CHOOSE YOUR WEAPON!

- Labeled for use on golf courses and sod farms only
- Proven effective on thousands of courses and in numerous university trials
- Apply at 60 to 80 lbs. per acre for insect control
- Concentrated 5% granular formulation

- For use on all turfgrass areas
- 4 to 6 week residual control
- Apply at 100 to 200 lbs. per acre to control insects
- Distributes evenly through standard rotary spreaders
- Larger particle size makes calibration easier

CRUSADE 5G
Granular Insecticide

Mainstay 2G
insecticide
Mainstay™ 2G Joins the Ranks!

New formulation to help win the Battle of the Bugs!

Superintendents now have a choice about what to use to control mole crickets, grubs, chinchbugs, and other important turfgrass pests: LESCO Mainstay 2G and Crusade 5G Granular Insecticides. Both provide excellent control of soil-and surface-feeding insects. Both have the active ingredient fonofos, a proven performer on thousands of warm-season courses and in numerous university trials. And both come in an easy-to-spread granule formulation that demonstrates superior efficacy from tee to green.

Your Choice
Crusade at 60-80 lbs./acre
or Mainstay at 100-200 lbs./acre

Both provide four to six weeks residual control, making them among the most cost-effective insecticides on the market today.

Ask your LESCO Sales Representative about your new choice in insect control:
Mainstay 2G or Crusade 5G Granular Insecticides.

Call: (800) 321-5325
(In Cleveland, 333-9250)
FOREWORDS NEW ATTITUDE AT GCSAA ................................................................. 6
Paul Crawford was impressed with the attitude of the new GCSAA executive staff and sees great things ahead for the organization and for the magazine, Golf Course Management.

SPOTLIGHT I: POLLS, POA, FAREWELL ............................................................ 10
The Poa Weekend was fantastic and the Sandoz Poll shows that pesticide applicators are as much concerned about environmental safety as the general public. Tom Benefield turns in his editorial license.

COVER STORY WORLD WOODS OF GOLF ......................................................... 20
Joel Jackson went down to the woods between Brooksville and Homosassa Springs and found a magnificent, state-of-the-art facility with two superintendents and three assistants.

HANDS ON: MOLE CRICKETS THE FINAL FRONTIER ........................................ 35
Tom Benefield and 17 field experts discuss strategy and tactics in the never-ending war.

HEADS UP: ACSP ENVIRONMENTAL PLANNING ........................................... 56
Environmental planning is the key to becoming a Certified Cooperative Sanctuary under the Audubon Society of New York and USGA program. Shelly Foy, Tom Benefield and three superintendents share their thoughts.

REGULATION REALLY, MR INSPECTOR ............................................................. 54
Ignorance of local, state and national environmental laws will not prevent stiff penalties. Scott Bell covers 15 major areas in which to begin your own self-examination.

SPOTLIGHT II FUND RAISERS AND TV INTERVIEWS .......................................... 76
The Environtron Classic at World Woods of Golf, South Florida Expo in Fort Lauderdale and Futures of Golf in West Palm Beach all raised lots of money for turf research... and helped superintendents raise their professional standards as well. A New York superintendent explains why he agreed to appear in a CBS News story on pesticide use.

AFTERWORDS: JARRELL, JACKSON ................................................................. 92
Mark Jarrell sees some seeds of common sense sprouting in government, while Joel Jackson sees what only Joel can see...
The Florida Green
Official Voice of the Florida Golf Course Superintendents Association

Published four times a year:
On the fifteenth of January, April, July, and October

editor/publisher emeritus Dan Jones, CGCS
Bayern GC
West Palm Beach

tom Benefield, CGCS
PO Box 1783
Hole Sound, FL 33455
(407) 546-8033

Assistant editor Joel D. Jackson, CGCS
Magnolia GC at Disney Resort
Address Florida Green business to:
6780 Tamarind Circle, Orlando, FL 32819
(407) 351-3729
(407) 824-2687 Work

business manager Paul Crawford
Palm Beach Country Club
P.O. Box 997
Palm Beach, FL 33480
(407) 845-2395

publications chairman Scott Bell, CGCS
Bent Pine GC
6001 Clubhouse Drive
Vero Beach, FL 32967
(407) 567-9422

COPYRIGHT NOTICE: Copyright 1994, Florida Golf Course Superintendents Association. All rights reserved. May not be reproduced in whole or in part without written permission of the FGCSA. EXCEPTION: Official publications of all golf course superintendent associations affiliated with the Golf Course Superintendents Association of America are welcome to use any material contained herein provided they give credit and copyright notice.

SUBSCRIPTIONS: $20 for four issues. Contact the FGCSA office.

ADVERTISING: For rates and information, contact the FGCSA office at 800-732-6053

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

Contributors to this issue

Cover Photographer: Golfoto, Inc.

Cover Story Writer: Joel Jackson, CGCS

Mole Cricket Package: Tom Benefield, CGCS; coordinator; Mike Bailey; Eddie Snipes; Paul Salter, CGCS; Karl Schmidt; Robert Kline, CGCS; Lee Van Valkenburg, CGCS; Alan Fucetti; Dale Kuehner; CGCS; Buck Buckner; Bob Bittner, CGCS; Cary Lewis.

ACSP-Environmental Planning: Shelly Foy; Tom Benefield, CGCS; Greg Plotner, CGCS; Darren Davis; Cary Lewis.

Regulation: Scott Bell

South Florida Expo: Almar Chemical

Futures of Golf: John Gallagher

Columnists: Mark Jarrell, CGCS; Joel Jackson, CGCS

File Photos: Janlark Communications, Inc.

Production

The Florida Green is published with the assistance of Janlark Communications, Inc.

Publication Manager ................. Larry Kieffer
Art Director ....................... Ken Cooke
Separations .................... Positive Images, Bartow
Printer ......................... Rinaldi Printing Co., Tampa

JANLARK COMMUNICATIONS, INC.
208 South Main St.
P.O. Box 336, Auburndale, FL 33823
813-967-1385 Fax 813-967-4553

SUMMER 1994

Advertiser Index

AgrEvo .................................. 71
AgriGro .................................. 55
Agro-Tech 2000 ........................ 75
Almar Chemical Co. .................. 38
AmerAquatic Inc. ................. 33
Aquatrols Corp. Of America ...... 83
Arbor Tree & Landscape .......... 75
Atlantic FFC Fertilizer ............ 71
Biosys .................................. 7,9, insert
Boynton Pump ........................ 77
Central Florida Turf ............... 65
Cedar Chemical ....................... 41
Environmental Waterway Mgt . 77
Florida Silica Sand ................. 96
Golf Agronomics Supply .......... 73
Golf Course Renovations .......... 61
Golf Ventures ....................... 86
Harrell's, Inc. ....................... 89
Haverland Blackrock Paving .... 87
Hoechst-Roussel Agri Vet Co.. 25
Hunter Industries ................... 39
ISK Biotech Corp .................... 31
Kubota Tractor Corp ............... 57
Liquid Ag Systems, Inc .......... 23
Lofts Seed, Inc. ................... 45
Lutz Corporation .................... 83
Nutri-Turf, Inc. ..................... 69
Otterbine-Barebo Inc. ............. 91
Partac Peat Corp .................... 87
Pifer Equipment ..................... 51
Polecat Industries ................... 91
Precision Laboratories ............. 67,69
Regal Chemical Co. ............... 59
Rhone Poulenc ....................... 81
Rogers Innovative ................... 29
Rohm And Haas Co ................... 2
RSI Holdings of Florida ......... insert
Safety Storage Inc ................. 73
South Florida Grassing .......... 61
South Florida Turf Products .... 63
Southern Ag Insecticides ....... 42
Southern Corp. Promotions ...... 43
Specialty Tree Surgeons .......... 87
Spread-Rite, Inc. ................. 87
Standard Sand & Silica .......... 91
Subaqueous Services Inc ....... 48
Sullivan Electric & Pump ......... 93
Sunniland Turf Products ....... 67
Terra International, Inc. ....... 38
Tifton Physical Lab ............... 79
TMI Turf Merchants .............. 15
Tom Burrows Turfgrass Svc .... 83
Toro Dealers Of Florida ......... insert
United Horticultural Supply ...... 17
Valent USA .......................... 27
Van Waters & Rogers .......... 47
Vigoro Industries ................... 53
Zeneca .............................. 37,95, insert
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.

