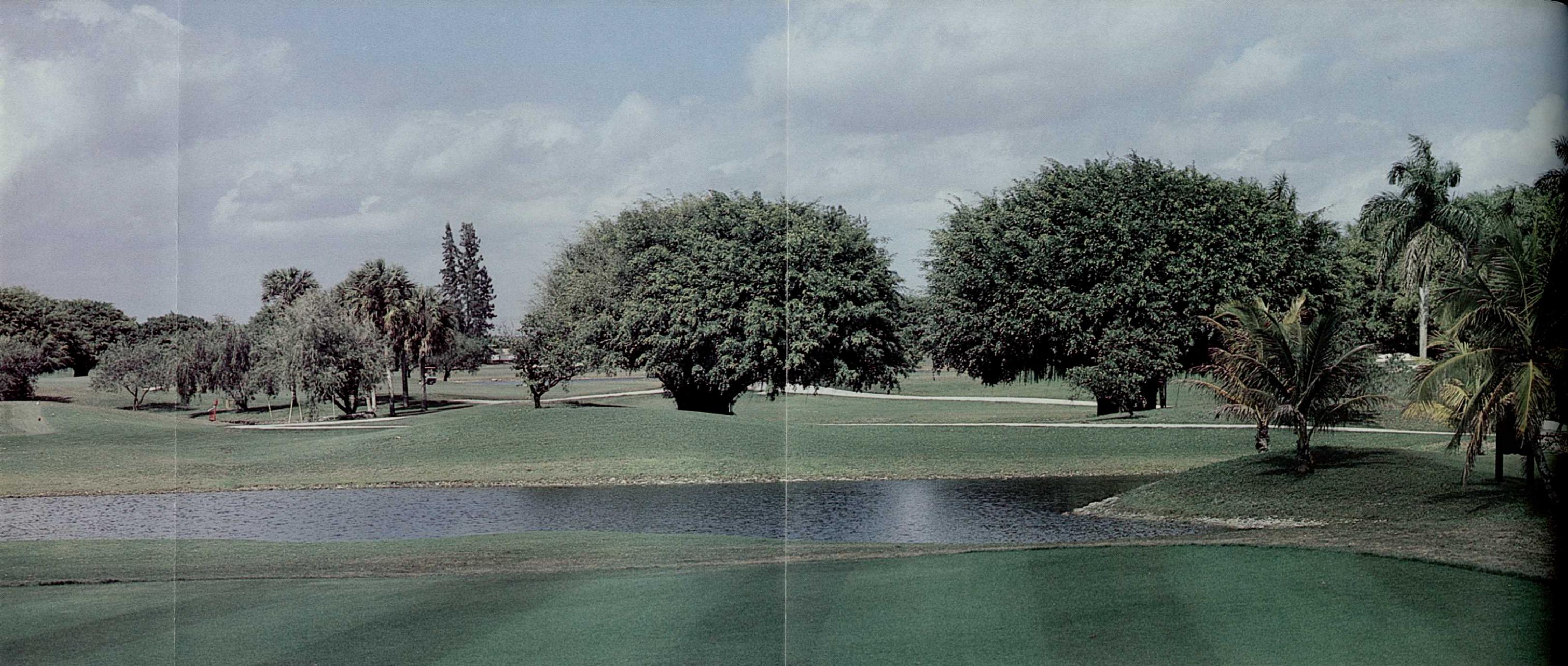




The Florida Green

SUMMER 1984



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CBS + Shadow Mix (70% CBS – LESCO Eagle Blend, 30% Shadow Chewings Fescue)	Putting Greens Tees & Collars	25-30 lbs. / 1000 sq. ft. 20-25 lbs. / 1000 sq. ft.
CBS + Sabre Mix (85% CBS – LESCO Eagle Blend, 15% Sabre <i>Poa trivialis</i>)	Putting Greens Tees & Collars	20-25 lbs. / 1000 sq. ft. 10-15 lbs. / 1000 sq. ft.
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ABOUT OUR COVER

Gallery around 18th green at Eagle Trace TPC Golf Club. See article page 36.



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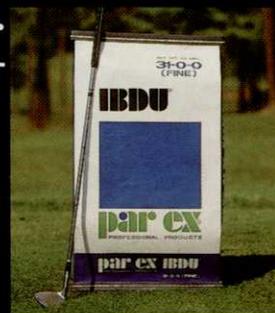
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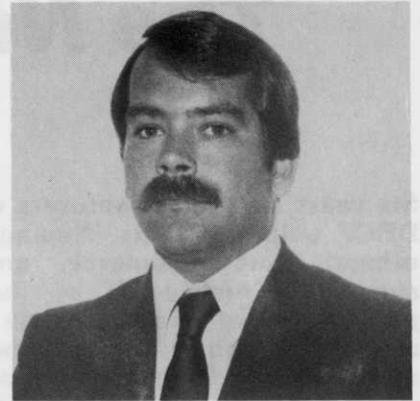
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President's Message

The many long volunteer hours put in by our associations workers; past and present, are beginning to show some results. Our strength nationally in GCSAA speaks for itself. The media acceptance to our Golf Course Superintendent Recognition Program at PGA and LPGA events have been very effective. Golf course superintendents names were mentioned and highlighted on every televised tour event in Florida that I watched. Florida Golf Day accomplished some turfgrass research funding needs and also initiated communication between golf course superintendents and the general public on anticipated problems with golf turf in the future. The second FGCSA Management Seminar at the PAL Annual Classic was close to capacity. We have put a crack in the much talked about public awareness wall.

The dedicated volunteer commitment by a small number of members has made our programs possible. How much more can we expect from these small numbers to help our progression. Finding association members to put forth the volunteer hours to carry out and through projects we will have to do in the future will be difficult.

The Florida GCSA can fill a very important void in our profession, like statewide job referral services for clubs and superintendents, education and public relations. In order to accomplish these programs professionally, our association needs a full time employee with the use of an office area and telephone. The funding for the project will be very difficult but not impossible.

The Florida GCSA is in very good condition at the present time. I have received phone calls from all over the country asking how we have been so effective. My concern is how do we progress and be as effective as we could be?

A handwritten signature in cursive script that reads "Don DeLaney". The signature is written in dark ink on a light background.

The Nematicide Dilemma

By DR. ROBERT A. DUNN
Extension Nematologist

Six years ago, manufacturers voluntarily withdrew DBCP soil fumigants (Nemagon, Fumazone, and others) from commerce, and EPA eventually suspended nearly all of their uses, following publication of their adverse effects on human reproductive physiology and their probably potency as human carcinogens. Ethylene dibromide (EDB) replaced DBCP for many agricultural soil treatment uses. Like DBCP, it is relatively inexpensive, easily applied, and effective, and can be applied at planting time for many crops. Unfortunately, also like DBCP, it now has been suspended as a soil fumigant for crops.

In recent months, low concentrations of EDB (generally less than 15 ppb) have been found in ground water (underground water sources; those tested in Florida were 100-200 feet deep) in four states: Hawaii, California, Georgia, and Florida. Since EDB has been determined to be a potent carcinogen in laboratory animals, detection of even very low concentrations in drinking water sources has caused concern about its potential as a human health hazard.

In addition to the concern about EDB in ground water, detection of aldicarb (active ingredient in Temik) early this year led to suspension of nearly all field applications of Temik in Florida for the balance of 1983, to allow time for further study of its behavior in soil and ground water.

Factors which have contributed to the problems with DBCP, aldicarb, and EDB include innate characteristics of the chemicals which seem to be necessary for them to be effective as nematicides, compounded by apparently unnecessarily high rates and frequency of use and perhaps inappropriate use, and unrealistic toxicological concepts held by the general public and some of their public servants. Perhaps none of these can be completely corrected, but some compromises must be reached if agriculture is to retain nematicides for use in the field.

Because nematodes live in water (whether free in the soil or in or on plant tissues, they must be in a film of water to be active), nematicides must be soluble in water to reach their targets. Nematode movement in soil is neither predictable nor uniform, so it seems to be necessary to treat a substantial volume of soil to protect the plant root zone; this usually requires using somewhat more of a compound per acre than is needed to protect the same plants from insect pests. Therefore, in most nematicide applications, we are placing relatively

large quantities of water soluble compounds into the soil.

Overuse, intentional and innocent, of these materials has probably happened because they are so effective and economically profitable to use. Nevertheless, it may have contributed to their appearance at undesirable levels in the environment. Any time that we unnecessarily increase the amount of a pesticide in the environment, just because it offers a cheap way to control a pest, without careful thought; or we use more because a little bit is recommended but it is so cheap that we can afford to be sure, we increase the chance of the amount of that pesticide in the environment becoming unacceptable. It is poor economics, poor crop management, and jeopardizes the availability of the product for situations for which there is no better alternative.

It is unrealistic to maintain the concept that the legal tolerance for any compound should be "no detectable residue." The level of sensitivity of technology that the tolerance levels used guidelines during product development are suddenly made absolute, and the rules of the game are changed when the game is already in progress. Regulatory agencies need to develop the professional and political courage to establish tolerance levels that are specific and finite, based on the best objective data that can be obtained before its registration. If changes of established tolerance levels are to be made, they should be defensible on the basis of hard scientific evidence that higher or lower limits to the quantities of the compound can be safely tolerated in food, feed, or the environment.

