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### President's Message



What do we do when the well runs dry? What do we do when Mother Nature says she will not cooperate - she will not provide what we need in the quantity and quality we assume is unending?

Perhaps I am being over pessimistic, but I do not see how we can continue to demand the ultimate "wall to wall" perfection when we are so dependent on basic commodities over which we have no control.

Understand the "we" refers to the golf industry — architects, developers, builders, installers, educators, researchers, equipment and supply manufacturers and marketers, golfers of all abilities, and — of course — we, the superintendents, who ultimately are placed in the position of "guardian angel" of man's evolution in golfing desires and nature's reluctance to succumb to these desires.

Please do not misinterpret my thoughts. I am not condemning the occupation I enjoy and which provides my livelihood, but I do wish to point out that we can no longer be insensitive to the scarcity of vital and politically volatile ingredients which are an absolute basic necessity for survival. The recent water shortage is presently foremost in prominence and is an excellent case in point. It is possible to literally have the well run dry.

It is conceivalble to design, build, supply, and maintain a challenging and enjoyable golf course and at the same time conserve energy and use of politically potent life sustaining elements. Golf courses of relatively shorter yardage, smaller greens, more limited manicured green area, and more rough area in natural growth with no supplemental cultivation produce a happy medium between our present expansive park like atmosphere and a more positive test of exacting golf. The benefits of open green areas to society are immeasurable, but requirements for existence cannot exceed the availability of sustenance.

I would like to see and, humbly predict that, the golf courses of the "1990's" will be more discerning of nature and as such, by design and cultural maintenance practices, will place more golfing emphasis on skill. Bureaucratic regulations and environmental restraints will dictate further conservation reformation. Let's be prepared to graciously accept the inevitable and, at the same time, vigorously oppose the ridiculous, selfish intent.

We certainly cannot be defeated by nature's eccentricities or by over zealous preservationists, but the well must not be permitted to run dry - we all have too much at stake.

Bill Wigner

### The Florida Green The Official Bulletin of the Florida Golf Course Superintendents Association Florida Green Phone: Days - (305) 793-0069 or 793-2497 **Officers and External Vice Presidents for Florida G.C.S.A.** BILL WAGNER..... President Tequesta Country Club 22 Pine Tree Circle, Tequesta, FL 33458 • (305) 746-4408 KEVIN DOWNING, C.G.C.S. .....Vice President Atlantis Golf Club 301 Orange Tree Dr., Atlantis, FL 33426 • (305) 965-6316 DON DELANEY, C.G.C.S. ..... Secretary-Treasurer Isle Del Sol Country Club 6025 Sun Blvd., St. Petersburg, FL 33175 • (813) 866-0313 PAUL TURCOTTE.....South Florida JOHN HAYDEN, C.G.C.S. .....North Florida City of Miami San Jose Country Club 607 Bowles Court, Neptune Beach, FL 32233 • (904) 733-3464 1802 N.W. 37th, Miami, FL 33125 • (305) 579-6920 FRED KLAUK ..... CHARLES RETTEW, C.G.C.S. .....Gulf Coast .....Palm Beach Pine Tree Golf Club - R.R. #1 **US NAS Recreation Department** Pine Tree Box 200, Boynton Beach, FL 33436 • (305) 732-6404 Route 8 Box 695, Pensacola, FL 32506 • (904) 455-2555 TOM BURROWS.. ..... Treasure Coast DAN MEYERS, C.G.C.S. .....West Coast Turtle Creek Club Carrollwood Village Golf Club Club Circle Drive, Tequesta, FL 33458 • (305) 746-8911 13903 Club House Drive, Tampa, FL • (813) 961-1375 200 Inverness Ave., Tampa, FL • (813) 985-2812 JAMES ELLISON.....Central Florida ROYCE STEWART..... .....Suncoast Bay Hill Club and Lodge Conquistador Bay C.C. 6200 Bay Hill Blvd., Orlando, FL 32811 • (305) 876-2402 4400 Conquistador Pkwy., Bradenton, FL 33507 • (813) 756-9555 BOB SANDERSON, C.G.C.S. ..... Everglades Port Charlotte Golf Course 425 Oneida, Port Charlotte, FL 33952 • (813) 625-7192

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18th Green at Bay Hill Golf Club in Orlando. See article on Page 15. Cover Photo by Dan Zelazek.

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# Editorial

Turfgrass in Florida is a billion dollar plus industry. The University of Florida has been appointed guardian of this industry to help us prosper through research and extension.

For the past two years The Florida Turfgrass Association has applied considerable pressure on the turfgrass research and extension program at The University of Florida. As of this writing the fruits of this labor are not evident.

There appears to be a definite lack of commitment from the university towards turf. Three cases in point are:

- 1. Appointment of a *part time* turf research coordinator for this billion dollar industry.
- 2. The closed mind attitude of some administrators and research people.
- 3. The dearth of extension publications from the university for the past four years. How can research get into the hands of industry without an effective extension program?

"The Florida Turf", published by The Florida Turfgrass Association is supposed to be a vehicle for getting research information from the university to the industry. Over the past year the editor of "Florida Turf" has literally begged the university personnel for papers to print. During the past month three very good research papers from university personnel have appeared in turf magazines outside the state of Florida. Is this proper support of our Florida turf industry?

It looks like the FTGA will have its first \$100,000 plus year collecting funds for research. The figure could reach a quarter million. That will buy a lot of research. A lot of pressure has been applied by industry on the FTGA Board of Directors, even suggesting the funding of research outside the state of Florida.

We cannot allow this to become an alternative. We must dedicate our efforts to helping to correct what we all agree is a poor situation.

# **RESEARCH + DOLLARS = SOLUTION**

By CHIP POWELL The Deerwood Club

During the past years, there have been several problems that have come up over and over again. I cannot count the number times I've heard superintendents lament about the problems of government regulation, energy, price and availability of fertilizers and pesticides and — more recently — the water shortage.

While there are no easy solutions to these difficult problems, I believe it is important for us all to realize there are some very constructive things we can do about them.

On the matter of government regulation, we need only look at how other industries are working with the problem to see what must be done. Other industries hire a lobbyist and put him to work watching the legislature to protect their interests.

At the recent F.T.G.A. board meeting in Orlando, this subject came up. The board has been investigating this matter and has discovered we could contract the services of a lobbyist, who is currently working with some other agriculturally concerned industries, for no more than \$10,000 per year.

It seems the only obstacle between us and this vital service is the money. It does not take much to figure out that this sum represents only about \$15 per year from each golf course in Florida. It is difficult for me to accept the idea that our industry cannot easily come up with this sum of money.

In regard to our dilemma with the increasing scarcity of water, ferilizers, pesticides and fuels, we also have a clearcut method of working on these problems. The method is called research.

One of the major problems we face with research is cost. Individual golf clubs cannot afford to equip and staff their own research and development departments. The only other option is for each club to come up with an affordable contribution to be joined with contributions from other concerns in the turf industry. The funds would then be directed into the hands of institutions that are set up to do research.

The Scholarship and Research Foundation of F.T.G.A. is the perfect organization to handle this. It is already organized, staffed and has non-profit status so all contributions are tax deductible. In addition, the staff is entirely volunteer and the foundation's small administrative cost is handled by the general fund of F.T.G.A. This means 100 per cent of every dollar donated goes directly to fund scholarship and research.

It is vital the club industry realize what a well-funded scholarship and research program offers. It is important to understand scholarship and research complement each other. One cannot exist without the other, as we will try to show in the following paragraphs.