**Beats more diseases for the money.**

On tees, greens, and fairways, Fore proved it was more than a match for 14 major diseases. Including such well known names as Brown patch, Dollar spot, and Helminthosporium melting-out.

And as superintendents in 17 states discovered, a treatment of Fore costs far less than the leading competitive fungicides.

**No resistance after 25 years.**

A multi-site enzyme inhibitor, Fore has been defeating turf diseases for over 25 years. And in all that time, not one of those diseases has mustered even the least resistance.

Spray a reduced rate mixture of Fore and Subdue (or Banol) – and you can also gain improved control of Pythium blight.

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.
Carefully monitored trials* in these 17 states showed Fore controlled 14 major turf diseases.

GUARANTEED TO TEE OFF ON MAJOR TURF DISEASES OR YOUR MONEY BACK**

NOW AVAILABLE IN WET FLOWABLE

FORE®
TURF & ORNAMENTAL FUNGICIDE

GUARANTEED TO TEE OFF ON MAJOR TURF DISEASES OR YOUR MONEY BACK**
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 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.
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

Continued on Page 18
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.

You've seen it season after season. You pull out all the stops. Hit them with everything you've got. And still it isn't enough.

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.

20005 Lake Rd. • Rocky River, OH 44118
(800) 321-5325 • Fax (800) 673-3030

Vector MC is a registered trademark of biosys. LESCO is a trademark of LESCO, Inc.
Friday the 13th no ill omen as annual Poa Annua Weekend attracts hundreds to Naples

I

f 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.

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 record 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.

Photos on pages 12 and 13

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-

Continued on page 18
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.

For More Information about these products and services, please contact:

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Phone</th>
<th>Mobile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael T. Ayer</td>
<td>Tampa, Florida</td>
<td>(813) 684-3306</td>
<td>(813) 220-9161</td>
</tr>
<tr>
<td>David Barnes</td>
<td>Central Florida / Orlando</td>
<td>(813) 684-3306</td>
<td>(813) 325-5412</td>
</tr>
<tr>
<td>Marty Griffin</td>
<td>Southeast Florida</td>
<td>(407) 793-4495</td>
<td>(407) 346-6315</td>
</tr>
<tr>
<td>Mike Miles</td>
<td>West Coast Florida / Tampa</td>
<td>(813) 684-3306</td>
<td>(813) 230-5362</td>
</tr>
<tr>
<td>Billy Griffith</td>
<td>Northern Florida</td>
<td>(813) 684-3306</td>
<td>(904) 360-9494</td>
</tr>
<tr>
<td>Glenn Zakany</td>
<td>Southwestern Florida</td>
<td>(813) 768-3975</td>
<td>(813) 851-1541</td>
</tr>
<tr>
<td>Tom Benefeld</td>
<td>Equipment Sales - Florida</td>
<td>(407) 546-8033</td>
<td>(407) 285-9904</td>
</tr>
</tbody>
</table>

EcoSoil Systems
10890 Thornmint Rd, Suite 200 • San Diego, CA 92127 • TEL (619) 675-1660 • FAX (619) 675-1662
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 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 they have increased their concern, 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

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.

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...

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

CERTIFIED

CYPRESS
Poa trivialis

FAST-PUTTING, LOW-MOWING, GOOD LOOKING CERTIFIED CYPRESS!

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.

<table>
<thead>
<tr>
<th>Mean Quality</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypress</td>
<td>7.2</td>
</tr>
<tr>
<td>Sabre</td>
<td>7.2</td>
</tr>
</tbody>
</table>

"Although Cypress and Sabre Rough Bluegrass had equal seasonal Turf Quality Ratings of 7.2, the "Cypress" cultivar had better color and less dollar spot disease in May."


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypress</td>
<td>6.8</td>
<td>8.2</td>
<td>8.0</td>
<td>6.8</td>
<td>7.25a</td>
</tr>
<tr>
<td>Colt</td>
<td>7.1</td>
<td>8.2</td>
<td>7.8</td>
<td>8.5</td>
<td>7.19a</td>
</tr>
<tr>
<td>PT-GH-92</td>
<td>6.3</td>
<td>7.8</td>
<td>8.0</td>
<td>7.1</td>
<td>7.19a</td>
</tr>
<tr>
<td>LPT-CT (Loft)</td>
<td>6.6</td>
<td>7.8</td>
<td>8.0</td>
<td>6.8</td>
<td>7.16a</td>
</tr>
<tr>
<td>PT-GH-89 C11 (Dark Horse)</td>
<td>8.1</td>
<td>7.3</td>
<td>7.8</td>
<td>7.0</td>
<td>6.97a</td>
</tr>
<tr>
<td>Danish Common</td>
<td>7.5</td>
<td>8.2</td>
<td>7.5</td>
<td>5.8</td>
<td>6.94a</td>
</tr>
<tr>
<td>LPT-HWY (Loft)</td>
<td>6.6</td>
<td>7.7</td>
<td>7.9</td>
<td>8.2</td>
<td>6.88a</td>
</tr>
<tr>
<td>Winterplay</td>
<td>6.7</td>
<td>7.5</td>
<td>7.8</td>
<td>6.3</td>
<td>6.88a</td>
</tr>
</tbody>
</table>

Quality mean based on eight visual ratings on a scale of 1-9 where 9 = best
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 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 primarily from 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 available. 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 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, ka-kakka; 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 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.

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 he’s out of the country. Something about a lot of bad press in Wisconsin this spring!

Sincerely,

Joel Jackson, CGCS
Asst. Editor
Our commitment to your success continues with TURFGO® products.

As part of our continuing commitment to turf care professionals, United Horticultural Supply proudly features our own TURFGO® line of fertilizers, chemicals and turf seed. These top pros have discovered that TURFGO® products are premium quality in addition to being environmentally sound.

For example, TURFGO® Dursban* 2 Coated Granules provide cost-effective, broad spectrum control of turf insects, including worms and crickets. It bonds tightly to plants and soil providing residual control that's hard to match.

Also, TURFGO® Dursban 2CG’s active ingredient forms a vapor in the turf’s micro-climate, providing control even where sprays can’t reach.

Whatever your need, United Horticultural Supply has a product that performs as promised and is always in good supply. Call us at 1-800-457-0415 for more information.

* Dursban is a registered trademark of DowElanco
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 media), 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 Annua. 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 sufficient 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 regrass 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.
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.
If you go down to the 'W
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. Yukihisa 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 3 1/4 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.
... Mole Cricket Problem?

Liquid Ag Systems introduces a new, safe and effective solution for Golf Courses.

Proact™

With Six Major Advantages Over Any Other Control Method:

1. More Effective Control 4. No Need to Close Golf Course
2. Environmentally Safe Control 5. Proactive Pest Management
3. Reduction of Chemical Usage 6. Improved Course Image

Exclusively available with:

Liquid Ag Systems, Inc.