The challenge to those who give advice about nematode management or use nematicides is how to achieve economically efficient relief from crop losses to nematodes with the least negative effect on the environment. We must not only be honestly concerned about the impact of pesticides we use on the world we live in, we must act accordingly, but the general public must know and understand that we are achieving the most benefit at the least environmental cost possible from the pesticides which we use. If we in agriculture project a careless and callous attitude toward pesticide use, you may count on seeing the products available to us topple in order like so many dominoes, and we will deserve it.

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GOLF TURF NEWS

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CHARLES H. PEACOCK
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Gainesville

The Importance Of Proper Turf Irrigation

Irrigation practices are a vital component of the overall golf course turf management program. There are numerous important factors which comprise turf irrigation practices, but in Florida one of the most critical irrigation factors is the quantity of water applied. Florida turf is subjected to numerous deficiencies because our sand soils have low water and nutrient holding capacities. These problems can be enhanced or reduced through irrigation practices.

Studies recently concluded at the Ft. Lauderdale Research and Education Center have examined the effects of irrigation on bermudagrass growth and nitrogen leaching. One of the studies evaluated the overall turf quality as influenced by irrigation during a four year period. One set of plots received daily irrigation and the other set of plots received irrigation on an 'as-needed basis' which was determined by tensiometers buried in the soil. Within each of the irrigation plots were sub-plots of dry granular applied ammonium nitrate or sulfur-coated urea. The plots were maintained under conditions similar to those on Florida golf course fairways. The turf plots were periodically rated for color on a 1 to 9 scale, with 9=best and 6=minimally acceptable.

The overall effect of water received by the plots can be seen in Table 1. During the wet season (June-October), rainfall combined with irrigation methods produced turf with significantly different appearances. The best turf resulted when irrigation was only applied as needed by the tensiometers. Daily irrigation and rainfall during the wet season resulted in excessive amounts of water being applied to the turf and caused poor turf due to fertilizer leaching. By limiting the water to only what the plant needs for growth, leaching can be minimized. In the dry season (November-May), both methods for scheduling irrigation worked equally well. This indicated neither method was supplying excessive amounts of water to the turf, since color ratings for both treatments were above the minimally acceptable level. The tensiometer treatment over the four year period saved between 42 and 95 percent of the water applied by conventional daily irrigation, depending on the rainfall frequencies and amounts.

The irrigation method can also influence the performance of nitrogen sources as shown in Table 2. During the wet

season no difference in turf color was noted between the water soluble (ammonium nitrate) and the slow-release (sulfur-coated urea) nitrogen sources. The main effect as indicated in Table 1 was the difference in water applied to the plots in the wet season. During the dry season there were performance differences between the nitrogen sources. The best turf was produced with sulfur-coated urea and daily irrigation. The other treatments produced turf with similar appearance. However if one considered the cost of water and fertilizer, the plots that received irrigation on an as needed basis and the water soluble nitrogen source probably were just as acceptable as the other treatments.

The general conclusion that can be drawn from this study is that we can grow turf with less water than many people think. By exploiting rainfall as much as possible, we can reduce the amount of irrigation that is applied to turf. Also by more carefully managing the irrigation, we can reduce nitrogen leaching and get better results from the cheaper, water soluble sources of nitrogen.

Table 1. Effects of irrigation method on turf color ratings during different seasons of the year.

Irrigation Method	Color Rating	
	Wet Season	Dry Season
Daily	6.7 a	7.1 a
Tensiometer	7.7 b	7.0 a

Values followed by the same letter are not significantly different.

Table 2. Effects of irrigation method and nitrogen source on the color rating of bermudagrass turf during the seasons.

Irrigation Method	Nitrogen Source	Color Rating	
		Wet Season	Dry Season
Daily	Sulfur-Coated Urea	6.8 a	7.4 a
Daily	Ammonium Nitrate	6.5 a	6.9 b
Tensiometer	Sulfur-Coated Urea	7.6 a	7.0 b
Tensiometer	Ammonium Nitrate	7.8 a	7.0 b

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Sunnyland Corporation Celebrates Birthday

On July 14, 1984, Sunniland Corporation based in Sanford, Florida, will celebrate its 100th anniversary. Actually formed as a chartered company under the name of Chase & Company, on May 14, 1884 by S.O. Chase, Sr. and Josh C. Chase. Sunniland has been a locally owned operation except for a brief period from 1979 to March of 1982 when it was owned by Reichold Ltd. of Canada and the name was changed to Sunniland Corporation, however in March of 1982, Lee. P. Moore purchased Sunniland from Reichold Ltd.

The company now has 6 building materials warehouses located throughout the state, distributing wholesale building materials and a fertilizer and chemical plant located at Five Points in Sanford, distributing and manufacturing Sunniland fertilizer and garden supplies over the state of Florida and to other Southern States.

Sunniland's corporate offices were located at 2nd and Oak avenues in Sanford for many years. After Mr. Moore's acquisition he moved the corporate offices to Five points where the fertilizer and chemical plants were already located. In July 1983, the Sanford based building materials department relocated to the Five points location as well. Now the Sanford based departments are all located in one beautiful setting at Five points. ■

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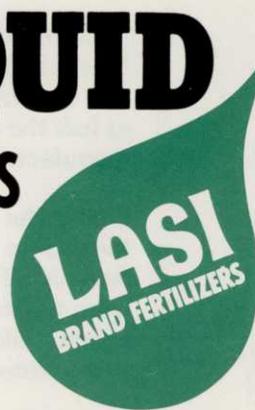
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Future Of Golf Tournament

The Palm Beach Chapter Golf Course Superintendents' Association held its third annual Future of Golf Tournament at The Golf and Racquet Club at Eastpointe on May 5th. 152 players challenged Gary Grump's immaculate golf course in a 4-man scramble, with Boca Grove's Steve Pearson, Roger Gamblin, Walt and Earl Christensian taking top honors with a 14-under par 56.

As its name implies, the purpose of the Future of Golf Tournament is to raise money for organizations which enhance and preserve the future of the game of golf. This year's proceeds, which totalled nearly \$6800, will go to the Palm Beach County Jr. Golf Association, the FTGA research fund, and the Palm Beach Jr. College golf team.

The success of this outstanding tournament is the result of the cooperation, hard work, and dedication of many individuals. Our special thanks to Tournament Director and host Superintendent Gary Grump and his staff; Director of Golf Bob Komarinetz; Head Golf Professional Donnie Schultz; Food and Beverage Manager Allan Herrmann; General Electric Credit Corp. and the members of The Golf and Racquet Club at Eastpointe for allowing us the use of their superb golfing facility. ■

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Central Florida Crowfoots



By GARY MORGAN
Spruce Creek Golf and Racquet Club

Central Florida President

Joel Jackson, President of the Central Florida Golf Course Superintendents Chapter, is Superintendent at Walt Disney World's Lake Buena Vista Golf Course. The Lake Buena Vista course is the site of the Crowfoot Open Golf Tournament and also hosts with the other Disney courses, The Walt Disney World Classic, held in Mid-October and it is also a PGA Tour stop.

Joel's background is unique and indicates a hard working individual who wants to excel in all facets of the Golf Management Business.

Joel received his BA degree in Geology from the University of South Florida, then attended 1-1/2 years of graduate school at the University of South Florida again majoring in Geology. He served in the United States Coast Guard before starting his career in Golf Management. while at Apollo Beach G.C. in Tampa, he worked on the crew to build and plant the course. Joel then helped with golf course design and construction with "Ecogolf." He then worked for Pembroke Lake C.C. as a foreman for one year, before coming to work for Walt Disney World. He started at Disney as an hourly employee and has worked his way up to his present position of Superintendent.

As President of the Central Florida Chapter Joel has many goals that he hopes to accomplish as President. Joel believes that an important item in the chapter is increased participation from all members.

He will try to visit a lot of the courses in the chapter area that don't belong to the chapter. Through this he wants to upgrade the professionalism and the Superintendents image whgh he hopes will promote a more friendly atmosphere to expand the membership in the chapter.

Joel is a fine example of the modern Superintendent. In the Golf Management Business world we all need to follow Joel's example to better our profession.

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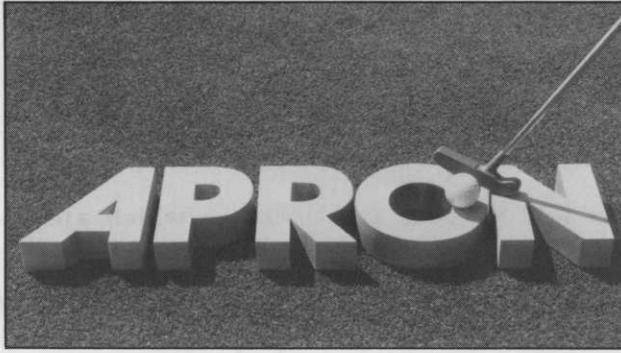
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"What's The Difference Anyway"

By ROBERT A. MOORE
Aquatrols Corp. of America
talk given at

Temple Terrace Country Club, Tampa, FL, 4/19/83

I really appreciate this opportunity to clear away some of the confusion that often surrounds the sale and use of wetting agents.

I want to replace the "Miracles and Mystery" with Results and Reasons.

In addition I hope to leave you with enough information to make you a "Wise Buyer" of these materials.

The First point of confusion seems to be the use of so many different names — adjuvant, surfactant, spreader, sticker, penetrant, wetting agent and so forth.

Let's look at these names and explain their meaning, use, and relationship to each other.

The first name to define is adjuvant. This is the most general of all the terms. The chemical dictionary definition states: "A subsidiary ingredient or additive in a mixture which contributes to the effectiveness of the primary ingredient." So anything

you add to your treatment — which are usually sprays — and as long as it increases the performance, that product is an ADJUVANT. One example would be a chelating material that can improve a chemical's availability. Another would be surfactant materials and there are many other cases.