Money directed towards scholarships accomplishes many things. First, if it is awarded to a graduate student, the student will do research for his graduate thesis. Hence, money spent in this way will not only yield some immediate research findings, but will also help train a researcher of tomorrow. Money awarded to undergraduate students will promote the training of the superintendents of tomorrow. This is extremely important because it is these trained professionals who will put the research findings to work in the field and help the industry realize the fruits of the money used to fund research.

I would like to point out that clubs are not capable of training a superintendent on location. They must rely on colleges and universities for that training. After employment the superintendent can keep up to date by taking advantage of continuing education made available by F.T.G.A., G.C.S.A.A. and local superintendents chapters. This is necessary but the fact remains that clubs must rely on colleges and universities for the intial training.

It must also be pointed out how desperately we need research. Consider these problems: mole crickets, contaminated grasses in putting greens, reduced pesticide availability, energy related problems, double digit inflation and throw in the water shortage. Research findings in these areas could not only save the industry many dollars, but could mean the survival of golf turf as we know it today. I am not trying to be a prophet of doom; I am just trying to recognize our need to act and act soon.

In the case with scholarship and research, as with the lobbyist, money is our obstacle. However, in this area our need for money is much more substantial and much more difficult to attach a specific figure to. It is for this reason (Continued on Page 8)

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### RESEARCH + DOLLARS (Continued from Page 6)

F.T.G.A. and the Florida G.C.S.A. have agreed we should begin collecting \$500 per year from each 18 holes of golf in the state. One hundred courses would provide \$50,000, 200 courses \$100,000 and so on. There is no question the amount of funds needed to initiate the type of program we need is in the hundreds of thousands of dollars per year. You need only look at your own budget to see what \$100,000 buys to appreciate how much money is needed.

This program has been promoted during the past months and is becoming very widely accepted. I have no official count of contributors yet, but several checks have already been received and numerous courses are committed to donate the funds between now and October when F.T.G.A. holds its conference and show.

Each superintendent in the state must get tuned into this idea and take responsibility for selling it to his club just as he would any other vital item in the budget. If funds are not in the present budget, they can be raised in many ways such as raffles and special tournaments held at the club. The presidents of the local superintendents chapters will be able to help in coming up with ideas on how to raise money or how to present it to the board of directors or whoever else must approve the expense at the club.

In about a month, F.T.G.A. will make available a brochure explaining the work of the Scholarship and Research Foundation. Later this year a slide set will be available for use with more detailed presentations. Local chapter presidents will be kept up to date on the progress of the brochure and slides, and it is to them that each superintendent should look for information and answers to questions.

I sincerely hope each of you will give these things serious thought. We should not let a minor amount of money stand between us and the vital services of a professional lobbyist, nor between us and a well-funded scholarship and research program.

Over the years there has been much criticism of how little our professional associations like F.T.G.A. do for us. If we truly want F.T.G.A. to do the things for us we so badly need, we must be committed enough to provide F.T.G.A. with the necessary funds. If we overlook the opportunity to do something about these annoying and costly problems now, we will have only ourselves to blame in the future for the unpleasant consequences of our inactivity.

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### The Evolution of an Equipment Repair Parts Inventory System

By S.F. UDELL Co-Chairman, Greens Committee The Woodlands Country Club

"Your budgetary request for Equipment Repair Parts of \$55,068 is too high." This, I was told by the Finance Committee Chairman of our two golf course complex in September of 1978.

We usually arrive at the final budget figure for the complex by adding an approximate allowance for rising costs and contingencies to the actual amount spent the previous year. The \$55,068 figure did seem inordinately high, particularly when compared with actual expenditures of \$26,958 in 1974-75, \$29,554 in 1975-76 and \$34,907 in 1976-77. The request for 1978-79 represented a 36% increase over projected 1977-78 expenditures. We therefore felt we should make do with a figure that excluded rising costs and contingencies.

At about this time, Dr. Max Brown submitted a report to our Board of Governors based on a three-month study of our entire greens operations. He stated our actual expenditures could be broken down into four categories: payroll and payroll taxes 61%, fertilizer and herbicides 12%, electricity and fuel 8% and equipment repair parts 11%. According to Dr. Brown, "the mean average for Equipment Repair Parts for golf courses in southeast Florida is 7.1%." He considered expenditures in the first three categories either uncontrollable or at an irreducible minimum.

Since I agreed with the Finance Committee Chairman, and knowing our expenditures were way out of line compared to the statistics provided by Dr. Brown., I was determined somehow, some way, these costs would be cut. For want of a better yardstick, I took Dr. Brown's mean average figure of 7.1% and arrived at a new total of \$38,000. The revised budget was resubmitted, accepted and approved.

It was apparant drastic control measures had to be instituted to meet this budget. The department consisted of a head mechanic, three full time mechanics and one part time mechanic — and no one was keeping any records.

The first step was obvious: daily job records had to be kept. A supply of three-part snapout forms modeled on those used by service stations was ordered. The forms provided space for listing parts, their cost and labor cost.

It was the head mechanic's responsibility to keep the records, noting the description of the job, the date and the

name of the mechanic who performed the work. The number of hours worked was also noted at an hourly rate arrived at by adding a percentage for payroll taxes, unemployment insurance, etc. to an average hourly cost (salary) of the entire work force.

The original copies were kept in numerical order in a binder, the dupicates were placed in individual manila folders assigned to specific machines. The head mechanic kept the third copies as a record of preventative maintenance, parts used and for whatever need future experience would dictate.

The system was started on October 1, 1978 and worked out very well right from the beginning. The time required for record keeping was negligible and easily absorbed as we were averaging only six jobs a day. After three full months, it became clear we were garnering a wealth of feedback information. According to our Accounting Department, purchases for the period totaled \$12,119; however, the total cost of parts used as taken from the job tickets was \$7,531. Why the discrepancy of \$4,588? The most logical assumption was the dollar value of our inventory had increased by that amount, but without records this had to be merely an assumption!

Armed with these figures, we arranged a meeting with the head mechanic and the greens superintendent. It was agreed to establish an inventory control system immediately. The first step was the taking of a physical inventory on a crash program basis. Under the direction of the head mechanic a team of three girls was organized. They were drafted from the maintenance crew, selected on the basis of their educational background, innate intelligence, etc. They worked during slack periods, after hours, and full time on rainy days. The work was completed on January 12.

The procedure was quite simple. The part number, description, and the number of units were annotated on lined  $8\frac{1}{2} \times 14$  sheets. Parts were categorized as either related to specific equipment or interchangeable. For example, all parts used to repair Greensking mowers were listed under the heading "Greensking". Parts used interchangeably were listed under separate headings such as "bearings", "fanbelts," and "sparkplugs". The completed sheets were given to the head mechanic who added the unit cost, multiplied this figure by the number of units and entered the total in the last column on the right hand side of each (Continued on Page 10)

### **INVENTORY** (Continued from Page 9)

sheet. At the bottom of each sheet a total for this column was annotated. By adding up the bottom line figures from the 55 inventory sheets, we arrived at a dollar value of the inventory - \$30,000.

We found that our inventory consisted of 2,100 different categories of parts with a total of 5,000 units.

Once the initial inventory was completed a method to keep it up to date had to be devised. Many suggestions were advanced by the superintendent and members of the Greens Committee. We seriously considered computerizing the initial inventory through a rental service. Then daily information on parts used could be taken from the job tickets and fed to the computer. The same could be done for parts added to the inventory by using delivery receipts of incoming shipments. We felt this method was not quite tailored to our needs, but that the same principles could be employed and handled by our own people.

The first step was to index every item on all 55 sheets. We used a technique similar to the Dewey Decimal System used by public libraries. For example, the first 26 items were indexed from A1 to Z1, the next 26 items from AA1 to ZZ1, and so forth. Our last entry was NNN30, the 2,107th item. This method was chosen because a straight numerical system could possibly cause errors due to conflict with parts numbers.