Liquid Ag Systems, Inc... providing solutions for 20 years.

For More Information Call: 1-800-432-2249 In Florida • (305) 971-0022 Outside Florida
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.
SOUTHERN FRIED GOOSEGRASS.

ILLOXAN® STYLE.

It's the favorite style for superintendents of many of the South's best bermudagrass courses. Just apply Illoxan 3EC Herbicide at recommended rates to 1-leaf up to 1-tiller stage goosegrass,* spray well for good coverage, and enjoy a goosegrass–free golf course all season long. And it comes without the ugly brown spots other herbicides can cause.

Southern fried goosegrass, Illoxan style. It'll be your favorite style, too.

*Silver crabgrass, crowfootgrass.
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")
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.

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 change. A temporary clubhouse will be under construction soon.
Either Protect Your Turf, Or Enlarge Your Sandtraps.

Mole crickets, Fireants, Cutworms, Sod webworms, Armyworms, Fleas, Chinch bugs, Wasps. Who knows what they could eventually do to your golf course? Exactly why you should protect all of your greenery with ORTHENE® Turf, Tree & Ornamental Spray. It's easy. It's economical. It controls the broadest spectrum of tough turf pests. And best of all, it's a heck of a lot better than the alternative. For more information, call 1-800-89-VALENT.

Your Best Course Of Action.
Steve Hritsko  
Ripon, Wis.

Family: Single  
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.  
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 Envirotroon 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.
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.

WINDFOIL Driftproof Technology
The World’s Best Drift Control

Drift studies by Agriculture Canada and Hoechst (Germany) show that the WINDFOIL controls drift better than any other sprayer in the World. Simple shrouds are not effective. Only by using a WINDFOIL can you say that you have done everything reasonable to protect your staff and the environment.

Management Leadership

GOLFCORP, a leading golf management company uses WINDFOIL Sprayers to protect the environment and their people while maximizing operational efficiency and management flexibility. Their Plantation Course, Frisco, Texas, earned a GCSAA Environmental Stewardship Award. GOLFCORP cared and GOLFCORP acted.

RZI One Man, Ride On, Root Zone Injector

Fast & Lite Aeration, 64,800 sqft/hr
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 railroad-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](image-url)
FOR BROWN PATCH, "A PROGRAM CENTERED ON DACONIL 2787®... HAS NEVER FAILED ME."

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 indiangrass, 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.”

Have you learned a valuable lesson? Tell us your Daconil 2787 success story. If we use your story in an ad, we’ll donate $100 to your favorite charity. Write Jackie Tengler, ISK Biotech Success Stories, 5885 Landerbrook Dr., Suite 215, Cleveland, OH 44124.

Always follow label directions carefully when using turf and ornamentals plant protection products.

© Registered trademark of ISK Biotech Corporation.
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 conversation 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
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."

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 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-
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 donated 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

W ell, 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 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...
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 superintendent 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-feet 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 insecticidal 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 Nemacur, 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...
You want your customer to be confident in you and the insecticide you use on her lawn. Confident that it does the job quickly and without problems for today’s environment.

SCIMITAR® turf and ornamental insecticide gives your customer this confidence. Applied at a much lower rate than other popular insecticides, SCIMITAR controls major turf insects in seconds. Pests like chinch bugs, sod webworms, mole crickets and ants. And without the odor that often raises a customer’s concern.

Plus, it’s a non-restricted use insecticide that doesn’t harm turf and ornamental plantings.

Give your lawn care customer confidence for today’s environment. With SCIMITAR turf and ornamental insecticide.

For more information, contact your Zeneca representative, or call 1-800-759-2500.
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 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

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

**Terra**

**Positioned to Meet Industry Needs**

**Professional Turf • Horticulture**

**Vegetation Management • Pest Control**

No matter what business you're in, we get the products to you when and where you need them. And that leaves you with more time to do what you do best—run your business.

Think of Terra as your business partner. Our goal is to supply you with a complete line of chemical, fertilizer and seed products that is supported by the best technical advice available in the industry today.

The Terra product line includes pesticides and adjuvants from all of the major manufacturers, plus our own quality Riverside brand. Fertilizers and seeds are supplied by the best producers in the industry.

Complete soil and plant tissue analyses and fertility recommendations are also available.

**CHEMICAL CO. INC.**

P.O. BOX 18101
TAMPA, FL 33679

CALL COLLECT:

813-839-3363

STUART COHEN
EAST FLA.

RUSS VARNEY
WEST FLA.

**ALMAR**
The New Hunter G-700

Take a look at the beefy, new G-700 with Hunter's proven and reliable gear drive. This large-radius rotor features the industry's first Pure Flow valve filtration system for dependable performance in the toughest conditions. New, patented Pressure Port Nozzling also ensures efficient water distribution across the entire 76' to 100' radius range.

The G-700
- Check-O-Matic, Hydraulic and Electric Valve-in-Head
- 3 1/2" pop-up prevents wet spots around head
- Logo cap with recess for yardage markers
- Five-year exchange warranty

Authorized Hunter Golf Distributor

The G-700
Electric
Valve-In-Head
With Pressure
Regulation

11 FLORIDA LOCATIONS
- Clearwater, 11475 49th St. North, 813-573-9284
- Fort Myers, 6281 Arc Way, 813-936-5869
- Gainesville, 2614 NE 19th Terrace, 904-372-7196
- Longwood, 1340 Bennett Dr., 407-290-7000
- Naples, 4300 Enterprise Ave.
  Ste 4 Bay-D, 813-943-3255
- Orlando, 485 W 27th St, 407-839-3771
- Port Richey, 6835 Commerce Ave, 813-849-1522
- Sarasota, 6055 Clark Center Ave., 813-923-2517
- St. Petersburg, 3170 24th Ave No., 813-321-6677
- Tampa, 9819 E. Broadway, 813-621-2075
- For all locations: 800-347-4272

1940 Diamond St. • San Marcos, CA 92069 • U.S.A. • 1-619-744-5240 • FAX: 1-619-744-7461
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 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 Oakridge 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 tunnel 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 one 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,
Introducing the First Complete Line of Potassium Nitrate-Based Turf Products.

Supported by Research
You've read the studies. A desirable ratio of potassium and nitrogen makes stronger turf requiring less maintenance. You know this is a higher ratio of potassium to nitrogen than you're applying now.

Controlled-Release: the Key
But what choice have you had? Controlled-release materials are the basis of advanced turfgrass fertility programs. And until recently, controlled-release potassium nitrate has not been available.

Now K-Power's MultiCote® controlled-release coating allows you to apply the benefits of potassium nitrate-based fertilization across your entire program: Greens Grade, Fairways, even Combination products.

K-Power® Builds Stronger Turf
K-Power's potassium helps turf plants better regulate water levels in their tissue and increase cell wall thickness. The plant is better able to resist temperature and drought stress as well as fungus and insect attacks. Without costly chemical treatments. Stiffer leaves support the golf ball for better shot-making. Even if you mow a little higher. Clippings are reduced because K-Power's desirable ratio of potassium to nitrogen reduces the rate of leaf growth.

And the low salt index of chlorine-free K-Power potassium nitrate makes it one of the safest turf fertilizers available.

Unique Formulas
The Greens Grade line includes the only ammoniated homogenous products that combine the benefits of methylene urea and potassium nitrate.

The Fairway Blends provide a unique 50/50 ratio of controlled-release nitrogen to controlled-release potassium. For the growth and green-up you need. When you need it.

Trial Programs
Contact your distributor for more information on K-Power and the world's most perfect trial program. Or call us at 1-800-227-2798.

(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.