In your field of work, spraying chemicals, most of the adjuvants you would use would fall in the class of SURFACTANTS. The word surfactant comes from a contraction of "Surface-Active-Agent." The chemical dictionary definition of a surfactant is: "Any compound that reduces surface tension when dissolved in water or water solutions; or which reduces interfacial tensions between two liquids, or between a liquid and a solid." This again is a very general term, and covers a multitude of materials.

There are three categories of surfactants:

- 1) Detergents
- 2) Emulsifiers
- 3) Wetting Agents

All have the same basic chemical mechanism and differ chiefly in their behavior as a result of the nature of the surface or surfaces treated. In addition to these behavioral differences, where living tissues are involved, as they are in your field of work, you must also consider the effect of various surfactant types on phytotoxicity.

At this point let me give you a little demonstration:

—Demonstration—

"An adjuvant, in this case a surfactant, that contributes to the effectiveness of the primary ingredient." This example: Better wetting by the Water! For this demonstration, actually all types of surfactant material would work — some more than other. So don't be lead astray by simple demonstrations alone. Demonstrations do prove a point; that water can be changed and your programs can be made more effective. But you must also remember that you have to consider toxicity to the plant as well as that part of the definition made earlier: "Surfactants behavior differ chiefly as a result of the nature of the surface or surfaces involved." I want to again emphasize that the main point is that the water has been changed. By use of these materials one can improve the effectiveness of your sprays, your fertilizing, and your waterings.

Each of these categories of surfactants can further be separated into:

- (1) Anionic
- (2) Cationic
- and (3) Non-Ionic

(Continued on page 21)



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(Continued from page 20)

detergents or emulsifiers or wetting agents.

Anionic's are negatively charged surfactants, usually a sodium, potassium, or ammonia salt, and are most frequently used as detergents or for rapid wetting.

Cationic's are positively charged surfactants, and frequently are phosphates or quaternary ammonium compounds. These materials tend to exhibit the highest degree of toxicity to plants.

Non-Ionic's are surfactants that do not form charged particles — negative or positive — and are therefore much less chemically active, much less toxic to plants, and have wider use applications.

To help understand this difference between non-ionic and ionic (positive or negative) think of salt and sugar. Both white and granular and both dissolve in water. When salt dissolves, ions are formed — a cation, positively charged sodium and an anion negative by charge chlorine. This solution will transmit an electric current — because of these electrically charged particles. Sugar on the other hand, does not form ions. It stays as the sugar molecule $C_{12}H_{22}O_{11}$. This solution will not transmit an electric current.

Does this make sense so far.

Let's go back now and look at each category of surfactant for a better understanding.

Detergents are substances that reduce the surface tension of water — specifically a surfactant that concentrates at oil-water interfaces, exerting emulsifying action, and thus removing soil. From a turf and Horticultural standpoint, these materials should be avoided because of the tendency to weaken soil structure (emulsifying the soil) and the high degree of toxicity to plant tissue. They are rapid wetters and can be used in small amounts but should be generally avoided.

Emulsifiers are compounds that hold in stable suspension two or more materials — usually liquids — that normally would not mix. This again is a surface-Active-Agent which reduces the surface tension at the interface of the suspended material and the solution. Many of the materials you use emulsions — flowables, emulsifiable concentrates, etc. — The surfactants in these materials are tied-up by stabilizing the suspension or emulsion, and usually have little or no effect on any other solution that they may be put into.

The third category, wetting agents are surface-active agents which when added to water, causes water to penetrate more easily into, and to spread over the surface of another material by reducing the surface tension of the water.

(Continued on page 22)

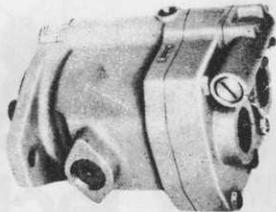
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(Continued from page 21)

Frequently, you hear the expressing that detergents, wetting agents or whatever are all the same. It is important that you see the difference. Detergents primarily wet and emulsify oils, dirt, soils — while wetting agents primarily penetrate, wet, and spread.

If everyone is still with me we all should be able to agree that the category of surfactant adjuvant that is best to use in horticultural work is a non-ionic wetting agent. Agreed?

Now, let's look at this category — wetting agents — and see how they can be grouped. First, wetting agents are used as spreaders. By lowering the surface tension of water they allow a solution to spread out, and wet a larger area. The normal tension of water that holds a drop together — pulls a solution away from a surface — is greatly reduced by wetting agents so that the drop can no longer hold together and thus spreads.

Wetting agents are also used as spreader stickers, when the wetting is combined with a resinous material. These materials, upon drying will form a film that is tacky and resistant to washing by rain or irrigation water. Unfortunately, some spreaders are sold as Spreader-stickers and are little more than just spreaders — a non adsorbing wetting agent that does a good job of wetting but little for retention.

The next group are called spreader-extenders. These materials are basically a good spreading wetting agent, combined with a material that absorbs ultraviolet light when the film dries. These materials are used to extend the life of pesticides that are photo sensitive — are broken down by sunlight. Many times these formulations may also contain a sticker type resinous material to also help retention.

Spreader-Activators are wetting agents that have good penetration and adsorption characteristics, as well as the wetting and spreading. Adsorbing and penetrating the spray materials usually increase their activity.

I want to refresh your memory here by repeating an earlier definition: "Surfactants behavior differ chiefly as a result of the nature of the surface or surfaces involved." One big difference in wetting agents is how they adsorb on soil or leaf surfaces and at what solution concentration they become active.

The final group I want to mention are called soil Wetting agents. These materials, while similar to the spreaders and spreader-activators, have some unusual characteristics that set them apart of other wetting agents or surfactants or adjuvants. Soil Wetting Agents are used to control the management of the rootzone of plants — especially the water

(Continued on page 24)

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(Continued from page 22)

distribution, drainage, and availability as well as aeration. In order to accomplish this management, much larger quantities of wetting agents are required as compared to spray adjuvant uses. University tests from Cornell, Michigan, Maine, Nebraska, Ohio, Texas, California, and others, all show the need for approximately 16-oz. of active ingredient / 1000 sq. ft. to effectively control the rootzone of turf or ornamentals. This would compare to a spreader treatment of maybe 16-oz. active ingredient / 100 gallons of spray per three acres. Thus you are looking at a 100 to 150 times as much materials being used as a soil wetting agent. Materials that are horticulturally safe as spreaders may not be safe as soil treatments.

In addition how the wetting agent adsorbs on the soil can have a very pronounced effect on plant toxicity, leaching, and longevity. A weakly adsorbed material remains in the water phase of the soil solution. With heavy rains or excess irrigation these materials are rapidly leached and lost. If the wetting agent remains in the soil solution, it can be translocated into the plant, and data from the University of California and Michigan State have shown a detrimental effect on turf. One soil wetting agent, that has been shown to be irreversibly adsorbed on the soil, did not show the adverse growth effects in these same tests.

Thus, the soil wetting agent besides being good penetrants and spreaders must have a very low plant toxicity, and a very high adsorptive behavior. Much more must be known about these materials before you endeavor to use them.

To summarize all of this information I want to use some of the guideline questions that were put to us to answer in our talk.

1) What's the difference between all of these names?

Answer: They are all related. Adjuvant is the general name for a material added to your program that will enhance its performance. Surfactants are the type adjuvant you most commonly use. You don't want to use detergents or emulsifiers because of their higher plant toxicity; and their primary action of

emulsifying liquids and solids — they tend to decrease soil aggregation.

Wetting agents are the type to use in the horticultural field. Here again anionic and cationic materials should be avoided because of greater toxicity. The non-ionic materials are preferred.

2) When do we need — What?

Answer: Spreaders will generally be the least expensive and are used where good coverage for short periods is the primary objective. Spreader-Stickers, Spreader-Extenders, and Spreader-Activators will all be more expensive and are used where a longer protection time, a light sensitive material, or an enhanced performance is a major factor.

Soil Wetting Agents frequently are more expensive than spreaders because of their special needs — low toxicity, high adsorption, and flexible use under different soil conditions — They are used for rootzone management of water — which in turn manages all your programs — fertilization, soil pesticides, drainage, aeration, as well as watering.

3) When don't we need a wetting agent?

Answer: In our opinion, we feel that you should consider some wetting agent for every spray application, and soil wetting agent wherever you irrigate or have a water related problem.

4) How does one know when they are being taken to the cleaners?

Answer: Be a wise buyer. Read the label and ask questions. Don't accept hear-say and generalizations.

First point is to find out the amount of active ingredient. 10 out of 12 materials on the market contain large quantities of water — 75 to 90% don't buy water!

Second, Know the chemistry of the wetting agent. Is it a single type or a blend? Blends are broad spectrum — are active in more type of soils.

Third, Find out the residual. One marketed wetting agent biodegrades in 4 to 7 days — that's not much control. Many are weakly adsorbed and leach readily — again not much residual control.

Fourth, Ask about phytotoxicity. Remember, if they don't adsorb they can get into the plant and effect its growth. In addition some wetting agents are just plain toxic to plants!

I hope you can now see the reasons for the Results (both negative and positive); and that there are no more "Mysteries" remaining!