The next step was to design an inventory card — one to be used for each part category. We were able to include all the desired information on an  $8 \times 5$  index card. The card illustrated below shows a typical entry. The cards were filed in a



double metal file, two drawers side by side and placed on a desk in the general office of the equipmnent shed. To make it easier to find a particular card, we placed colored pressboard dividers between each alphabetical grouping. The dividers had elevated tabs and were stepped from left to right. They can be purchased at any business stationery supply house.

The problem now was to transfer the parts listings from the 55 sheets to the new "inventory" cards. With the cooperation of Club Manager Sam Grayson, a team of three clerks was enlisted from the Accounting Department. They were furnished with a copy of the inventory sheets from which they transcribed the needed starting information, namely the index number, part number and description, equipment for which used, the date (January 12), the number of units on hand, the unit cost and the total dollar amount. The job was done in less than three days.

The new system was now ready to go. At approximately the same time, we were fortunate in securing the services of Kenneth Nicholson as our new greens superintendent. We outlined the new inventory control system to him seeking his reaction, comments and suggestions. His response was most enthusiastic. He welcomed it without reservation, but suggested that it be kept on a daily basis. This would make it a true perpetual inventory and make it a simple matter to prepare an end-of-the-month inventory figure for the Finance Committee.

The starting date for the new system was February 1, concurrent with the beginning of Mr. Nicholson's tenure. The daily work tickets and delivery receipts for the period from January 12 to February 1 were entered on the inventory cards within an hour or two.

How is this system working? At the end of each work day, our head mechanic, Cesar Condemarin, delivers all the completed job tickets and all the day's delivery receipts to the office. Using a copy of the January 12 written inventory, he adds the appropriate index number beside each part entry on the job tickets and delivery receipts. As a result, it takes our part time secretary no more than 15 minutes a day to pull the necessary cards from the file, make the entries and refile the cards. On the last work day of each month, it takes only minutes to compute the dollar value of the inventory and submit it to the Accounting Department. They in turn provide us with an Operations Statement which shows the cost of "equipment repair parts" for the month adjusted for an increase or decrease in the final inventory total. This figure is then carefully checked against the total parts utilization for the month, taken from the daily work tickets.

By June 30, five months of operation had elapsed with no significant discrepancies. The figures for inventory (dollar value), parts utilization and purchases were all in balance. The bottom line figure was \$11,469. This was an average of \$2,294 per month compared to our initial budget request which averaged \$4,589 per month. The tremendous drop was dramatic indeed. We have been at 5.4% of total budget as opposed to our original projection of 7.1% and actual previous expenditures of 11%.

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By CLINT SMALLRIDGE, C.G.C.S Everglades Chapter Royal Poinciana G.C.



Replacement of golf course equipment can be one of the most difficult expenditures to be understood by Board and committee members. Being geared mainly to business and financial matters, justifying the need to replace equipment to such a group can be very effectively explained by the following article, which has proven successful to both my club and other area superintendents:

### WEAR FACTOR - THE REASON WHY

Wear on equipment (mowers, tractors, payloaders, and our own personal automobiles) is best defined in terms of miles.

Most modern day auto enthusiasts know and understand that when your car reaches 100,000 miles, it is about worn out. Keeping that in mind one can readily see the parallels in the following illustration:

Most American cars are driven on the highway at approximately 60 miles per hour using high gear. The engine r.p.m. (revolutions per minute) is about 2,100. In this example, if you were to drive for three hours, you would cover 180 miles.

Using this wear factor, we can convert hours of use on a mower, or any other piece of golf course equipment, to *miles*. Although golf course equipment customarily operates at only five to six miles per hour, and sometimes less, our engine r.p.m. is still at 2,100 and higher on one and two cylinder engines. The slow forward speeds are achieved by using a lower gear ratio.

With this in mind, the following comparison will be made using our triplex mowers as an example. They mow greens every day, seven days per week, 365 days per year. It takes an average of three hours per day. This means that the wear factor is equal to 180 miles per day — multiplied by seven days to equal 1,260 miles per week — multiplied by 52 weeks in a year, equaling 65,520 miles — multiplied by five years, which totals 327,600 miles.

In checking with engineers to confirm my theory on wear, I learned many other interesting facts about our business. Some of these engineers will tell you that stop-and-go driving and turning increases the wear factor greatly. With this in mind, consider the back-and-forth operation of most of our golf course equipment every day.

Another interesting point to be considered is that a car going down the highway at 60 miles per hour causes a cooling wind created by the velocity. We don't have that velocity for cooling an engine when operating at only five to six miles per hour. In addition, our radiators often get clogged with grass clippings and other debris common to golf courses, resulting in temperatures running even higher which further increases the wear factor.

There are other factors that contribute to the wear and tear, such as the early morning activity in the dew and frequent running through and over chemical and fertilizer applications, all of which are corrosive elements. Preventative maintenance and level of training of the operator can contribute greatly to the success and life of a piece of equipment.



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# Crowfoot

Open

### By JIM ELLISON

The Florida Golf Course Superintendents Association and the Bay Hill Club and Lodge are proud to present the 5th annual Crowfoot Open on Monday, August 31. The open will be hosted and co-sponsored by the Central Florida Chapter.

This year's event is expected to be a special one with the tournament located at Arnold Palmer's Bay Hill Club in Orlando, home of the Bay Hill Classic.

Bay Hill will be able to accommodate most of the participants at the 72-room lodge and there are many other hotels within two or three miles of the course. DisneyWorld, Sea World, Citrus World and other attractions in Orlando should encourage many participants to make the Open a three-day vacation.

The great success of the Crowfoot Open during the past few years has brought it wide recognition as one of the most exciting tournaments for people in the turf industry.

The Crowfoot Open is a one-day shotgun start tournament. Golf course superintendents and commercial industry associates who are members of qualified chapters are eligible to participate. Each chapter will receive a designated number of entry forms with a detailed format of the tournament day festivities and registration and lodging costs. All entry forms and registration fees must be submitted to chapter presidents or external vice presidents. The chapters must submit forms and fees to the Crowfoot Open Committee no later than August 1.

The festivities will begin with a bass fishing tournament on the beautiful Bay Hill lakes from 5:30 to 7 a.m. A winner's trophy and other prizes will be awarded. Tournament registration and a full course breakfast buffet will be held from 8 to 9:30 a.m. The shotgun start will be at 10 a.m. and refreshments will be served on the course for the duration of the tournament. A luncheon of cold sandwiches will be available at the turn.

Immediately following the tournament at approximately 3 p.m., there will be a cocktail party for all players and guests in the Bay Hill Classic Room. The awards banquet will be in the main dining room from 4 to 6 p.m. There will be a gourmet buffet followed by the announcement of the tournament results and awards presentation.

During the banquet a drawing will be held for a vacation at the Bay Hill Club including golf and lodging. The drawing will also include golf clubs, golf bags, shoes and other prizes.

Much of the Crowfoot's success can be attributed to Suntree's membership. Last year 25 men and women volunteered to assist the Crowfoot Committee, Suntree's executive staff and association volunteers in scoring, marshaling, registration and other activities.

As the 1981 tournament nears, the Crowfoot Committee is quite proud of the accomplishments of the past few years. Last year, in addition to hosting an enjoyable event, the tournament submitted \$500.00 to G.C.S.A.A. to help the national association support professionalism, \$500.00 to F.T.G.A. for continued support and \$500.00 to Lake City Community College to be used for two \$250.00 scholarships to worthy students.