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 teetops 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-
### Plastic Putting Cups
- **Practice**
  - Super White Matte Finish
  - $2.75
- **Regulation**
  - $3.25

### Solid Fiberglass Flagsticks
- **1/2" Straight Stick**
  - 7'
  - $9.00
  - 7'
  - $15.00
  - 8'
  - $9.50
  - 8'
  - $16.00

- **3/4" Tapered Big Stick**
  - Rich White or Creamy Yellow
  - Ask About Our Stripe Options

### Nylon Flags
#### Practice & Position
<table>
<thead>
<tr>
<th>Color</th>
<th>Reg.</th>
<th>Screen Printed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 color</td>
<td>$4.25</td>
<td>$6.50</td>
</tr>
<tr>
<td>2 color</td>
<td>$5.25</td>
<td>$8.50</td>
</tr>
<tr>
<td>3 color</td>
<td>$6.25</td>
<td>$10.50</td>
</tr>
<tr>
<td>4 color</td>
<td>$7.25</td>
<td>$12.50</td>
</tr>
</tbody>
</table>

#### Regulation
- **Plain**
  - Sewn Checkered
  - $9.50
- **Custom**
  - Custom Checkered
  - $12.00
  - Screen Printed
  - 1 color
  - $12.00
  - 2 color
  - $14.00
  - 3 color
  - $16.00
  - 4 color
  - $18.00
- **Embroidered**
  - Custom Checkered
  - $18.00
  - up to 6 colors
  - $18.00

Grommet and Tubular Flags are the same price.

### Contact Information
**PHONE** 404-487-8095 800-233-3853 **FAX** 404-631-3825 800-277-7701
**P.O. BOX 2899** 297 DIVIDEND DRIVE PEACHTREE CITY GEORGIA 30269
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 infestations, 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 ongo-

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.
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.
When the majority are hatching. We then worry about any fly-ins.

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 in 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 Boiler
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
FOR YEARS THE BEST SOURCE FOR TURF CHEMICALS HAS BEEN RIGHT UNDER YOUR NOSE.

Serving Florida From:

- Jacksonville - Pete Elbert
  904-781-1634 / 800-356-9964

- Orlando - Jim Watson
  407-843-2611 / 800-826-2611

- Delray Beach - Hal Porcher
  407-243-0001 / 800-251-3334

- Pompano Beach - Hal Porcher
  305-970-0535 / 800-654-2015

- Miami - Ralph Archer & Gabe Centeno
  305-883-9514 / 800-432-8717

- Tampa - Susan Zeigler
  813-671-2071 / 800-282-5388

- Ft. Myers - Jim Durlacher
  813-693-1919 / 800-922-4260

Professional Products For The Turf Industry

Van Waters & Rogers Inc.
subsidiary of Univar

"Where Service Is Our Only Business"
with **HAND DREDGING** the play goes on!

**◆ EXCLUSIVE HAND DREDGING ◆**

WITH OUR PATENTED SYSTEM THE **PLAY GOES ON!**
WHILE WE CLEAN DREDGE YOUR LAKES, PONDS, CULVERTS, PIPES
AND INTAKES. MAKING YOU LOOK GOOD! MAKES US LOOK GOOD!

**◆ EXCLUSIVE PUMP & DUMP ◆**

WITH OUR PATENTED SYSTEM PUMP & DUMP WE PUMP DIRECTLY
INTO OUR WAITING TRUCKS, FAR FROM THE DREDGE SITE.
WE'RE QUIET, FAST, EFFICIENT AND ENVIRONMENTALLY SAFE.

FOR MORE INFORMATION CALL:
1-800-432-7658

SUBAQUEOUS SERVICES INC.
4201 KEAN ROAD, FORT LAUDERDALE, FL 33314
SERVING FLORIDA FOR OVER 20 YEARS
Groundsmaster® 300 Series

Timeless durability, reliable power and unsurpassed cutting quality. It’s no wonder why Groundmaster riding rotaries remain the standard to which all others compare.
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.

Whatever your situation or application, there's a Groundsmaster to serve your utmost demands.

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.
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 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-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.

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

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

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

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

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

**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 ¾" 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*  

<table>
<thead>
<tr>
<th>ENGINE</th>
<th>GROUNDMASTER 345, 2 WHEEL DRIVE — GAS, MODEL 30789</th>
<th>GROUNDMASTER 325-D, 2 WHEEL DRIVE — DIESEL, MODEL 30788 AND GROUNDMASTER 325-D, 4 WHEEL DRIVE — DIESEL, MODEL 30795</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>FUEL CAPACITY</td>
<td>6.5 gallons (24.6 liters) unleaded gasoline.</td>
<td>6.5 gallons (24.6 liters), No. 1 or 2 diesel fuel.</td>
</tr>
<tr>
<td>CONTROLS</td>
<td>Hand-operated throttle, choke, PTO, hydraulic implement lift and foot-operated traction pedal.</td>
<td>Hand-operated throttle, PTO, hydraulic implement lift and foot-operated traction pedal.</td>
</tr>
<tr>
<td>GAUGES &amp; DIAGNOSTICS</td>
<td>Ammeter, hour meter, fuel gauge, coolant temperature switch-gauge (prevents overheating), oil pressure warning light and buzzer.</td>
<td>Ammeter, hour meter, fuel gauge, coolant temperature switch-gauge (prevents overheating), oil pressure warning light and buzzer, glow plug switch/indicator.</td>
</tr>
<tr>
<td>ELECTRICAL FEATURES</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>Approx. 1,300 lbs. (590 kg) dry weight.</td>
<td>Model 30788: Approx. 1,250 lbs. (567 kg) dry weight. Model 30795: Approx. 1,665 lbs. (755 kg) dry weight; includes ROPS.</td>
</tr>
</tbody>
</table>

**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. 8 quart (7.5 liter) oil capacity. Single foot pedal control of forward/reverse ground speed. Optional Electronic Cruise Control Kit, Model 30677, available. |
| IMPLEMENT DRIVE AND LIFT | 1-1/8" (2.9 cm) splined PTO shaft driven by a tight-slip 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 FLATGON CUTTING UNITS**

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

*Specifications and design subject to change without notice.*
<table>
<thead>
<tr>
<th>FULL FLOTATION CUTTING UNITS (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRIMMING ABILITY</strong></td>
</tr>
<tr>
<td>Deck off to the right from centerline: 18&quot; (46 cm). Deck trim width from outside of standard traction tire to trim side — right: 23&quot; (58 cm). Uncut circle — right: 15&quot; (38 cm). Uncut circle with use of wheel brakes: 0&quot;. (Rear discharge trims both sides).</td>
</tr>
<tr>
<td><strong>HEIGHT OF CUT</strong></td>
</tr>
<tr>
<td>1-4&quot; (2.5 - 10 cm) adjustable front and rear in .5&quot; (13 mm) increments with spacers on the caster shafts.</td>
</tr>
<tr>
<td><strong>CONSTRUCTION</strong></td>
</tr>
<tr>
<td>Model 30722: 11 gauge steel, 6&quot; (15 cm) deep with 2&quot; (5 cm) step. Reinforced with 3.5&quot; (8.9 cm) x 7 gauge channel.</td>
</tr>
<tr>
<td><strong>CUTTER DRIVE</strong></td>
</tr>
<tr>
<td>Isolation mounted PTO driven gearbox with 1.26:1 spiral bevel gears. &quot;B&quot; hex section belts to spindles. 1.25&quot; (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.</td>
</tr>
<tr>
<td><strong>BLADES</strong></td>
</tr>
<tr>
<td>Three 25&quot; (64 cm) long, .25&quot; (6 mm) thick, heat-treated steel, suction-lift blades.</td>
</tr>
<tr>
<td><strong>SUSPENSION &amp; CASTER WHEELS</strong></td>
</tr>
<tr>
<td>Two front and rear caster tires consist of hard rubber and roller bearings. Deck counterbalanced by two torsion springs. Optional Pneumatic Wheel &amp; Tire Assembly, P/N 12-1509. (two required).</td>
</tr>
<tr>
<td><strong>ANTI-SCALP FEATURES</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>DECK COVERS</strong></td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
</tr>
<tr>
<td>Model 30722: 400 lbs. (181 kg) Model 30710: 415 lbs. (188 kg)</td>
</tr>
</tbody>
</table>