Be a wise Buyer — you now have a better base to shop from. ■

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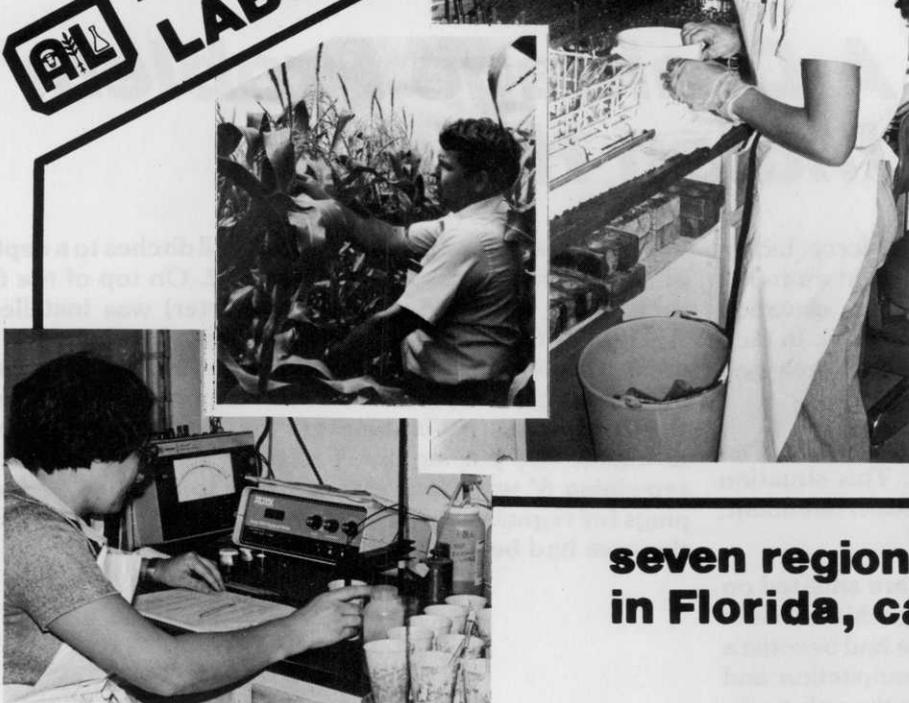
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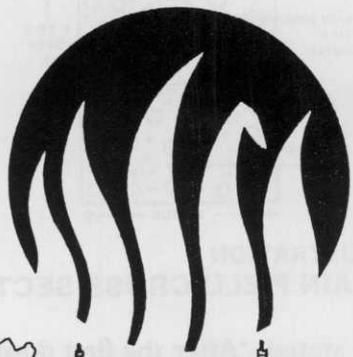
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Treasure Coast "Tide"ings

By JAMES P. CALLAGHAN
Rio Mar Country Club

Correcting A Drainage Problem At Indian Hills

Nestled just east of U.S. 1 in downtown Ft. Pierce, Indian Hills Golf Club is fortunate because it sits right on top of the "east coast ridge". Because of its higher elevation (relatively speaking), drainage problems are few. In fact, the golf course is usually open when other area golf courses are closed due to wet conditions.

However, there is one low area at Indian Hills that resulted in problems after heavy rainfall. This situation was recently rectified by Golf Course Superintendent, Joe Briguglio.

The first and second holes at Indian Hills are situated on the lowest point of the golf course. Although this area is in the proximity of an irrigation lake, drainage had become a severe problem over the years due to compaction and high water table. Many times, this would be the only problem area on the golf course after heavy rainfall. Closing the golf course could not be justified because only two holes had standing water (especially since the golf course is operated for profit). Trying to direct golf carts around the sloshy areas proved futile and only added to the drainage problem by increasing compaction.

In order to rectify the situation, a drainage system had to be installed in this area. With his Greens Chairman, Joe surveyed the area and proposed a plan to correct the problem. After lengthy discussion and cost analysis, the project was approved.

As illustrated in figure 1, a basic herringbone drain field was installed in the first and second fairways to drain the surface water into the lake located to the south of the area. The first phase of the project included digging three parallel drainage ditches (4' - 5' deep x 2' wide) along the far sides of each fairway and between the fairways. A slope of 6" per 100' toward the lake was provided.

After the main ditches were in place, the project continued by installing the herringbone drain field. All the lateral drain flows into the drainage ditch between the two fairways as the purpose of the other two ditches is to aid in draining the area when the water table is naturally high or to relieve pressure from the system after extremely heavy rainfall. Again a slope of 6" per 100' was provided for when digging the herringbone field. Now that all main and lateral ditches were excavated, phase 2 could begin.

Fill rock was placed on the bottom of all ditches to a depth of 12" as diagrammed in illustration 2. On top of the fill rock, ADS drain pipe (4" - 6" diameter) was installed. Additional fill rock was then placed in the ditches to a depth 6" from the surface. In the area near the lake, tarpaper was placed over the fill rock to prevent water from entering the system in the event the lake overflowed and to enable the playing areas to drain more rapidly. The remaining 6" was filled with a sandy topsoil and aerifier plugs for regrassing. Within 5 weeks, no one could tell that the area had been disturbed.

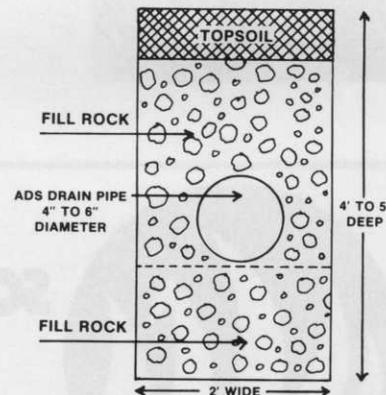
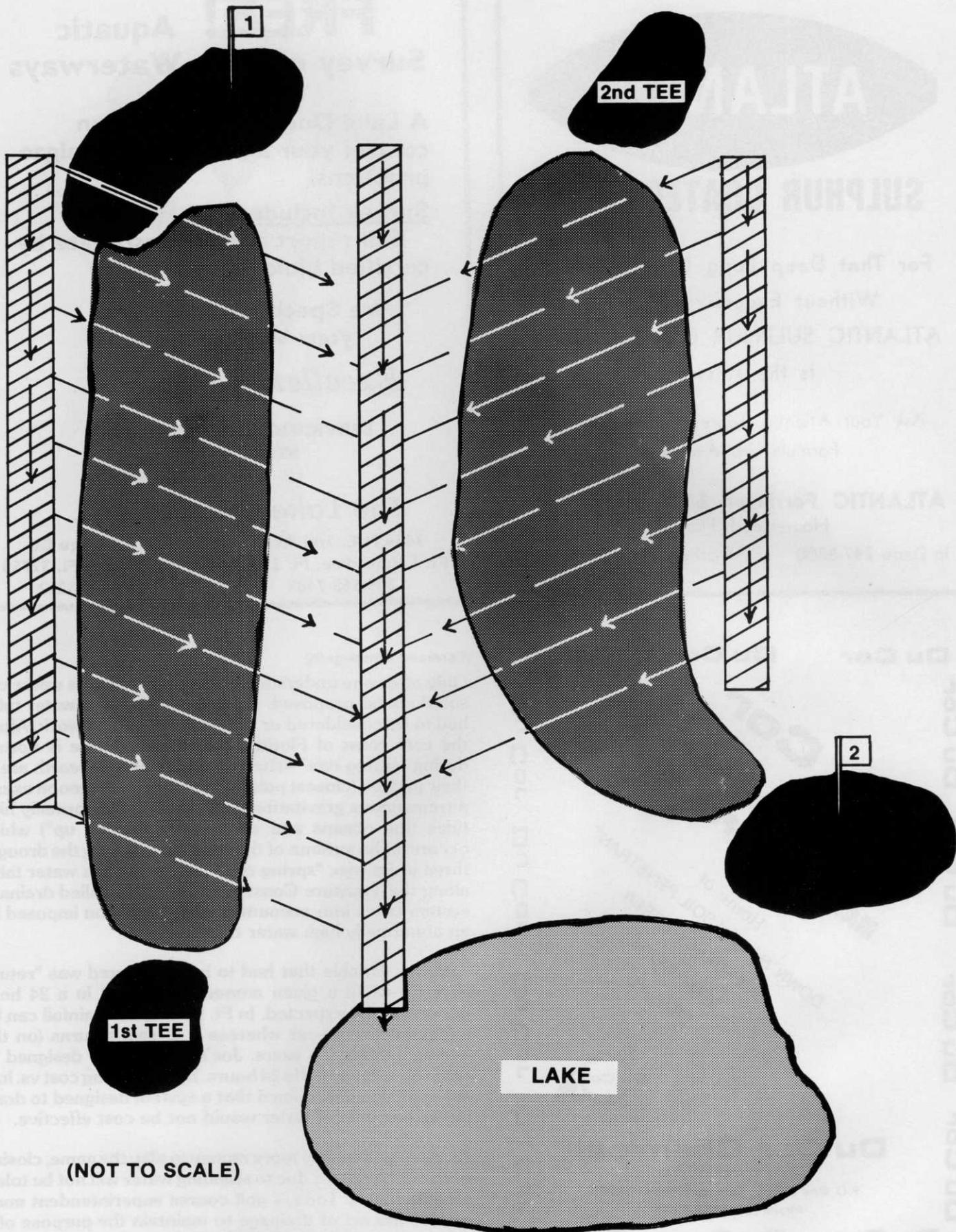


ILLUSTRATION 2.
DRAIN FIELD CROSS-SECTION

Joe Briguglio stated, "After the first downpour, the system proved successful. We are now able to get the golfers off the first tee without the delays we encountered when the area held excessive amounts of water." Joe's employer is ecstatic about the drainage improvement - more golfers being able to tee off equals more revenue. Total cost of the project was \$4,800.00, \$200.00 below estimate!