The first Crowfoot Open was held at Poinciana Golf and Racquet Club in 1977 and the second at Suntree Country Club in 1978. The Everglades Chapter won the first and second opens by one stroke over the host Central Florida Chapter. In 1979 the Central Florida Chapter defeated Everglades and five other chapters to capture the title.

The West Coast Chapter won the title for the first time in 1980. Low Gross team honors went to North Florida Chapter and individual honors to Fred Klauk.

Early registration is important because of an expected capacity field. We'll see you in Orlando.





# Nematode Control Update

By MIKE COOK Nematode Controllers, Inc. Brandon, Florida

While traveling the state of Florida, I hear many questions concerning nematodes and their control. I hope to answer the ones most frequently asked.

What do nematodes look like? Most are cylindrical and slender in shape. Semitransparent and very small (.5 to 3mm in length), they can normally be seen only under a microscope which is also used to classify and identify the species.

The nematode has a stylet on one end which is used to penetrate the plant. Those that completely enter the tissue of the plant to feed are classified as endoparasitic; those which feed exteriorly through the root tissue are ectoparasitic.

How do you know you have nematodes? The superintendent can begin watching for visible symptoms in turf quality such as wilting, thinning, chlorotic spots which look like a nutrient deficiency, no lateral root growth, very sparse feeder roots and shallow root system.

Once you notice some of these problem areas or symptoms, a soil sample should be taken for a nematode analysis. When taking samples, make sure they are kept cool. They need not be refrigerated but keep them cool enough to insure the survival of your count. The samples can be kept in a styrofoam container if they are not sent in for immediate analysis. If samples are allowed to sit in the trunk of a car or truck, the hot sun will kill over half the count and the reading will not be true.

When pulling samples take between 10 and 14 plugs from a fairway at that many different locations. Mark off a one square foot area and return to the exact spot to make the test valid. Do not take bare area plugs. Take plugs from the turf adjacent to the bare area. Put all the plugs taken from the same fairway in one bag. Once the bag has at least 12 plugs in it, shake it up to blend the soil together. Be sure to label the outside of each bag with the fairway number using a marking pen.

The samples can be sent to the University of Florida in Gainesville, U of F extension station in Ft. Lauderdale, or to a private laboratory such as Applied Agricultural Research Co. in Lakeland. Private labs usually return analysis results within a week depending on their work load. To help you better understand your nematode analysis, I have listed those nematodes most commonly found in Florida which can be detrimental to turf quality. Beside the type of nematode is the count level (per 100 cc of soil) at which treatment is recommended.

Nematodes common to Florida:

1. Root-Knot41	6. Stubby Root 41
2. Sting 10	7. Cyst 41
3. Lesion	8. Stunt 81
4. Lance	9. Ring
5. Spiral 81	10. Sheath 151

What chemicals are available today for treatment of nematodes? At the present time the most reliable means of control is by proper application of a nematicidal chemical. EDP (Ethylene Dibromide) is a liquid nematicide injected into the soil. Nemacur, Dasanit and Mocap are granular nematicides.

Unfortunately, there is NO chemical on the market today which will completely eradicate the nemotade and still be used safely on established turf. Therefore, we have to control nematodes to a point at which we can live with them. EDB treatment seems the best way to control them economically.

The EPA has put a temporary restraining order on DBCP (Dibromochloropropane) which states in so many words there will be no use or resale of DBCP in the continental United States for a period long enough for more studies to be made on the chemical. Personally, I feel the outlook for release of DBCP back on the market for restricted use is very bleak. Once the EPA pulls a product as fast as they pulled DBCP, it is very doubtful it will ever return. Enough said about a product over which we have little, if any, governing power. The job now is to find a product which will take the place of DBCP.

All my experiments during the past two years lead me to believe EDB and DD are the best products available for controling nematodes economically. I can illustrate this with the figures below. They are based on samples from two different courses. (Continued on Page 18)



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### **NEMATODE** (Continued from Page 16)

After		Two Months After Before		Three Months Before		Four Months Before		
#1	#2	#1	#2	#1	#2	#1	#2	
80	62	66	0	24	0	42	20	
110	38	36	54	42	22	28	24	
66	54	82	40	44	24	0	14	
72	238	12	88	66	144	24	96	
40	356	64	144	52	88	24	112	
0	24	0	0	8	0	28	0	
0	6	0	0	0	0	0	0	
0	0	0	24	0	0	0	0	
180	1082	48	288	88	450	64	492	
92	72	88	0	24	12	0	28	
	#1 80 110 66 72 40 0 0 180	#1         #2           80         62           110         38           66         54           72         238           40         356           0         24           0         6           0         0           180         1082	After         Mail           #1         #2         #1           80         62         66           110         38         36           66         54         82           72         238         12           40         356         64           0         24         0           0         6         0           180         1082         48	After         Months Before           #1         #2         #1         #2           80         62         66         0           110         38         36         54           66         54         82         40           72         238         12         88           40         356         64         144           0         24         0         0           0         6         0         24           100         24         40         40	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	After         Months Before         Months Before           #1         #2         #1         #2           80         62         66         0         24         0           110         38         36         54         42         22           66         54         82         40         44         24           72         238         12         88         66         144           40         356         64         144         52         88           0         24         0         0         8         0           0         6         0         24         0         0           0         24         0         24         0         0           0         0         24         0         0         0           180         1082         48         288         88         450	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$ \begin{array}{c c c c c c c c c c c c c c c c c c c $

You can see that the overall treatment with EDB and DD has helped reduce the overall nematode population from the time the courses were treated in April through late July. In some cases you will note a few species which were not present in the previous months but are now. In other cases, there is a reduction in count, but it goes back up the next months. In still others, we have reduced the count considerably but not down to the desired level.

These two courses had never been treated before with any nematicide. Following the treatment the turf quality improved 100 per cent leading me to believe the treatment really helped by reducing nematode count. These courses may need another treatment to further reduce the count to accepted levels.

Proper soil moisture is a key ingredient in the application process. The soil must be moist prior to application. After the material has been applied use your irrigation system to apply between 1/4 and 1/2 inch of water per day for at least the first five days. This seals the product in the soil and gets the material where it is needed.

I hope this article will help to answer a few of your questions about nematodes and their control. Research is being done every day and it is hard to keep up with all the advancements. Therefore, I recommend you keep in touch with your county agricultural agents, Dr. Dunn at the University of Florida and the extension services throughout the state.

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### Early Extinction By Excessive Inflation

By JAMES P. CALLAGHAN Rio Mar Country Club

As an agent for my employer, I purchased a specialized piece of turf equipment for \$5,200 in September, 1978. This month I purchased the same updated model for \$8,500. This represents a 63% increase in just 28 months or 27% per year, which is more than double the overall inflation rate. I question the accelerated rise in cost. Is it inflation – or what?

Granted, there are several innovations found on the new piece of equipment but this alone shouldn't account for such a drastic increase in price. In fact, some parts are no longer found on the new model. I ask what accounts for all the added expense because I can't see it!

However, I do see an ominous consequence on the horizon if some of the specialized turf equipment introduced during the last decade continues to increase in price at such an alarming rate. Coupled with high energy and maintenance costs, this equipment that has become commonplace on the golf course may soon be priced out of the market. Its remains will be found among those of the dinosaur.

In the future, sound economics will be scrutinized in every dimension. Manufacturers take heed — for soon it may be cheaper to cut our greens with an updated circa 1930 greensmower!