**GROUNDSMASTER ACCESSORIES**

<table>
<thead>
<tr>
<th>2-POST ROLL-OVER PROTECTIVE STRUCTURE (ROPS)</th>
<th>4-POST ROLL-OVER PROTECTIVE STRUCTURE WITH SUN ROOF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STANDARD FEATURES</strong></td>
<td><strong>STANDARD FEATURES</strong></td>
</tr>
<tr>
<td>Roll-over Protective Structure (2&quot; (5 cm) x 3&quot; (7.6 cm) x 1/4 gauge welded tubing), seat belt and attaching system.</td>
<td>Roll-over Protective Structure, seat belt and attaching system. Tinted safety glass throughout. Removable door with locking handle. 1&quot; (2.5 cm) acoustical roof insulation. Steering post filler plate and underseat filler panel, heavy duty floor mat, rubber isolator mounts and hood support.</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td><strong>ELECTRICAL FEATURES</strong></td>
</tr>
<tr>
<td>2-Post ROPS: 135 lbs. (61 kg). Canopy Kit (optional): 90 lbs. (41 kg), approximate.</td>
<td>Two headlights, one rear working light, flashing amber beacon, defroster fan, windshield wiper, wiring harness and toggle switches.</td>
</tr>
<tr>
<td><strong>OPTIONS</strong></td>
<td><strong>WEIGHT</strong></td>
</tr>
<tr>
<td>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.</td>
<td>580 lbs. (263 kg).</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td><strong>OPTIONS</strong></td>
</tr>
<tr>
<td>250 lbs. (113.4 kg); shipping weight.</td>
<td>Heater Kit. Road Light Kit: two combination signal and flasher lights, controls, mounting hardware and wiring.</td>
</tr>
</tbody>
</table>

**48" (122 cm) SNOW BLOWER, MODEL 44910**

**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.
## IMPLEMENT AND ACCESSORY COMBINATIONS

<table>
<thead>
<tr>
<th>TORO ACCESSORIES</th>
<th>OTHER MANUFACTURERS' ACCESSORIES**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rotary Broom</td>
</tr>
<tr>
<td>Seat Adapter Kit Model 30709</td>
<td>—</td>
</tr>
<tr>
<td>Armrest Kit Model 30707</td>
<td>—</td>
</tr>
<tr>
<td>Leaf Mulcher Kit Model 30733</td>
<td>Opt.</td>
</tr>
<tr>
<td>High Lift Blade P/N 23-2410</td>
<td>Opt.</td>
</tr>
<tr>
<td>V-Plow Mounting Kit Model 30757</td>
<td>—</td>
</tr>
<tr>
<td>Guardian® 72&quot; Recycler Low Height of Cut Kit Model 30680</td>
<td>Opt.</td>
</tr>
<tr>
<td>Debris Blower 2670 Kit Model 44535</td>
<td>—</td>
</tr>
<tr>
<td>[1] To comply with ANSI OPEI B71.1-1990 stability requirements, Groundsmaster 2-wheel drive models 30789 and 30788 require additional rear weight. See &quot;Counterbalance Weight Requirement&quot; 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 62-6550, weighted with suitable ballast, may be substituted for cast weights. [5] Must order P/N 80-0040 Spacer to complete assembly.</td>
<td></td>
</tr>
</tbody>
</table>
## OVERALL SET UP DIMENSIONS AND WEIGHTS (approximate)

<table>
<thead>
<tr>
<th>Model</th>
<th>Groundsmaster 345 - Gas Model 30789</th>
<th>Groundsmaster 325-D Model 30788</th>
<th>Groundsmaster 325-D, 4WD Model 30795</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIDTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/30722 SD Cutting Unit</td>
<td>46&quot; (117 cm) (measured from outside of front tires)</td>
<td>46&quot; (117 cm) (measured from outside of front tires)</td>
<td>47&quot; (119 cm) (measured from outside of rear tires)</td>
</tr>
<tr>
<td>w/30710 RD Cutting Unit</td>
<td>85.5&quot; (217 cm)</td>
<td>85.5&quot; (217 cm)</td>
<td>86.5&quot; (219 cm)</td>
</tr>
<tr>
<td>w/30716 72&quot; Recycler® Cutting Unit</td>
<td>75.5&quot; (191 cm)</td>
<td>76.5&quot; (194 cm)</td>
<td>76.5&quot; (194 cm)</td>
</tr>
<tr>
<td>w/44590 Fine Cut Flail 2760</td>
<td>69&quot; (175 cm)</td>
<td>69&quot; (175 cm)</td>
<td>69&quot; (175 cm)</td>
</tr>
<tr>
<td>LENGTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/30722 SD Cutting Unit</td>
<td>91&quot; (231 cm)</td>
<td>91&quot; (231 cm)</td>
<td>94&quot; (234 cm)</td>
</tr>
<tr>
<td>w/30710 RD Cutting Unit</td>
<td>112&quot; (285 cm)</td>
<td>112&quot; (285 cm)</td>
<td>115&quot; (292 cm)</td>
</tr>
<tr>
<td>w/30716 72&quot; Recycler® Cutting Unit</td>
<td>117.5&quot; (298 cm)</td>
<td>117.5&quot; (298 cm)</td>
<td>118.5&quot; (301 cm)</td>
</tr>
<tr>
<td>w/44590 Fine Cut Flail 2760</td>
<td>116&quot; (295 cm)</td>
<td>116&quot; (295 cm)</td>
<td>117&quot; (297 cm)</td>
</tr>
<tr>
<td>HEIGHT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/30722 SD Cutting Unit</td>
<td>50&quot; (127 cm)</td>
<td>50&quot; (127 cm)</td>
<td>50&quot; (127 cm)</td>
</tr>
<tr>
<td>w/30710 RD Cutting Unit</td>
<td>46&quot; (117 cm) (measured from outside of rear tires)</td>
<td>46&quot; (117 cm) (measured from outside of rear tires)</td>
<td>47&quot; (119 cm) (measured from outside of rear tires)</td>
</tr>
<tr>
<td>w/30716 72&quot; Recycler® Cutting Unit</td>
<td>86.5&quot; (219 cm)</td>
<td>86.5&quot; (219 cm)</td>
<td>87&quot; (221 cm)</td>
</tr>
<tr>
<td>w/44590 Fine Cut Flail 2760</td>
<td>76.5&quot; (194 cm)</td>
<td>76.5&quot; (194 cm)</td>
<td>77&quot; (195 cm)</td>
</tr>
<tr>
<td>DRY WEIGHT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/30722 SD Cutting Unit</td>
<td>1,300 lbs. (590 kg)</td>
<td>1,250 lbs. (567 kg)</td>
<td>1,665 lbs. (755 kg) (w/ROPS)</td>
</tr>
<tr>
<td>w/30710 RD Cutting Unit</td>
<td>1,715 lbs. (778 kg)</td>
<td>1,665 lbs. (755 kg)</td>
<td>2,080 lbs. (934 kg) (w/ROPS)</td>
</tr>
<tr>
<td>w/30716 72&quot; Recycler® Cutting Unit</td>
<td>1,781 lbs. (808 kg)</td>
<td>1,731 lbs. (785 kg)</td>
<td>2,165 lbs. (969 kg) (w/ROPS)</td>
</tr>
<tr>
<td>w/44590 Fine Cut Flail 2760</td>
<td>1,845 lbs. (836 kg)</td>
<td>1,820 lbs. (828 kg)</td>
<td>2,146 lbs. (969 kg) (w/ROPS)</td>
</tr>
<tr>
<td>WHEELBASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>49&quot; (124 cm)</td>
<td>49&quot; (124 cm)</td>
<td>51&quot; (130 cm)</td>
</tr>
</tbody>
</table>