Like many drainage problems encountered in Florida, Joe's predicament was unique. Although poor drainage was confined to a limited portion of the golf course, a COMPLETE analysis of the situation was in order. There are many variables that determine the cause of poor drainage (i.e. elevation, soil texture, water table, etc.).

(Continued on page 28)



(NOT TO SCALE)

ILLUSTRATION 1.
INDIAN HILLS GOLF CLUB — FT. PIERCE

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(Continued from page 26)

Only after one understands why an area holds water can solutions be proposed. At Indian Hills, high water table had to be considered or the system wouldn't work. Along the east coast of Florida, a high water table is normal during "spring tide" -when the moon and the earth are at their perigee (closest point). At this time, the moon exerts a tremendous gravitational pull creating abnormally high tides (the oceans and water table "spring up") which occurs in the autumn of the year. Even during the drought three years ago, "spring tide" created a high water table along the Treasure Coast. Joe's newly installed drainage system takes into account for any limitation imposed by an abnormally high water table.

Another variable that had to be considered was "return period" -when a given amount of rainfall in a 24 hour period can be expected. In Ft. Pierce, a 3" rainfall can be expected every year whereas a 6" rain returns (on the average) every 2.5 years. Joe's system was designed to drain off a 3" rainfall in 24 hours. By estimating cost vs. lost revenue, Joe determined that a system designed to drain larger amounts of water would not be cost effective.

As more golfers pay more money to play the game, closing of the golf courses due to standing water will not be tolerated as much. Today's golf course superintendent must master the art of drainage to maintain the purpose of a golf course -**BEING ABLE TO PLAY A GAME OF GOLF WHENEVER THE ELEMENTS ARE FAVORABLE.**■

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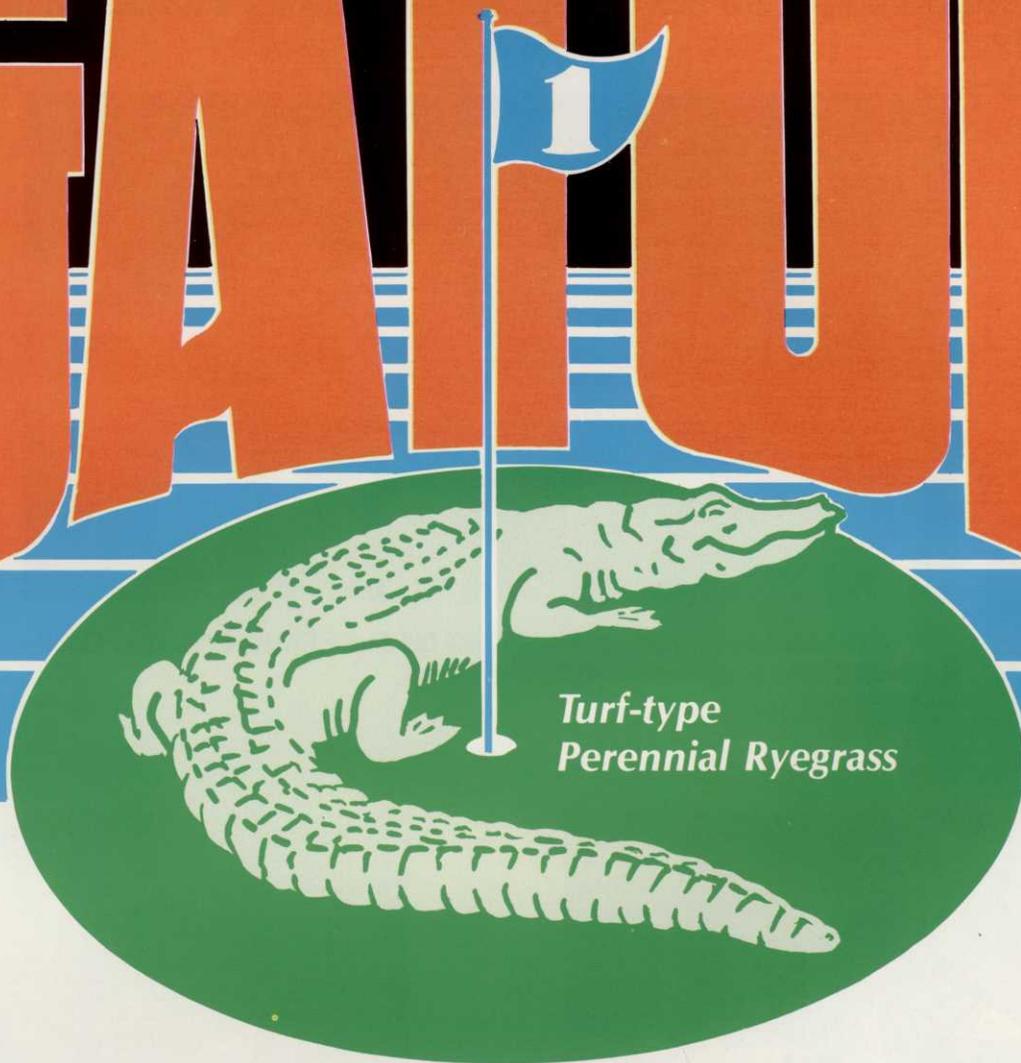
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Governor Bob Graham declared May 5, 1984 as Golf Day. The Florida Golf Course Superintendents Association in regional tournaments raised thirteen thousand dollars for turf grass research. Pictured here is the golf tournament held by the Palm Beach Chapter at East Lake Country Club. Golf Course Superintendent and Tournament Director was Gary Grump.



Left to right (winning team at 14 under par 56) Steve Pearson, Rodger Gambelin, Walt Christensian and Earl Christensian.

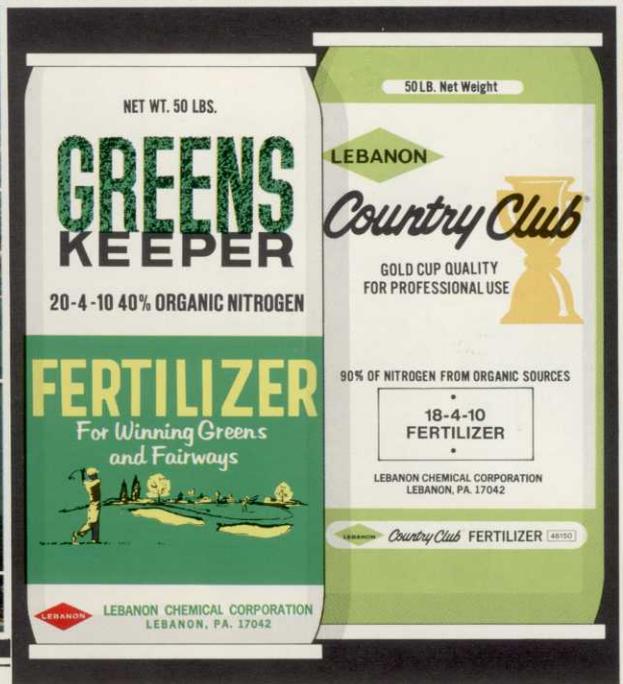
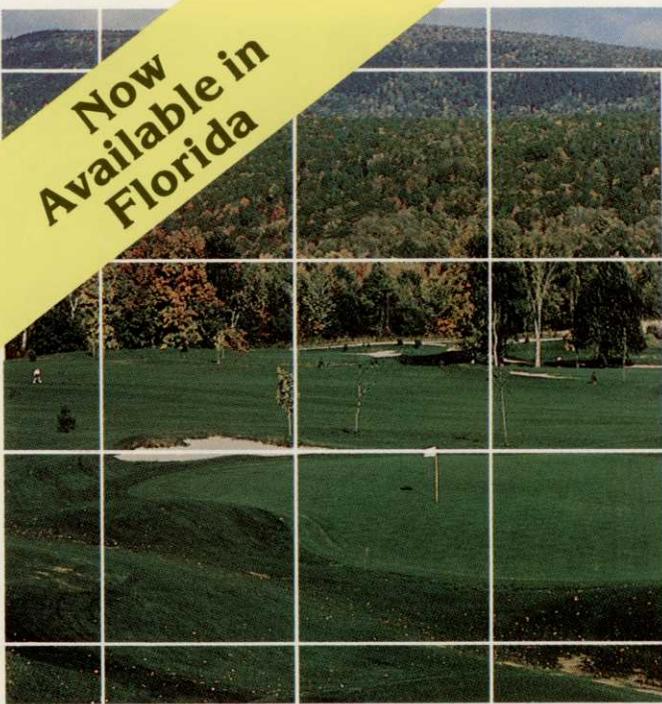


Left to right David Bailey, President Palm Beach G.C.S.A. Kevin Downing, Public Relations Director, Florida G.C.S.A., Steve Pearson, Superintendent Boca Grove.