### FLORIDA PESTICIDE USE SURVEY

Preliminary data shows that the golf course superintendents used a total of 63 pesticides on golf courses in Florida which includes 20 fungicides, 24 herbicides, 15 insecticides and 4 nematocides. The top 5 pesticides used for golf courses were:

Rank	Pesticide	Pounds ai		
1	DBCP	274,773		
2	MSMA	256,990		
3	toxaphene	255,956		
4	chlorpyrifos			
	(Dursban)	81,273		
5	trichlorfon (Dylox)	71,253		

It seems to me that compared to the intricate workings of a golf course, a moon rocket is a simple toy.

David J. Gradman Palm Beach Country Club

### MAN DESTROYS FLEAS, HOUSE

The next time Paul Molz needs to get rid of a flea and tick problem in his vard he's going to use a water-based spray that doesn't burn - not gasoline.

The 31-year-old North Miami man accomplished his purpose when he sprayed his lawn with gasoline. What Moltz didn't figure on was the pilot light in his water heater.

Half of his one-story house was burned in the resulting blaze, and Molz was hospitalized in fair condition with second-degree burns on his legs.

Molz's Irish setter, Sinbad, was having problems with fleas and ticks, which frequently are a problem with South Florida pet owners because of the year-round warm climate.

Molz figured spraving the lawn with gasoline would eradicate the pests.

Dade County firefighters said the gasoline fumes were ignited by the pilot light of the water heater on the porch of his house.

The fire spread quickly through the house and it took six fire units 16 minutes to douse the flames. Firefighters estimated damage to the house at \$25,000.

(Reprinted from the Palm Beach Post Times and Associated Press.)

### The Golfing Superintendents

During the recent Palm Beach county amateur sectional qualifying rounds, six area superintendents distinguished themselves not only as turfgrass managers but also as competitors. Over 400 players try to qualify for the event, one of the largest local tournaments in the nation.

Three different Palm Beach county courses were used. At Wellington Country Club Kevin Downing of Atlantis Golf Club tied for fourth place with 76. Also qualifying was Glen Klauk of Delray Dunes with 83. At the President Country Club north course, Mark Henderson of Mavacoo Lakes Country Club and Bill Whitaker of Seminole Golf Club shot 71 and 72 respectively. These great scores enabled Henderston to tie for third place and Whitaker for seventh. At the Indian Spring Country Club Fred Klauk of Pine Tree Golf Club took the low qualifying honors with a two over par 74. Pete Brooks of the Palm Beach Golf Club was also able to qualify with 82.

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# South Florida Sunshine

By BRAD KOCHER Inverrary Country Club

To properly equip a new 18-hole golf course, one can easily spend upwards of \$200,000. Some of this equipment will need to be supplemented within a two-year period and much of it phased to back up or second line equipment within four to five years. Certain items if properly maintained (tractors, trucks, utility vehicles & sprayers), will remain front line equipment for five to 10 years, but most other turf equipment will need to be replaced or supplemented within that four to five years. During this time the equipment begins to need minor repairs that become an expense after the first year warranty is completed. As the equipment grows increasingly older, minor repairs become major repairs, more parts must be purchased, mechanics' labor is increased, operator furstration is increased, and efficiency is lost.

At some point in time, it becomes economically unfeasible to continue to repair existing equipment and new equipment must be purchased. As Golf Course Superintendents, we are also equipment managers and must be able to determine and advise management when this point occurs.

If we are to be able to properly determine when to repair or replace equipment, we need to keep accurate records. An accountant can accurately judge when an item is an expense, or how to depreciate a capital improvement item. By the same token, we should be able to reflect to management that a particular piece of equipment is costing so many dollars to repair on an annual basis. We are not talking about preventative maintenance, but rather about parts and labor for repairs. Therefore, it becomes somewhat of an accounting determination after a piece of equipment reaches a certain level of repair maintenance. For example, a greensmower at the end of three years may need \$800 worth of parts and labor during the next year to keep in A-1 condition and possibly \$950 the subsequent year. It may be in excellent condition and may have a life of six to seven years. However, from an accounting standpoint, it may be better to replace it after four or five years. One thing to consider is that \$800 or \$950 in a given year for repairs will be mostly eliminated when a new piece of machinery is purchased. Any parts problems in the first year are covered by warranty, and except for some troubleshooting by the mechanic for minor repair problems the end of the year expense is minimal. Accurate parts and labor expense on each item of equipment must be kept and this information will assist in presenting justification for new equipment purchases. If a piece of equipment is costing you \$1,000 a year in labor and material, this figure is nearly eliminated with the purchase of new equipment.

One area that can be easily overlooked is labor for repairs

to equipment. Labor cannot strictly be figured on the time it takes to replace a part. We must consider the time a mechanic takes to troubleshoot on the course, time to tow or haul the equipment to the maintenance area, diagnosis of the problem, finding the proper repair part, ordering a new part and ultimately replacement and testing. If all this time is figured at \$7 to \$10 per hour, it is easy to see how equipment repair cost adds up quickly.

Parts prices are another area that deserves a great deal of attention in figuring costs on a year to year basis. Turf equipment parts are increasing at an alarming rate of 12 to 15% annually. Some parts have increased 25 to 30% annually! This has caused many superintendents to shop for comparable replacement parts. There are several companies that manufacture replacement parts for turf equipment and most are looked upon quite favorably by superintendents as another alternative to an already limited market. It does not make much sense to spend a great deal more for bearings, oil filter seals, engine parts, hoses, etc. when these items are available from specialty companies. In addition, there are a few companies who manufacture or supply many of the gears, reels, bedknives, rollers, etc. at greatly reduced prices.

Parts availability and service is another question put to many local superintendents and, for the most part, there has been a general feeling of satisfaction and a marked improvement in these areas over the past few years in the South Florida area. The area turf distributors have been very cooperative in expediting parts deliveries.

Equipment prices, on the other hand, have been a sore spot with most superintendents. Prices have risen annually at 15 to 20% for most turf equipment and 20 to 25% annually for the past two years for some other equipment. This becomes rather difficult for clubs to handle financially when salaries, greens fees, cart rentals and dues at golf courses have not gone up by the same margin. Most superintendents feel trapped when increases like this occur because competition in many areas of the turf industry is minimal. There are limited choices for turf equipment. Distribution is done in regions that require golf courses to buy from certain distributors. Supply and demand in most of the turf industry sort of goes like this, "You've got it and I have to have it." I do not know where competition and "fairness," as one superintendent put it, enter into the picture, but I hope the turf equipment manufacturers can get their act togther and help us maintain a level of price increase that is tolerable and realistic. If we cannot present conditions to our golfers that they expect for a reasonable cost, then the entire industry will lose ground instead of gain.

### **Lake City Alumni Meet**

Alumni of the golf and landscape courses of Lake City Community College returned recently from throughout the south to participate in their annual golf tournament.

This year's event was held at the Lake City Country Club with host superintendent Harold Barnett and host professional Chris Pottle. Brian Silva was chairman of the golf and banquet.

Billy Harkins, of Stuart, won the tournament with a 71. Runnerup was last year's FTGA champ Robby Robbins, Gainesville, with a 72.





### The Look of a Champion

Bill Whitaker, CGCS, Seminole Golf Club, won the 7th Annual Poa Annua Classic Golf Tournament. Bill will now be on the 1982 team representing Florida in the GCSAA Golf Tournament at Disney World.



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Photograph of Eldorado Country Club, Indian Wells, California



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### The Agoney of Defeat

Bill Whitaker, Fred Klauk and Karl Jacobs had a sudden death playoff in the 7th Poa Annua Golf Classic. Bill won on the second hole.