### COUNTERBALANCE WEIGHT REQUIREMENT

<table>
<thead>
<tr>
<th>Model</th>
<th>72&quot; SD, Model 30722 &amp; 72&quot; RD, Model 30710</th>
<th>GUARDIAN® 72&quot; RECYCLER®, Model 30716</th>
<th>FINE CUT FLAIL 2760, MODEL 44590</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUNDSMASTER 345, Model 30789</td>
<td>105 lbs. (47.6 kg)</td>
<td>105 lbs. (47.6 kg)</td>
<td>105 lbs. (47.6 kg)</td>
</tr>
<tr>
<td></td>
<td>(1) 24-5780 &amp; (1) 24-5790</td>
<td>(1) 24-5780 &amp; (1) 24-5790</td>
<td>(1) 24-5780 &amp; (1) 24-5790</td>
</tr>
<tr>
<td>GROUNDSMASTER 325-D, Model 30788</td>
<td>70 lbs. (31.7 kg)</td>
<td>70 lbs. (31.7 kg)</td>
<td>70 lbs. (31.7 kg)</td>
</tr>
<tr>
<td>GROUNDSMASTER 325-D, 4WD, Model 30795</td>
<td>No weight necessary.</td>
<td>No weight necessary.</td>
<td>No weight necessary.</td>
</tr>
</tbody>
</table>

* Specifications and design subject to change without notice. "Toro", "Groundsmaster", "Guardian" and "Recycler" are registered trademarks of The Toro Company, 8111 Lyndale Avenue South, Minneapolis, Minnesota, 55420-1196. Products depicted in this advertisement are for demonstration purposes only. Actual products offered for sale may vary in use, design, required attachments and safety features. Consult your local Toro distributor.

For more information, visit [Toro's website](https://www.toro.com) or contact your local distributor.
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 biological 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 Pageant* 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 scaperiscus (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.

They 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 started 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 was 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 chose 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 any where 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 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.

‘... 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.’

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:

Distributors for Ransomes, Cushman, Ryan
(800) 321-8374

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

Distributors for Ransomes, Cushman, Ryan
(800) 321-8374

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

Distributors for Ransomes, Cushman, Ryan
(800) 321-8374

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

Distributors for Ransomes, Cushman, Ryan
(800) 321-8374

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

Distributors for Ransomes, Cushman, Ryan
(800) 321-8374
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 upside 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 into 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...
Graduated With Honors From Over 25 Prestigious Universities

Why do competitive fertilizers "go to school" on Par Ex® with IBDU® slow release nitrogen? Maybe it's because IBDU®'s been passing the test at major universities for more than 20 years.

Not just in controlled laboratory experiments. In actual field testing. On all types of turf. Under every conceivable combination of soil and weather conditions.

Par Ex® earns straight A's when it comes to performance:

- Steady, continuous feeding to the root zone
- Extra staying power for fewer applications
- Primarily unfazed by temperature, moisture extremes
- Uniform turf growth for reduced mowing, labor costs
- Unmatched for late season applications

To study up on Par Ex®, call us at 1-800-767-2855. We'll show you how to get an advanced degree of IBDU® slow release nitrogen for your turf.

PAR EX® GIVES YOUR TURF AN ADVANCED DEGREE OF SLOW-RELEASE NITROGEN
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 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.

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.

Chipco and Mocap are registered trademarks of Rhone-Poulen. Always read and follow label directions.

Ken Lewis, Ph.D.
Rhone-Poulen 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.
Agri-Gro of Florida, Inc. introduces **Turf Formula**, “The Natural Solution” for quality Turfgrass maintenance. Florida golf course superintendents are experiencing the following benefits of **Turf Formula**:

1. Increased Soil Microbial Activity
2. Increased Root Mass and Root Penetration
3. Helps Eliminate Algae on Greens
4. Increased Aerobic Bacteria, a Natural Predator to Nematode Eggs
5. Increased Water Penetration and Percolation
6. Aids in the Decomposition of Thatch

**Turf Formula** is a non-toxic and environmentally safe product which contains stabilized micro-organisms from the following genera: *Azotobacter*, *Bacillus* and *Clostridium*.

**Turf Formula** is a premium soil amendment and bio-catalyst with a four year shelf life.

---

**For information and product availability:**

<table>
<thead>
<tr>
<th>GOLF VENTURES</th>
<th>UNITED HORTICULTURAL SUPPLY</th>
<th>VAN WATERS &amp; ROGERS, INC.</th>
<th>LIQUID AG SYSTEMS, INC.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2101 East Edgewood Dr.</td>
<td>3632 Queen Palm Dr., Suite 306</td>
<td>4240 L.B. McLeod Rd.</td>
<td>5610 N.W. 12th Ave. Suite 211</td>
</tr>
<tr>
<td>Lakeland, Florida 33803</td>
<td>Tampa, Florida 33619</td>
<td>Orlando, Florida 32811</td>
<td>Ft. Lauderdale, Florida 33309</td>
</tr>
<tr>
<td>1-800-330-8874</td>
<td>1-800-457-0415</td>
<td>1-800-826-2611</td>
<td>1-800-884-6942</td>
</tr>
<tr>
<td>(813) 665-5800</td>
<td>(813) 628-6496</td>
<td>(407) 843-2611</td>
<td>1-305-776-2288</td>
</tr>
<tr>
<td>Fax (813) 667-0888</td>
<td>Fax (813) 664-0371</td>
<td>Fax (407) 649-8433</td>
<td>Fax (305) 776-6942</td>
</tr>
</tbody>
</table>
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 becomes 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 enhancement.

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

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, 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.
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.

---

**AN OUTSTANDING PERFORMANCE REVIEW**

The reviews are in... and Kubota's compact and dependable turf tractors deliver a powerful and clean-cut performance. The 18 HP Kubota GF1800 diesel front mower is extremely versatile, equipped with a variety of performance features that increase your productivity while minimizing cost and downtime. Features include 2WD and 4WD, hydrostatic transmission, a 'no-clutch' forward/reverse pedal, optional grass catcher and choice of mower decks. Large roomy deck and operator comfort and safety features are built in to ensure hours of smooth operation.

For the ultimate in maneuverability and versatility, the Kubota F-Series diesel front mower offers hydrostatic transmission and is available with 24 HP (F2400) and 20 HP (F2100) with four-wheel drive and front differential lock. A fuel-efficient 2WD 20 HP (F2100E) front mower is also available.

For an outstanding performance every time you mow, review Kubota's turf mowers today.

Kubota Tractor Corporation markets a full line of tractors through a nationwide network of over 1,000 dealers.