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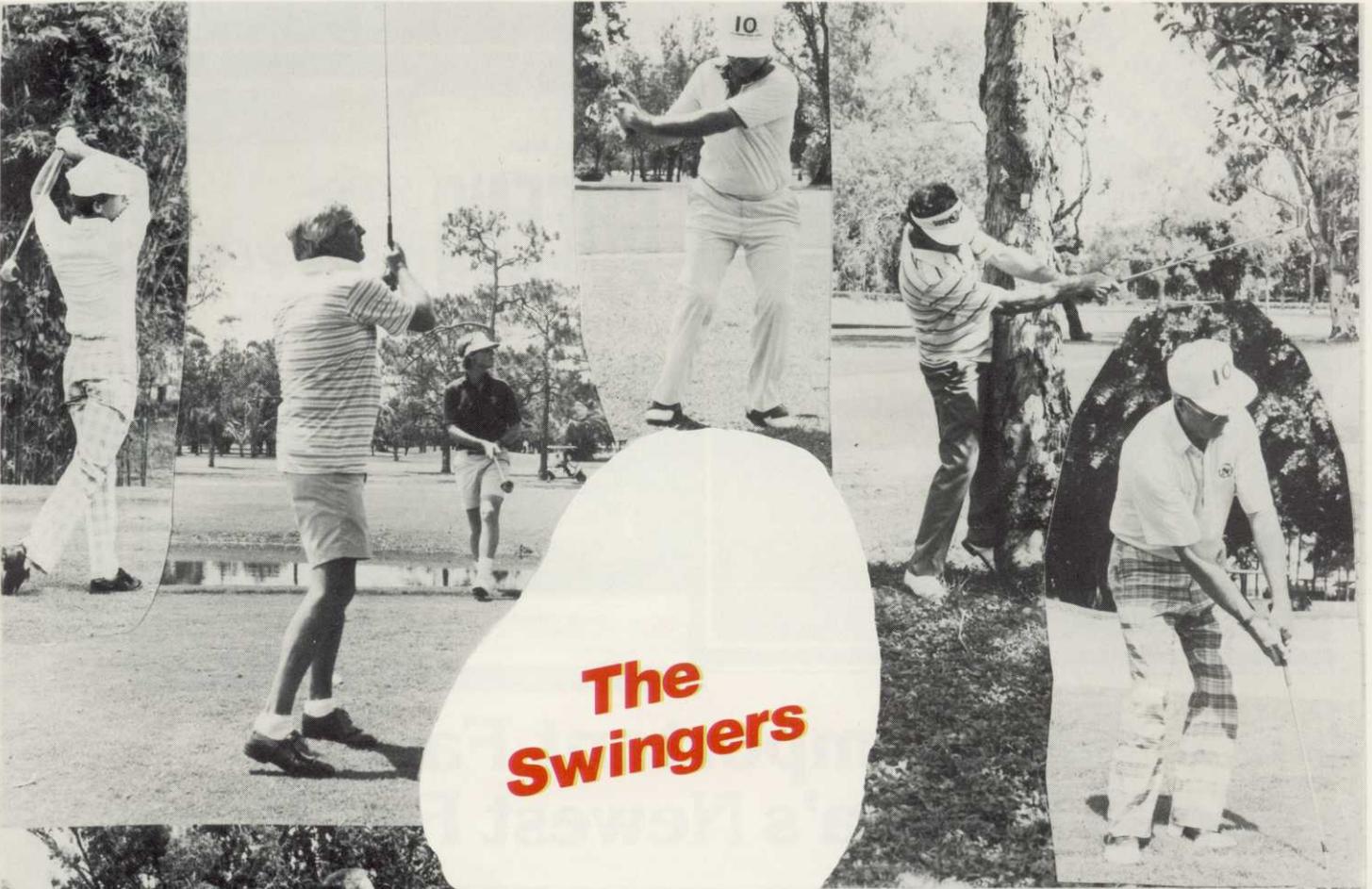
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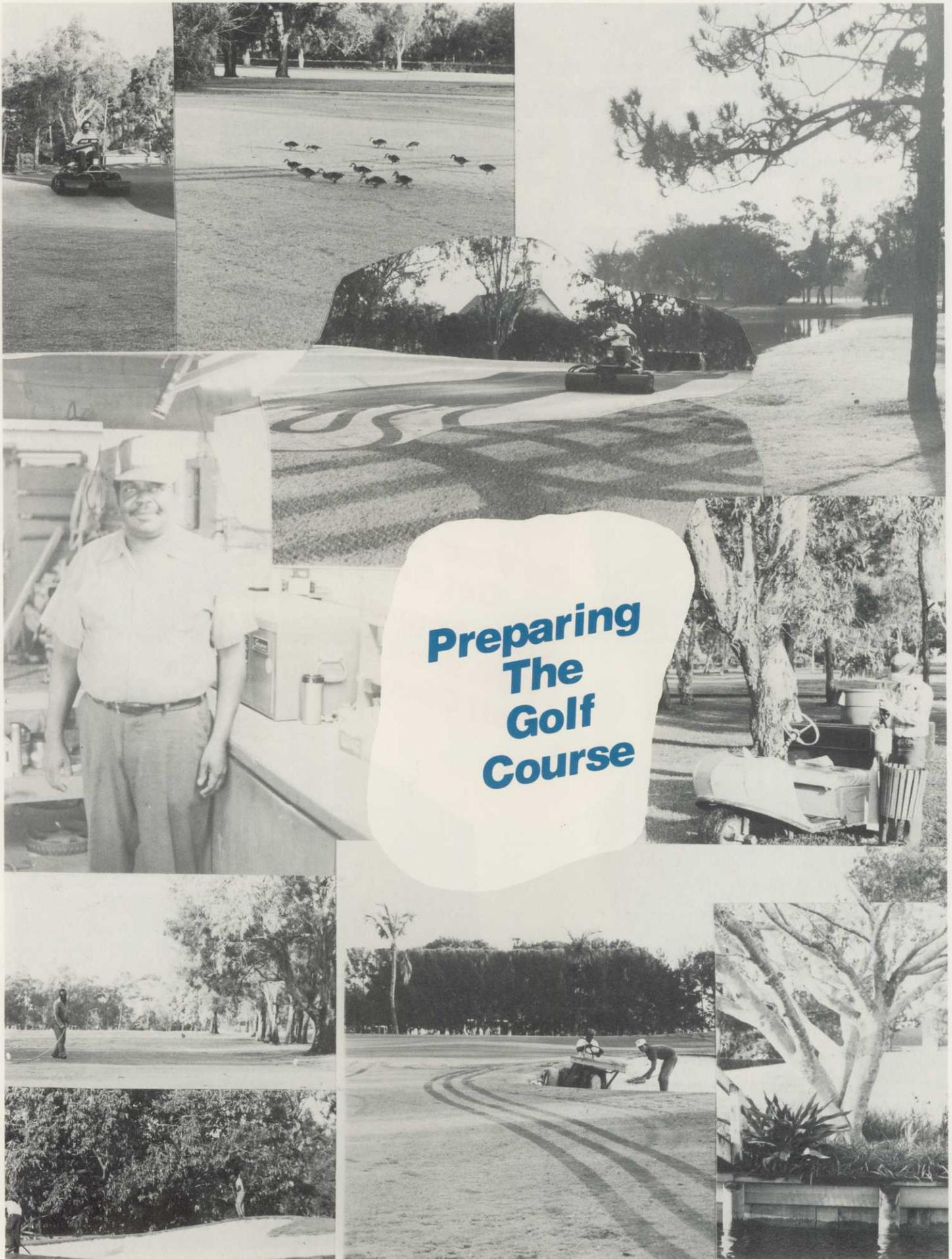
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Naples Beach Hotel And Golf Course Adds To Its Charm With \$5 Million Refurbishing

NAPLES, FLA — She has been described as a grand old lady filled with grace, charm and memories.

And among her admirers she has attracted such notables as Gary Cooper, Hedy Lmarr, Greta Garbo and Gertrude Lawrence.

In the past few years she has undergone a name change and today she has just concluded a "face lift" . . . a \$5 million glamorizing program to give her a smart, up-to-date look.

The "lady" in question is The Naples Beach Hotel and Golf Club, a plush 315-room resort nestled on 135 acres of sun-drenched Gulf of Mexico beachfront in the city of Naples, the southernmost city on Florida's southwest coast. The comprehensive refurbishing program included

most guest areas at the resort, a direct descendent of the now-defunct three-story Naples Hotel, built in the 1880s.

The Naples Beach Hotel and Golf Club — still the sun-kissed dowager of southwest Florida where she reigns in a class by herself — is both a deluxe stopover for the casual tourist and seasonal visitor, as well as a popular meeting place for state and national groups wishing to combine business with the amenities of gracious comfort, plus an 18-hole championship golf course, four Har-Tru tennis courts, three fine restaurants, a huge heated swimming pool and access to fishing, windsurfing and water sports and recreation of every variety, all in a setting offering miles of unblemished sandy beach and warm, gentle Gulf waters.



Insulated from the hectic pace of Florida's larger east coast cities by 100 miles of Everglades and snugly tucked away in a quiet, peaceful corner of a tropical paradise, the city of Naples remains a clean, thriving and attractive urban center of 20,000.

"What Naples has to offer is one of the best kept secrets of our time," explains Henry B. Watkins, Jr., president of The Naples Beach Hotel and Golf Club, "and it is only in the last 20 years that people have begun to find that out."

But both the city and its illustrious hotel had humble beginnings.

The original Naples Beach Hotel had been constructed a century ago by General John Williams who apparently went quickly into bankruptcy and sold out to a Louisville, Ky., newspaperman named Walter Haldeman who was to become Naples founding father. The hotel changed hands



twice again, meanwhile catering to a gentleman-class hunting and fishing clientele that had to travel 40 miles by boat from Ft. Myers to reach the remote village.

Eventually the hotel was inherited by three sisters whose only interest was to sell it.

"That's when my father first saw it," said Watkins, who succeeded his father as president of the hotel company. "He had been in the toy manufacturing business in Ohio and during World War II had been a defense contractor for the Army. He wanted to sell out and move south into the sunshine. The hotel looked like a way to do it.