### **The Real Winners**

Rick Cook, superintendent, Mirror Lakes Golf Course; Clint Smallridge, President, Everglades Chapter; Bill Wagner, President, Florida GCSA; Bob Sanderson and his registration crew; and the celebrated Doc Anderson and his Hoedown Bar-B-Que Boys. I can't wait till next year.

i i III I



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## **Agronomy Quiz**

Match the following:

1	Blade	6Blend
2	Xylem	7Phloem
3	Grass	8 Overseed

4. \_\_\_\_ Herbicide 9. \_\_\_\_ Evapotranspiration

- 5. \_\_\_\_ Sheath 10. \_\_\_\_ Internode
- A. The principal food conduction elements of vascular plants.
- B. The flattened portion of the leaf located above the sheath.
- C. To seed onto an existing turf with temporary cool season grass.
- D. Total loss of moisture through the process of evaporation.
- E. Any plant of the family gamineae.
- F. A pesticide used for controlling weeds.
- G. A combination of two or more cultivars of a single turfgrass species.
- H. Portion of the stem between two successive nodes.
- I. The principal water conducting element in vascular plants.
- J. The tubular basal portion of the leaf that encloses the stem.

### SOUTH FLORIDA SUNSHINE (Continued from Page 20)

### NOTES:

Try this new alternative to using pin position indicators (whiffle balls on flagpoles). Use red, white and yellow colored flags. Red is used in the front third of the green, white in the middle and yellow in the back. The cupcutter takes one extra flag and pole with him in the morning and takes the old flag and pole to each successive green. It's not as much of a problem as you would think, avoids having whiffle balls that slip on the pole, and is very appealing to the golfers. It also greatly reduces theft. For some reason, vandals do not particulary care for numberless flags. Without exageration, we have reduced our flag theft by 80% over the past year!

### ANSWERS TO AGRONOMY QUIZ

Answers: I. B. 2. I 3. E 4. F 5. J 6. G. 7. A 8. C 9. D 10. H



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### Everglades Hosts Poa Annua Classic

Bill Whitaker won the 7th annual Poa Annua Classic in a three-way playoff over Fred Klauk and Karl Jacobs. The team event was won by the Palm Beach chapter.

As always, Everglades Chapter hosted a splendid tournament, played this year at Mirror Lakes Golf Course, Lehigh Acres. Rick Cook was host superintendent and Mel Elby, host professional.

Whitaker, a former national lefthand champion, is superintendent of the world famous Seminole Golf Club, Juno Beach. His par 72 was tied by Jacobs of Westview Country Club, Miami, and Klauk from Pine Tree Golf Club, Boynton Beach. Jacobs was eliminated on the first playoff hole. Whitaker defeated Klauk, the defending Crowfoot Open champion, on the next hole. Joe Ondo of Winter Pines Golf Club, Orlando, was one shot off the pace with his 73. He was the long drive winner.

The chapter event conducted on the Calloway Scoring System was won by Palm Beach over Central Florida by matching scorecards. Mark Henderson, Mayacoo Lakes Golf Club, paced the winners with a net 71. The Palm Beachers had six players with a net 72.

Doc Anderson and his staff again supplied the excellent food. No trip to the Poa Annua Classic is ever complete without the famous Bar-B-Q!!!



# Standard's Duo-Rake reduces rake replacement cost...and it floats!

After more than 3 years in use, the Standard Pro-Line Duo-Rake is proving to be the toughest, most versatile sand bunker rake ever produced. Rake heads are of a high impact plastic that's flexible in either hot or cold temperatures. Many superintendents are finding that when they use the Standard Duo-Rake, members use them more often. That means smoother traps for all! The Duo-Rake is designed with both teeth for raking the sand, and a blade for smoothing the teeth marks. And yes, the Duo-Rake floats! Talk to your Standard Pro-Line distributor . . . or contact us.

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### **18 WAYS OF MIS-USING EQUIPMENT**

### Remember this is what takes place when you mis-use equipment.

1. Run equipment at excessive speeds.

Result - poor cutting appearance.

2. Run equipment with loose bolts and nuts.

Result - (a) bolts will become elongated due to vibration.

(b) bolts and nuts when lost usually end up between the reel and the bed knife.

3. Run equipment improperly adjusted, such as: (a) belts and chains, (b) clutches, (c) reel and bed knife.

Result - (a) Wear our prematurely and cause undue wear to pulleys, sprockets and bearings (b) wear clutch plates and linings, (c) will not cut properly and will wear bed knife and reel prematurely.

4. Operate with accumulation of grass clippings and dirt in air cooling fins on engine.

Result - will cut out flow of air causing engines to run excessively warm. May cause fires.

5. Operate equipment not properly lubricated.

Result - bearings, shafts, sprockets and all wearable parts will not stand up. This will cause poor performance of any equipment.

6. Operate engine with little or no oil in crankcase.

Result - connecting rod will seize in cylinder.

7. Operate engine with air - cleaner empty.

Result - will affect carburetion giving poor engine performance and shorten life of engine due to dirt entering engine.

8. Using improper equipment for the job. Example using a light duty piece of equipment where a heavy duty should be used.

Result - poor finished job and equipment will not stand the gaff. Example would be - sending a boy to do a man's job.

9. Using improper fuel in engines such as white gas, etc. Result - manufacturer's recommend standard gasoline,

Result - manufacturer's recommend standard gasoline, and substitutes will cause poor engine performance, also wear engine prematurely.

10. Operating equipment with faulty parts.

Result - one worn or missing part will possibly wear five others causing expensive maintenance costs.

11. Using heavy detergent oil in engines or number 10 weight oil.

Result - manufacturer's recommend non-detergent oils and number 10 is **too light** due to the high r.p.m. under which engines operate.

12. Operate any rotary mowing equipment with cutter bar out of balance.

Result - will cause undue vibration and wear bushings, bearings and could crack housings.

13. Use reel type mowers where there is any stones, or debris.

Result - tear up reels giving poor cutting appearance. 14. Over-grease or use wrong lubricant.

Result - excessive grease or wrong lubricant will fall on turf harming grass. Dirt will hang to unit.

15. Use air pressure grease guns when lubricating. Result - pressure build up will cause fittings to pop out.

16. Drain engine oil when cold.

Result - Sediment in oil is not in suspension and will settle to the bottom of the sump. If drained when warm, 90% of the sediment will flow out.

17. Spray water on cylinder head and cylinder when cleaning equipment that is hot.

Result - will cause warpage and may crack head or block.

18. Mis-use of equipment such as:

(a) hitting obstructions, (b) jumping curbings, (c) transporting walking greensmowers on roller.

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### HURRICANE PREPAREDNESS

By JACK CUNNINGHAM, C.G.C.S. Eastpointe Country Club

The drought is gone, but hopefully not forgotten, and the hurricane season is officially here. Many superintendents have never been in a bad hurricane. Many of us have moved here from the north and have never experienced the fury of these killer storms slamming ashore with their tidal surges, torrential rains, winds over 200 mph, and tornadoes.

Hurricane David, which hit the East Coast in September 1979, was barely more than a tropical storm after it passed over the mountains in Cuba. However, I can remember back in the early 60's to Hurricanes Donna and Cleo. Donna lasted two days. She came through the Florida Straights and hit Key West. She then turned north and the eye went up Florida's Gulf Coast. She wiped out almost everything in her path. She was so big that damage on Florida's East Coast was in the millions of dollars. Sand from Ft. Lauderdale's beach covered AIA, and large fish, trees, and other debris were strewn everywhere. Hurricane Cleo, the next year, was even worse. It's eye went up the East Coast.

These two hurricanes were not even the worst ones to hit Florida. I wasn't around for the others, but those two left an impression on me that I'll never forget.

In the summer of 1978, when I was preparing to take my vacation, I left with my assistant a Hurricane Preparation Check List. He did not need it that year, but the next year he did. When Hurricane David hit in September 1979 I was in Virginia proposing to my wife. I could not get back in time, but my assistant and the crew knew exactly what to do. Maybe this list will give you a few ideas to help reduce the damage.