**BRADENTON**
Franz Tractor
5504 15th Street East
(813) 758-2020

**NAPLES**
Naples Tractor Co.
2600 Davis Boulevard
(813) 774-7117

**BOYNTON BEACH**
Florida Coast Equipment
9775 W. Boynton Beach Boulevard
(407) 369-0414
(800) 343-7594

**WINTER HAVEN**
Polk Tractor Co.
3450 Havendale Boulevard
(813) 967-0651
(800) 532-8783

**FORT MYERS**
Sandland Equipment
9501 SR 82
(813) 332-5045
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 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.
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
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.
South Florida Grassing, Inc.

Celebrating 30 years in the grassing industry

419 SOD • 419 SPRIGS

- We provide reworking and planting services for fairways, tees and greens
- Hydro-mulching, grassing and mulching
- Our 419 is grown in Hobe Sound and sand based
- Rolled 419 available
- Tifdwarf - 1993 University of Georgia Release Lot #G8003-JK

Phone: (407)746-7816 (407)546-4191 FAX: (407)546-3482
P.O. Box 725 Hobe Sound, FL 33475

Golf Course Renovations of America, Inc.

Specializing in Retaining Walls, Bridges & Islands... Phone for brochure or estimates.

407-627-1555

2001 Bomar Road • Suite 3 • North Palm Beach, Florida 33408
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 golf holes. The wildlife corridors are areas of native vegetation that are selectively cleared to varying degrees. These corridors provide wildlife with safe freedom of movement around the golf course.

Trees are very beneficial for wildlife cover as well as providing framing and back drops 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.
   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.

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.

Cary Lewis
Stouffer Vinoy Resort

South Florida Turf Products

1-800-432-2214
407-746-0667

Distributors for Howard Fertilizers
QUALITY FERTILIZERS & CHEMICALS FOR THE TURF INDUSTRY

P.O. Box 8081
Jupiter, Florida 33468

SUMMER 1994
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
The better way to keep mole crickets off your fairways.

If mole crickets are chewing up your fairways, maybe it's time you tried Pageant DF* insecticide. A regular program with Pageant or Dursban 50WSP* insecticide can control mole crickets and keep them from seriously damaging your golf course. And it's cost-effective.
• Low dust formulation
• Stays put, even in heavy rainfall
• Four-to six-week residual effect
• Can be applied any time of the day
• Works as both a stomach and contact poison
• Unaffected by pH of mix water

*Trademark of DowElanco ©1993 DowElanco
A well thought-out environmental planning guide is evident here as the young hatchlings of the Sand Hill Cranes are doing quite well.

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 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 that 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
After you've done everything else right, why take short-cuts on course maintenance with ag-grade fertilizers? Sunniland's custom blends are formulated specifically for your course. Uniformly granular, too, eliminating hazardous dust on the course, your equipment, pools and members! The course will look superb and so will you. We knew you wouldn't mind if we cleared the air on course maintenance, so phone our Sunniland Golf Products Representative today.

Post Office Box 8001 • Sanford, Florida 32772-8001 • Phone (407) 322-2421 or (800) 432-1130

Golf Maintenance Budget Blues?

Are your Spray Pattern Indicators costing too much money?

Switch to SIGNAL™ and SAVE money!!

Get more color for your Spray Pattern Indicator Dollars - use SIGNAL.
Current regulations demand that you save, store and recycle all used oil from your equipment.

Really, Mr. Inspector, no one told me...

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
The better, more natural looking lake and pond dye

Why settle for artificial looking dye when TRUE BLUE™ will give your lake or pond a natural, living color appearance. The secret's in our tried and true blue formula that makes the other brand look unnatural by comparison. Try it and see for yourself why TRUE BLUE is fast becoming the preferred lake and pond dye. The one that's a natural. For more information and a technical bulletin, call or write today.

TRUEBLUE is a trademark of Precision Laboratories, Inc.
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.

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.

Displaying MSDS sheets and right-to-know information is the law – but it is not difficult to comply with.
That's why it's important that you get to know Atlantic FEC. Because we provide a variety of specialty mixes and related products specifically formulated for the South Florida turfgrass industry.

Each turfgrass mix is delivered by Spyder equipped trucks in water-resistant paper or plastic bags. Bulk material is available in either normal size Killebrews or "small door" (24") Killebrews to accommodate your turf spreader. Drop trailers, sulfur coated potash, and new Micro Prill Greenskote, a quality putting green blend, also available.

Call us toll free at 1-800-432-3413 or visit us at 18375 S.W. 260th Street in Homestead to find out how you can benefit from quality mix from the Atlantic FEC turfgrass professionals.

Atlantic FEC
Better Mixes Since 1923.
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
Safety Storage, Inc. prefabricated, relocatable buildings provide a low-cost solution to safe storage, containment, mixing, and dispensing of golf course chemicals and hazardous materials.

Safeguard personnel, avoid the liability arising from soil and groundwater contamination, meet fire safety needs, and achieve full compliance with federal, state, and local regulations.

Building sizes range from 5' to 32' in length with capacities up to 320 sq. ft. Standard features include continuously-welded, heavy-gauge steel construction, secondary containment sump, removable fiberglass floor grating, and chemical resistant coating inside and out.

Select from a full range of options. For complete details, call us toll free at: 1-800-330-6949.

COMPUTER-EXACT CUSTOM MIXES.
EVERY ORDER. EVERY TIME.

Every order received by Golf Agronomics is prepared in our fully computerized machine. Double screening capabilities ensure that your first mix portion is the same as your last. Golf Agronomics meets all your top dressing needs with its ability to customize your mix with a variety of soil amendments including: Dolomite, Hi-Cal, Wetting Agents, Charcoal, Humic Acid, Minor Elements, Rock Phosphate, Gypsum.

Golf Agronomics donates a % of every ton of top dressing sold to the FGCSA. 1994's donation will exceed $4000. Our sincere thanks to all of our customers.

Golf Agronomics Supply & Handling
(800) 626-1359
(407) 969-2563 Fax
P.O. Box 3455
Boynton Beach, FL 33424
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....

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 transportation 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 containment. 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.
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 government 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 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 workshops 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.
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 agriculture-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 two-fold: 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. Bot 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, Aattrax 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.

Tifton Physical Soil Testing Laboratory

Specializing in:

- Testing All Materials for USGA Golf Green Construction.
- Developing Putting Green Rootzone Mixtures that meet USGA Specifications.
- Recommending Topdressing and Bunker (Trap) Sands that meet USGA Specifications.
- Developing Sportsturf Rootzone Mixes with Optimum Physical Properties for Athletic Fields.

1412 Murray Avenue
Tifton, Georgia 31794

T. Powell Gaines
(912) 382-7292

SUMMER 1994
Seventh annual South Florida GCSA Expo raises nearly $25,000 for research green

The South Florida chapter hosted its biggest fundraiser 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.
Ask almost any Superintendent in the Southeast and you’ll hear that Chipco® Mocap® brand 10G pesticide is the mole cricket control of choice.

Now this product can be even better with a new placement technique: slit application.

Slit application cuts through the thatch and delivers Mocap® 10G below the surface where mole crickets tunnel and feed.

And thanks to our low-dust formulation and the closed systems on slit applicators, dust problems are all but eliminated. You get better odor control, too, with subsurface penetration.

Plus you may see a nice greening effect with the aeration slit application provides. And longer residual because biological activity is lower below the thatch layer.

New slit application with Chipco® Mocap® 10G brand pesticide. Mole crickets can burrow. But they can’t hide.

Chipco® Mocap® 10G
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!