"But when he found that the hotel deed also included more than 20,000 acres — three-fourths of the platted City of Naples — he decided it was more prudent to also involve other investors. In 1946 he found his participants and the deal was made," Watkins said.

Meanwhile, an 18-hole golf course had been built, then abandoned, just a few blocks north of the hotel, and the senior Watkins immediately leased it from its owners, the Joslin family (Jergens lotion) and in 1946 restored the first nine holes for use by himself and his hotel guests. It was at that time the only course in that part of the state. Later he

(Continued on page H)

(Continued from page G)

restored the back nine and, in 1950, he and his partners bought the property outright. He then moved his offices from the old Naples Hotel into the existing two-story clubhouse.

During the ensuing years, the partnership disposed of its extensive real estate holdings in Naples and Watkins bought sole ownership of the hotel and golf properties. Hen then started adding to the hotel complex, first by the construction of a two-story 35-room structure completed in 1953 that marked the start of the Naples Beach Club. For a time he operated both properties, but eventually all operations were transferred several blocks up the street to the new location and before long the 100-year-old original Naples Hotel was demolished.

Each couple of years saw a new section of the Naples Beach Club added until the complex reached its present make-up of six residential buildings, including the five-story tower, the two-story main wing, the two-level patio wing, the five-floor penthouse, two-level cabana wing and the nine-story Watkins wing, the newest addition.



The senior Watkins, who was active in the resort until 1978 when the role of president was passed on to Henry Junior, died in 1981 at the age of 92. A third-generation Watkins, Michael currently serves as general manager of the resort.

Today the property includes three restaurants to support the 315 rooms, plus six meeting and convention rooms. Its accommodations include 24 deluxe one-bedroom suites with a parlor, 32 one-bedroom standard suites with sitting rooms, 50 efficiencies and a combination of 209 deluxe and standard double-double guest rooms, all of which overlook either the Gulf of Mexico or the golf course.

The 18-hole, par-72 course is a comfortable 6,462 yards long. Redesigned in 1981 by golf architect Ron Garl, more than \$750,000 was spent enlarging the greens, adding traps and bunkers and installing an automatic irrigation system.

The course has been the home of the Southern Seniors Golf Association for 17 years and the Florida Senior Golf Association tournament for 15 years. It was the scene of the original Florida PGA tournament in 1963. Each October the Florida Seniors Open is played there and the

Florida State Womens Senior Golf Association Tournament has been held there for 25 years.

"It is not the toughest course in the world, but is a fun course," says Jim Duffy, head professional who has been on the pro staff at the course since 1958. "It has a good balance of three, four and five-par holes and is just the right test for a low handicapper or the week-end golfer. After all, our guests are here to enjoy themselves . . . and they do." ■

ME

You had better take good care of me. Perhaps you don't think much of me at times, but if you were to waken some morning and realize that you did not have me, you would start the day with an uneasy feeling.

From me you get food, clothing, shelter and such luxuries as you can enjoy.

If you want me badly enough, I will get you a 12-cylinder automobile and a home on Park Avenue.

But I am exacting..

I am a jealous mistress; yet sometimes you seem hardly to notice me at all.

In fact, you make slighting remarks about me at times and neglect me.

Considering the fact that you need me, not only for the material things of life but the spiritual as well, I wonder that you neglect me as you do.

Suppose that I should get away from you?

Your happiness would flee, for a time at least, your friends would worry and your bank account would dwindle.

So, after all, I'm pretty important to you.

Cherish me, take good care of me, and I promise that I will take good care of you.

I AM YOUR JOB.

PEOPLE LIKE TO WORK FOR A LEADER who is fair and square in every respect. It's a pleasure to work for someone you can trust, always a problem to work for someone you can't.

Leaders who want to enjoy this kind of reputation have to earn it. This first step is to make up your mind to show the same consideration for everyone whether they're weak or powerful, loudmouthed or mousey, a personal friend or someone you don't care much for. Run a fair ship without favorites.

And don't try to kid anybody. Call a spade a spade. Say what you mean and mean what you say. People don't like double-talk. They prefer a leader who gives them straight facts — even when they're not very pleasant. It's a lot better than a manager who tries to gloss things over and make black look white.

Be obvious, simple, straightforward. When people know for sure you're being fair with them, there's a good chance they'll be fair with you. ■

William E. Nass

The Florida Turf-Grass Association is pleased to announce the appointment of William E. Nass to the newly created position of Director - Member Services.

As explained by William Wagner, FT-GA President, "We feel we can do more for our members, and we need to do more. Turf-grass managers, like everyone in agriculture, need better information, and they need it sooner. Mr. Nass will play a key role in filling this gap."

Wagner continued, "Today's turfgrass manager is faced with an information explosion. He must stay current with developments in such fields as pesticides, turf breeding, equipment, labor law, water conservation and regulatory affairs. We feel FT-GA can help, especially in the technical aspects of warm-season turfgrasses, by consolidating research information and extracting that which is relevant to the manager's day-to-day operations."

Nass, 32, was formerly Agronomist for Lawn Doctor, Inc. (Matawan, N.J.), a chain of 280 franchised professional lawn care companies. Earlier had been associated with Chemlawn Corporation and Cornell University in turf related positions. He holds a Bachelor of Science in Agriculture degree from Kansas State University, where he majored in Horticulture.

The Florida Turf-Grass Association serves turf-grass managers in the fields of golf turf, professional lawn care, parks and recreational turf, sod farms, cemeteries and other turf sites.

Through individual and corporate contributions, FT-GA actively supports research on warm-season turfgrasses. It also awards five named scholarships annually in support of students in turf-related subjects at the University of Florida and Lake City Community College.

For additional information, contact Mrs. Ruth Sheperd, Administrative Assistant, Florida Turf-Grass Association, 302 S. Graham Avenue, Orlando, Florida, 32803, (305) 898-6721. ■

32nd FTGA Show To Be In Tampa

"Turfgrass Bowl I" will be the theme of the 32nd annual Turfgrass Conference and Show to be held October 1-3, 1984 in Tampa, Florida.

The Turfgrass Conference and Show is sponsored by the Florida Turf-Grass Association in cooperation with the University of Florida-IFAS, and the Florida Cooperative Extension Service. The Conference provides the latest up-to-date information in turfgrass management in addition to its trade show where exhibitors display the newest in turfgrass equipment and supplies.

Last year, the Conference and Show had 1165 attendees with over 70 exhibitors. "This year, we're projecting 2,000 attendees with more than 110 exhibitors," says Bill Nass, Director of Member Services for the Florida Turf-Grass Association.

The Conference and Show will be held at the Curtis Hixon Convention Center and the Hyatt Regency Hotel in Tampa. The Conference will begin as a general turf session with research reports sponsored by the Florida Turf-Grass Association. The keynote speaker will be Bobbie Gee, a consultant who has achieved national prominence as a specialist in the fields of corporate image and personal awareness.

The Conference and Show will have 3 concurrent sessions: golf, lawn care, and parks and recreation. Featuring speakers from the University of Florida and nationally, the topics will include discussions on both a technical and business nature with the goal of providing a wide diversification to meet the individual needs of the turfgrass professional. Registration for the Conference and Show can be

for all 3 days or on an individual day basis. For more information, contact Bill Nass, Florida Turf-Grass Association, 302 S. Graham Avenue, Orlando, Florida 32803-6332. The telephone number is 305/898-6721. ■



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Is A Young Person You Love In Trouble With Alcohol Or Drugs?

EDITOR'S NOTE: My family has gone through the insanity of drug abuse and risen above it with the help of God and Straight, Inc. When we put our daughter (age 16) in Straight she was failing school and our family was out of control. She is back in school with a straight "A" average and our family is a solid loving and supporting unit. If you, a relative or friend thinks they may have a drug and/or alcohol problem and would like someone to talk with, please do not hesitate to call me, Dan Jones.

BEHAVIOR

- Does your child go through frequent or extreme mood swings?
- Have you noticed a change in your child's friends?
- Has your child lied or do you suspect lying?
- Has your child been involved in acts of vandalism?
- Has there been evidence of other people in the home when you have been out?
- Have you noticed objects missing from your home? (money, silver, jewelry, liquor, etc.)
- Has your child used obscene language or gestures?
- Does your child seem withdrawn or prefer the seclusion of his/her room?
- Does your child demand that no one enter his room, or at least without permission?
- Does your child prefer to keep his room dark?
- Have there been sudden or explosive outbursts of anger?
- Does your child suffer from memory loss or disorientation?
- Are you aware of or do you suspect sexual activity with opposite sex or same sex?
- Have you ever discovered drugs or paraphernalia left out where they could be easily found?
- Has your child ever run away or threatened to?
- Has your child dropped out of favorite activities or sports?

- Has your child been charged with an auto accident or reckless/drunk driving.
- Has your child been involved in other court/legal matters?

APPEARANCE - HEALTH

- Does your child neglect personal appearance/hygiene?
- Have you noticed bruises on skin?
- Is your child's coloration pale, flushed, or blotchy?
- Have you noticed a constant or persistent cough?
- Have you seen your child with dilated pupils?
- Have you noticed that your child is going long periods without eating or sleeping?
- Has your child lost weight?
- Does your child appear hyperactive or nervous?
- Have you detected odor of pot or alcohol on your child?
- Have you seen your child staggering, stumbling, or disoriented but does not have any odor of alcohol on breath?

FAMILY

- Does your child attempt to withdraw from family functions?
- Has there been verbal abuse within the family?
- Has there been physical abuse within the family?