- A. PUMP HOUSE:
  - 1. Secure removable roof.
  - 2. Crack windows to relieve pressure.
  - 3. Remove any loose objects inside and out.

- 4. Fertigation tank Fill with water and secure lid.
- 5. Secure Fertigation Pump.
- 6. Master breaker off.
- 7. Secure the door.
- **B. GOLF COURSE:** 
  - 1. Remove shingles from Tee Information Posts.
  - 2. Remove Wastebaskets, Scorecard Boxes, Trap Rakes, Flag Poles, Cups, and Tee Markers.
  - 3. Remove everything from Practice Greens and Driving Range.
  - 4. Heavily secure all new trees.
  - 5. Lock and secure down Irrigation Controllers and check groundings.
  - 6. Remove all signs and cypress fence rails.
  - 7. Secure or remove all Road Signs.
- C. FLOOD PUMPS Check with Engineering.

### D. HALFWAY HOUSES:

- 1. Crack windows.
- 2. Remove all loose objects.
- 3. Turn off water.
- 4. Turn off circuit breaker.
- 5. Lock and secure door.
- 6. Bring in all water coolers.

### E. MAINTENANCE COMPOUND

- 1. Secure wood fence.
- 2. Chemical Room Remove small or wettable chemicals.
- 3. Sand bag a couple rows inside Fertilizer Room door.
- 4. All small equipment, pipe, etc. inside.
- 5. All loose objects inside or secured.
- 6. Sand bag a couple of rows inside all doors.
- 7. Master Breaker off.
- 8. Secure doors and gates.

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# DeBra Announces Greens King IV \$100 Rebate Program

DeBra Equipment Company recently announced the Greens King IV rebate program to benefit the F.T.G.A. Scholarship and Research Foundation. "The program will be simple" said Mike McLaughlin, executive sales administrator for DeBra. "The rebate will be tied to the number of Greens King IV units sold in the months of July, August and September. One hundred dollars per unit sold will be rebated to the S. & R. Foundation to help fund their programs through the regional superintendents associations at the F.T.G.A. annual business meeting."

Support and participation is nothing new from the DeBra organization. The company's principals, Jud DeBra, Tampa, and Dave DeBra, Hollywood, have worked on several committees for the F.T.G.A. David DeBra served as president of the association in 1978 and received the "Wreath of Grass Award" in 1980. In addition, DeBra has



Left to right: Dan Jones, V.P., F.T.G.A.; Dave DeBra, V.P., DeBra Turf, Hollywood; Max Brown, chaiman, F.T.G.A. Scholarship and Research Fund, and Jud DeBra, V.P., DeBra Turf, Tampa, examine the Jacobsen Greens King IV which we hope will raise a lot of money for scholarship and research.

actively supported the annual conference and show since its beginning.

"There has never been a better time for such a program," said McLaughlin. "The Greens King IV has been redesigned this year to include features our customers wanted like infinite speed control, internal back lapping, and individual three reel control. We're confident, based on response we've seen already, this will be a very successful program."

Max Brown, chairman of the F.T.G.A. Scholarship and Research Fund has set a goal of \$250,000 for the coming year. This is a tall order but well within the reach of our fine organization. We would encourage all commercial turf companies to participate in this worthwhile endeavor. If you have any ideas for generating funds please contact Max Brown at 305-971-0025.



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The ability of a golf course to be recognized as the best maintained tract of land in town, boils down to one very simple item. It is not necessarily mankind, money, chemicals or water, but the sophistication of the golf course maintenance equipment. This is what separates the pros from the armchair agronomist.

We are not living in the days of bush hogs and rotary push mowers, but, yes, the age of multi-hydraulically driven, hydrostatic reel mowers. Within a maintenance building, one can easily view a quarter of a million dollars worth of equipment. Just the faiway mowing unit alone can cost more than a Cadillac limosine.

Because of the extravagant expense, not just anyone is simply placed on a machine. Proper, thorough training is a must to keep the machinery in excellent operating condition. Jack Cunningham, CGCS, of Eastpointe explains that an operator does not just start mowing greens. "They are taught to operate machinery from areas of lesser perfection, and then upgraded to areas of higher perfection. An operator learns the feel of a triplex greens mower by first mowing tees and collars. Once familiar with the principles, mowing of a green is not so difficult, resulting in fewer scalps and straighter lines."

Mike Perham of Boca Del Mar believes the way to insure safe care of a machine is by educating the operator with a written job description. "This way you know you told the operator everything to do, which proves to be an invaluable tool."

The key to proper operation of machinery is proper management. Many courses are finding themselves developing a dual phase management. Golf course superintendents usually operate with a key right-hand person: the golf course assistant superintendent. The other phase is the mechanic and his machinery. The mechanic maintains service records, places orders, is involved in purchasing, receiving, inventory records and must still keep equipment operating at all times. The mechanic is also becoming a key right-hand person. Country clubs are finding they need two full time mechanics per course, i.e. Boca Del Mar where Phil Bourque and Ed Aris work with seven-year-old greensmowers and produce greens that rank with the finest in the country. J.D.M. Country Club with its multi-courses employes five full time mechanics under the supervision of head mechanic Sammy Lanier. In such a large complex, a secretary usually places many of his calls and orders to free Sammy to oversee equipment maintenance and repair.

Boca West, another multi-course complex, has a parts man who maintains important service records and places orders to help keep head mechanic Augustine Montes where he is needed most.

A groomed golf course is founded on good machinery backed by an adequate supply of parts. Augustine believes in stocking clutches, head gaskets and even complete sets of reels to eliminate down time. When parts are used, he restocks immediately, just to be ready.

Lanier uses local parts houses on high volume items such as tires, bearings or belts. If the item is more difficult to obtain or the local quality sub-standard, he uses distributors with factory replacements. Lanier believes nothing is more important than quality. "Inferior products result in more labor time for repairs and more occurrences of down time."

Heavily used equipment requires an abundance of parts; however, high wear on the machinery caused by summer growth and the avoidance of down time more than justify inventory expenses. Boca West owns 23 triplex greensmowers. To keep all functioning, Augustine believes the equipment must be worked on correctly. "Most any piece of equipment will get the job done, if you get it right."

Augustine finds cost is not the deciding factor in new equipment purchases. The best way to cut maintenance expense is to find the most durable piece of equipment. The initial cost is meaningless when measured against years of usage. One could almost say a good piece of equipment never dies; it's just parted out until it disappears.

Courses replace fixed assets based on life expectancy and depreciation; however, older equipment remains an asset. A greensmower may be downgraded to a tee mower with age and then even to a summer renovating clean-up machine. Once it's finally pronouced "deceased", it may be worth more as an out-back parts supply than as a trade-in. (Continued on Page 34)



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PALM BEACH (Continued from Page 33)

Golf course maintenance equipment has most certainly become more complicated in the last few years; and labor costs for repair dictate close scrutiny of design at the time of initial purchase. Ray Strausberger, head mechanic for Eastpointe and a former government test mechanic, explains that accessibility of key parts demands careful engineering. "A high wear maintenance part, such as a pump, should be designed to be taken right off without disassembling the entire machine. This can mean the difference between minutes and hours."

Other design features, such as back lapping of the hydraulic units, can save precious down time. Mechanics have also been enthusiastic about hydrostatic transmissions. They point to longer durability and improved operator capability. Throttle speeds maintain precise cut, while ground speed can be reduced to prevent marcelling and help reduce abusive tire wear patterns.