---

**Here's the Secret to Healthier Palms**

- Palm trees transplanted or lacking manganese, magnesium or potassium have difficulty producing Chlorophyll & growth may be stunted.
- Lutz Palm tree spikes are unmatched in their ability to restore & hold healthy green growth.
- Fast/Feeder drives spikes quickly.
- After 6 months, 50% of a Lutz/Spikes continues to feed while palms treated by broadcasting already show decline.
- Low cost
- Highly effective
- Easy to apply

Distributed throughout Florida by Ag Resources/Helena.
Phone 1-800-277-9053

---

**Controlling Localized Dry Spots...**

AquaGro® can be applied on a preventative or curative program to tame dry spots. Whether you use it once a month or only once in a while, make sure you have some AquaGro on hand.

...Another Reason To Use AquaGro.

AQUATROLS
Making Water Work Efficiently
800-257-7797 • Fax 609-751-3859
From anywhere in the U.S. and Canada.
We’ve Come A Long Way...

In 1986, there were two of us starting with flagpoles and rakes...

NOW, we have a 22,000 sq. ft. warehouse and have become a full line turf house and distributor of golf course maintenance products.

We can supply the fertilizer to feed the greens, the mowers to cut and trim, even the cups and rakes to complete the job. Our warehouse contains the greatest names to meet your toughest challenge.

Lykes Agri Sales
Ringer Turf Products
Helena Chemical Co.
Club Car Carryall

Cushman
Ransomes Turf Equipment
Ryan

Standard Golf Co.
Par Aide Products
Lewisline American Eagle
Daihatsu Hijet

2101 EAST EDGEWOOD DRIVE
LAKELAND, FLORIDA 33803
1-800-330-8874 • (813) 665-5800 • FAX (813) 667-0888

Golf Ventures
a complete line of golf course products
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.


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 Oeshslin.

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 Barrens course.

Continued on page 90
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 equipment 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 recipients 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.
Fertilizers of the Future That Keep Your Green Green.

- Precise daily spoonfeeding
- Durable, free-flowable polymer-only coating
- Unique osmotic release
- Release not affected by excessive moisture

Harrell's is proud to be the leading Polyon® formulator in North America.

The answer to successful turf.

Premium blend for Greens

contains Polyon®

Harrell's Inc. / P.O. Box 807 / Lakeland, Florida 33802 / 813-687-2774 1-800-282-8007
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 Buffington.

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 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 Haydik 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.
Troubled waters?

Otterbine Aerators

The prescription for troubled breathing, poor circulation, and changing temperatures in ponds and lakes is practical engineering that is ethically pleasing. These air systems range in power, circulating from 600,000 to 20 million gallons of water in a 24-hour period. Each complete turnkey system is delivered fully assembled, no special pumps or foundations are required. SEEKING PATTERNS BEGIN WITH THE STARBURST, ROCKET SUNBURST, CONSTELLATION, OR PHOENIX WORKING ALONE OR MINGLED TOGETHER. ADD THE OTTERBINE FOUNTAIN (Or LIGHTING SYSTEM FOR SPECTACULAR EVENING DISPLAY AS WELL AS SECURITY OR THE ROCK FLOAT COVER FOR THE ILLUSION OF NATURAL SPRAY.

Otterbine Aerators meet the water management needs of golf courses, parks, recreational lakes, offices, developments, and residential communities. Call or write for more information.

SULLIVAN ELECTRIC PUMP INC
(407) 588-5886

THIS POLECAT CAN RAISE PROFITS PRETTY EASILY TOO.

The Polecat does more than just make it easy to do grounds maintenance. This bucket lift can also raise your bottom line by lowering operating and insurance costs while dramatically raising productivity.

You see, it's fully self-propelled and hydraulically controlled by the operator in the bucket, so you can move in any direction with unprecedented ease. Available with a variety of features, the Polecat can be configured to suit any application.

For the full story, call 1-800-8 POLECAT, In Florida: 305-226-0621 or write Polecat of Miami: 12000 SW 45th St., Miami, Florida 33175.

GO AHEAD! Take Your Best Shot.

We've been setting the standards for Commercial and Industrial sand for 47 years.

Choose from 80 different grades including the finest:

- Greens Mix Sand
- White Trap Sand
- Choker Sand
- Dry, Sterilized Top Dressing Sand
- USGA Peagravel

All our sands meet USGA Requirements

For the best product and customer service, call one of our three Florida locations today.

Post Office Box 35
Hwy. 17 & 92 North
Davenport, FL 33837
Phone (813) 422-1711
FAX (813) 422-8610

JACKSONVILLE BRANCH
600 East 8th Street
Jacksonville, FL 32206
(904) 355-0516
FAX (904) 355-2022

MIAMI BRANCH
4101 N.W. 70th Avenue
Miami, Florida 33165
Dade (305) 593-1430
Broward (305) 524-5322
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
When it comes to service...
We're your best shot!

Design, sales, installation and service of all types of golf course irrigation pump systems. Fully stocked warehouse with the most pump equipment in South Florida.

Fully equipped, radio dispatch trucks provide 24 hour emergency service.

Complete crane service.

Inhouse pump & motor repair.

Licensed Electrical Contractors.

- Otterbine Aerators
- EPS Landscape Pump Station
- Wesco Fountains
- Lightning Protection Equipment
- Clayton Valve Parts
- Wessels Hydropneumatic Tanks
- Self Cleaning Intake Screen

Sullivan Electric & Pump
Fla. EC-1117
(407) 588-5886

Your Sand Man

Choker Sand • Greens Mix Sand • Pea Rock
White Trap Sand • Dolomite • Hi-Cal

Dry Sterilized Top Dressing Sand

All Sands meet U.S.G.A. Specs

E. R. JAHNA INDUSTRIES, Inc.
Lake Wales, FL 33859-0840 • (813) 676-9431
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 spokesnematode for the Steinernema. We have taken The Nematodic Oath to seek out and destroy the 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
With REWARD® herbicide, there's no waiting for it to go to work.

Because REWARD is absorbed by broadleaf and grass weeds just minutes after application. On golf courses, around greenhouses and nurseries, in right-of-ways — wherever you have a weed problem. And because it works much faster than Roundup and other herbicides, REWARD can be used in a lot more situations. Plus it's rainfast in only 30 minutes.

Also with REWARD, there's no worry about the surroundings. It stays where you spray it, controlling weeds without affecting non-target vegetation.

REWARD herbicide. For broad-spectrum weed control without the wait — and without the worry.

For more information, contact your distributor or call Zeneca at 1-800-759-2500.
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 sensitivity.”

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 existence 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.
KEEPING CUSTOMERS SATISFIED FOR OVER FORTY YEARS.

Our unique approach to the business over the years has made us many friends and loyal customers. The reason can be summed up in three words: Quality. Support. Service.

NUCRANE MACHINERY
2020 Seabird Way
Riviera Beach, FL 33404
(407) 842-0440

417 Central Park Dr.
Sanford, FL 32771
(407) 323-9555

11820 Lacy Lane
Ft. Myers, FL 33912
(813) 275-4441

72104 Corporate Way
Thousand Palms, CA 92276
(619) 343-0270
Exclusively.

As superintendent of a world famous Tournament Players Club course, Fred Klauk sets the highest standards possible for himself and his crew. At TPC Sawgrass, only the best will do. That's why the TPC network chose LESCO to be the exclusive supplier of golf course accessories to its 13 courses. LESCO's extensive Tournament Golf Course Accessory line combines durability, ease of maintenance, and the dependability you expect from a company with more than 30 years of service to the golf industry.

LESCO's extensive Tournament line includes a new aluminum ball washer, bunker rakes, personalized flags and flag poles, cups and cup cutters, signs, turf marking paint and much more. Superintendents count on LESCO products to perform season after season. And they do.

When only the best will do, do what TPC did. Call LESCO at (800) 321-5325.