Palm Beach County has been blessed with more golf courses than some states and golfers who continually flock to the south are finding a superlative product. Without the technology of refined equipment, we definitely would not be looked upon as the "Golf Capital of the World".

#### Club Management

In our Spring 1981 issue we ran an article, "Down the Golf Cart Path," reprinted from *Club Management* magazine. We failed to give credit to *Club Management* and we sincerely apologize.





#### Magazine Distribution Policy

Three copies of each issue are sent free of charge to every club in the state: one copy to the superintendent, one copy to the greens committee chairman or manager, and one copy to the pro shop. It is the responsibility of each local chapter to supply the editor with a mailing list. Any problems should be directed to the local chapter secretary.

The income of this publication is derived solely from advertising. Support the advertisers. ■



By JAMES P. CALLAGHAN Riomar Country Club

#### First Anniversary Approaching

July 15, 1981, will mark the first anniversary of the founding of the Treasure Coast Chapter Florida Golf Course Superintendents Association. Just 12 short months ago, our association was just an idea floating around in a few superintendents' minds. Today, the Treasure Coast Chapter is a well-organized group with over 50 members in an area with only 32 golf courses.

All members are extremely proud of and pleased with the success of and interest shown in their association. Special thanks and appreciation goes to Adam Yurigan, Jr. who has served as the association's first president. Adam's leadership and guidance was a most important factor in the Treasure Coast Chapter's outstanding growth and development.

#### Excellent Education Sessions Highlight Meetings

The last three meetings of the Treasure Coast Chapter have all been very successul with over 60 per cent attendance. Adam Yurigan, Jr. hosted the March meeting at the John's Island Club in Indian River Shores. Robert Williams, past presdient of the Golf Course Superintendents Association of America, was guest speaker. His talk — entitled "Today's Golf Course Superintendent" — centered on ways the superintendent can improve his image, profession and goals.

Lonnie Stubbs, vice president for Internal Affairs and superintendent of the Sandpiper Bay Resort in Port St. Lucie, hosted the May meeting which drew 44 members and guests. Tom Burrows chaired the educational session, a round table discussion of ways of coping with the recent drought conditions. Many superintendents commented on their volume of water use, cutbacks in water consumption and measures to grow turf with less water. Discussions of mole crickets and weed control followed.

Riomar Country Club in Vero Beach was the site of the June meeting hosted by Jim Callaghan. Bruce J. Augustin, Research Turf Specialist, University of Florida, and Bruce Adams of the South Florida Water Management District presented information on growing healthy turf under drought conditions and current guidelines established by the S.F.W.M.D. for water use. An afternoon golf outing was played on Riomar's seaside links, which was enjoyed by all who participated.

#### **Turtle Creek To Host Annual Meeting**

Tom Burrows, superintendent of the Turtle Creek Club in Tequesta, will host the Treasure Coast Chapter's first annual meeting on Monday, July 6. A shotgun golf outing will start at 1 p.m. followed by an evening business meeting including election of officers. Tom promises a fun-filled day to celebrate our first anniversary and all Florida superintendents are invited.

#### Nominations Presented

Joe Snook, nominating committee chairman, announced the nominations for a slate of officers to be elected at the annual meeting in July. The nominations are: President: Lonnie Stubbs, Sandpiper Bay Resort; Vice President -Internal Affairs: Jim Callaghan, Riomar Country Club; Secretary: Bill Mangold, Crane Creek Golf and Racquet Club; Treasurer: Joe Snook, Riverbend Country Club; Director: Craig Baker, Indian River Plantation; Director: Tom Ross, Miles Grant Country Club; Director: Robert Hurst, Jupiter Island Club. Tom Burrows, vice president -external affairs, has two more years to serve and Adam Yurigan Jr. will serve as a director as immediate past president.



#### NORTH FLORIDA

By EDDIE SNIPES Assistant Superintendent San Jose Country Club

With the constant rise in the cost and maintenance of new turf equipment, North Florida Chapter members are searching for viable ways to keep costs down.

Members eager to volunteer their thoughts and suggestions were Chip Powell, Deerwood Country Club; Bob Willis, Ponte Vedra Country Club; John Hayden, San Jose Country Club, and Jim Shine, Sawgrass. These superintendents agree there are some definite ways to reduce equipment and maintenance cost, but unfortunately there are some things they will have to live with.

Fuel and lubricant prices are very predictable of late; they are constantly on the rise. North Florida superintendents realize they cannot directly affect these cost increases. However, close monitoring of consumption in individual turf equipment units gives them not only an inventory check but also a preventative maintenance aid. Excessive use of gas or oil may be a symptom of a problem about to surface. Early corrective measures could avoid considerable downtime in the future.

All four superintendents feel it is unnecessary to rely solely on the distributorship for parts. Parts such as bearings, seals, belts and bedknives can be bought from local suppliers at a great savings. "I found a belt that I needed at a local supplier for \$2.80. Contacting my distributor, I found the same belt for an exorbitant \$24.60," said Chip Powell.

The next cost cutting area was stocking of parts. Bob Willis said, "Do not skimp on parts (high use items) because nothing is more costly than downtime." It's plain commonsense to keep high use items on hand. However, one should not go to the extreme and overstock. Keeping an extra hydrostat (hopefully not a high use item) would be carrying things a bit too far. If you trade in or sell the machine, you are like a quarterback with no one to pass or handoff to. He eats the football; you absorb unecessary cost.

The recent cry of superintendents is do not trade in old equipment. Used equipment can become valuable for stripping of needed parts or for rebuilding to use as back up units. "Sawgrass is a resort course and it has to constantly be in first class shape," said Jim Shine. "Sawgrass does not have the flexibility that a private course might have if equipment problems develop." That's why Shine has backup units for each piece of equipment. How far one goes in rebuilding equipment depends largely on the maintenance shop set up and the mechanic. A line must be drawn between which repairs can be done in the shop and those that should be done outside. Tying up your shop mechanic with unfamiliar, specialized repairs costs you time and money. Close scrutiny of any equipment that might be rebult is necessary in comparing rebuilding cost to a new equipment purchase. Will you actually be saving? Be careful your desire to cut cost does not backfire!

John Hayden has said, "The most cost and attention received on a golf course is that of its employees." No matter what system of preventive maintenance one has, it is not worth a plug nickel without good mechanics and operators. The superintendents interviewed kept coming back to a humanistic approach to keep maintenance cost down. Operator education is important to the life expectancy of turf equipment. Your best operator in most situations is your best teacher. By taking notice of an individual's abilities and placing that person with the right piece of equipment, you will have completed a highly productive bond of man and machine. As your new operator begins to learn his equipment, respect for that equipment and pride in his work will grow. Irony dictates this to be true the majority of the time though the worth of the man at \$3.35 an hour is not equally equated with the cost of a \$30,000 fairway unit.

High turnover of employess on a golf course can be a real equipment killer. Experimenting with a constant flow of new operators can cost money and increase the accumulation of gray hairs. Stopping to take a small interest in the way of a "thank you" or just asking how one is getting along may keep that fairway unit out of a lake or that greensmower off a tree.

Superintendents hate to see their mechanics go on vacation. A good mechanic is the heart of a shop, bringing life to all the units in the maintenance facility and keeping track of the vital signs with up-to-date maintenance records. If you think this is over-dramatized, try May through September without a good mechanic and watch your maintenance costs soar like an eagle.

The knowledge and thoughts shared in this article represent the best means of controlling equipment and maintenance cost.

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North Carolina, Rodney Harris, CGCS.

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(70% CBS, 30% Shadow Chewings Fescue)	Bermuda regions	25 - 30 lbs/1000 sq. ft.
	Tees & Collars	20 - 25 lbs/1000°sq. ft.
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