ACADEMIC

- Are you aware if your child has been:
 - a. Sleeping in class?
 - b. Skipping classes?
 - c. Cheating on tests, etc.?
- Does your child want to quit school?
- Have you received scholarship warnings or failing grades?
- Has your child been in trouble at school this year?

For more information on what to look for, call Straight, St. Petersburg 813-577-6011, for an information packet. ■

WHICH KID IS THE DRUG ABUSER?



Look closely.

You can't always tell a kid on drugs by the look in the eyes, the style of the clothes or the slur of the speech.

The truth is, both kids are druggies. They start each day with a joint. They drink enough alcohol to be considered alcoholics. They do coke. Hash. Ludes. Rush. And a lot of drugs you probably haven't heard a lot about.

What's even more frightening is — they're not alone. The sobering fact is 60% of all high school students are doing drugs or alcohol.

There *is* a place to get some straight talk about teenagers and drugs. Straight, Inc. A non-profit, drug treatment program that helps kids of all ages with drug problems.

The Straight program is based, in part, on the very same concepts of self-help as Alcoholics Anonymous.

Like AA, the program relies heavily on positive peer pressure. So the kids end up helping each other. And it works.

Straight is more than a drop-off center. Straight believes in total family involvement.

There are parent meetings. Sibling meetings. Family and individual counseling. And, most important, there is a sense of caring. Of sharing. Of respect. And a success rate that's hard to ignore.

So if you think your child may have a drug problem, call Straight today.

And start looking the problem right in the eye.

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Gulf Coast Sun Beams

By CHARLES BRASINGTON JR.
Golf Superintendent
Tiger Point Golf & Country Club

Golf Course Construction Techniques

The nineteen-eighties promise a great surge in the economic recovery here in the United States. With this surge, we will be seeing two things happening. The first is the consumer will have more leisure money to spend which will give us new golfers introduced to the game and more play out of the people who are already enjoying the game. Secondly, money will be a better investment to developers who will be building new golf facilities to accommodate all of this new play.

Since many of you will be needed to fill these new positions as construction superintendents or project managers, I felt it would be proper to pass on some of my experiences as construction superintendent that might make your job a little easier. It would literally take a book to discuss all that is involved in golf course construction. I will only scratch the surface on the main areas involved and some situations we encountered, realizing each development will have its own unique problems.

The name of the development at which I am employed is Tiger Point Golf & Country Club, located just east of Pensacola, Florida. It is a 36 hole project, primarily designed with intentions of hosting major professional golf tournaments. It is co-owned, co-designed, and co-operated by Professional Golfer, Jerry Pate. Helping Jerry with the architectural technicalities was one of today's premier architects, Ron Garl of Links Design, Inc.

The first thing to realize when taking on a new course is that it requires a lot of very long hours and very hard work. You will be responsible to incorporate the architect's ideas; and relaying them to the various construction companies, sub-contractors, to your employees and employers; coordination is imperative. According to John McKenzie, a veteran of multi-course facilities including Disney, PGA National, and now Golden Ocala, "Coordination of outside activities from the beginning is the most important objective of the project manager. Planning the installation of roads, storm drainage, water and sewer drainages, telephone cables and electric lines before final grading on the course to avoid duplication of work is a must." Keeping tabs on outside contractors is only the beginning. On one end of the course, you will have land being cleared and holes being shaped; and on the other end, you will have irrigation being installed and grass being sprigged or sodded.

You may now be beginning to feel that you are required to be in more than one place at a time. Communication becomes a very important aspect of your job and lack of it can cost your company tens of thousands of dollars and you a job.

Communication was difficult at times with Jerry out on a tour, other owners involved, and Ron not always being able to be in town. To make things easier, we would write

(Continued on page 33)



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(Continued from page 32)

up memos and distribute to each of the owners, the construction crew, the superintendents and the architects, so everyone knew where they stood and what was expected from each party involved. Just as important as the communication with outside parties, was the communication within our own maintenance crew. We purchased four two-way hand radios with 5 mile effectiveness and gave one to the project manager, Jack Cunningham, the two superintendents and the mechanic in the shop. This stopped all the wasted time running around looking for each other, and are still in heavy use now, even under general maintenance. I strongly recommend them for any facility over 18 holes.

Not only is communication important, but so is proper soil distributions and preparations, drainage, irrigation installation, plus having the proper equipment and tools on hand. Each must be complete before the course is ready to be planted.

Soil distribution is a key factor in the manageability of the course from the first few months of the planting and growing stages. You should stay on top of the construction crews and make sure they are giving you an 80% to 20% sand to organic ratio, that is well mixed. As soon as possible, you should take soil samples of every green, fairway and tee; checking PH, nutrient levels, percolation rates, and for salts if on or near the coast. The sooner you get these results, the better so you can make any adjustments before the grass is planted. Other considerations of your soils before planting, are fumigating greens, final floating of the course, and applying pre-plant fertilizers. Be sure the construction company's work satisfies all of your needs for maintenance purposes later. We had an instance out here where the ridges on the greens were obviously too sharp to keep a greens mower from scalping and were told it would settle and not create any problems. Well, here we are 4 months after grand opening interruption play leveling the severity of these ridges. Like I said before, make sure all of your needs are satisfied before grass is planted and the construction crews are gone.

Although most of the land in Florida constitutes high levels of sand, it still needs a good drainage system installed. We installed 4" corrugated pipe with a filter cloth sock in every green on the course. What we would do is go out after a good rain and mark any settled water in the lower areas and come back when it was dry to install the tiles. It is very important to keep an eye on the crews doing the installation, making sure they are back-filling the trenches with pure sand. If you back fill with the same soil you took out, the water will never have a chance to reach the tile and you would have wasted a lot of money. Six inch corrugated pipe with the filter sock was installed in wetter areas out in the fairways to relieve wetness. Whether on greens, roughs, tees or fairways, if you have installed drain tile, make sure the beginning has an end cap securely in place and the end comes up out of the ground to give the water a place to run off to.

Washouts can be a big problem on any new course until some kind of vegetative growth is established. One of the tricks we used to stop washouts was to cut old plywood

(Continued on page 34)

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(Continued from page 33)

into strips just a couple of inches less than the depth of the rut and a couple of feet wider than the rut. We would then plant the wood securely into each bank and a few inches below the surface and then back fill the soil. If the wood did not stop the washouts completely, in which most cases it did, it slowed the water down enough to where we would not have to completely fill in persistent washouts. In several instances, we had sheet water running across fairways and washing-out Pine Valley lips. After fixing numerous times, we came back in and added catch basins in front of each wash-out that had always recurred and hooked them into the 4" drain tile with fantastic results.

As all of you know, grass will not live without water, so having a competent irrigation system is imperative. I recommend you find a mature, trustworthy individual, hire him or her, and have them work right alongside the irrigation installation crew. You will be keeping this person on permanently after the installation crews are gone and you want to give them some things to look out for. We had our man draw his own version of the as-builts as they did each hole, that way we were not taking someone's word who is going to be gone soon and we are stuck trying to find pipe or wire later that is nowhere near the area indicated on paper. We did not have much of a problem with our particular crews, but in many cases I have heard of crews "getting around the corner" and running all wires the same color, poorly connecting pipes, and installing pipes only a few inches under the ground. There are many tricks they can use to hurry up their job and increase their profits, but with one of your men working right along with them, it greatly reduces your chances of getting "taken for a ride". Besides having your own employee out on the job site, it is really important to run your system for at least two weeks prior to planting to iron out all of the kinks. We had a lot of trash in our lines that took a while to work out and a few defective valves that needed replacing. If we would have planted grass as soon as the system was hooked up, we would have wasted a lot of money by losing the sprig and it is strongly recommended that you follow the same procedure.

Now that the course is final graded, greens are fumigated, all drain tiles are in place and the irrigation system is operating effectively, it is time to plant the grass. After spending millions of dollars, the owners are always in a big hurry to plant the course, grow it in and start generating some income, such was the case here at Tiger Point. Before sowing the first sprig, I would convince the owners to plant the driving range and a large nursery green first.

What happens is when you plant 150 plus acres of sprigs, you are inevitably going to have some areas that will not survive and you will need a place to cut-up sod or plugs to transplant. With the driving range and nursery green planted first, it will be established before the rest of the course and will be a perfect place to cut out sod without disturbing the condition of the course. Be sure that the grassing company is a reputable one like Southern Turf Nurseries and the grass is weed-free.

Whether planting 328 or Tiftdwarf, I would plant it at least 5 feet outside of your expected collar area so that it will be many years down the road before the 419 encroaches onto the greens. If the slopes are steep at all, along lakes or bunker faces, go ahead and spend the extra money to sod these areas. The sprigs would be slower to establish and would end up washing away on steeper banks, so go ahead and sod.

After planting, it is a must that someone be on hand 24 hours a day checking for blowouts, heads stuck on, off or not turning, until the grass is established. Depending on the time of year, weather and grow-in dead lines, the course should be fertilized every 5 to 10 days, each course will have its own special set of circumstances. We did not plant until July here and ended up having to really push it with Ammonium Nitrate weekly, having only 2 months of decent growing weather left. Because of the short length of the growing season, we only completed 80 to 95% coverage and were forced to overseed wall-to-wall with a quality perennial at 350/lbs./A. As it turned out, it was the best thing we ever could have done because we were the only course in Northwest Florida that had grass all winter and they were coming from all over just to play a course that was not brown.

Once the sprigs take root, growth is fairly rapid and as far as I am concerned, should be mowed as much as 4 days a week as long as you are not pulling it out of the ground. Mowing will smooth out all of the rough spots and keep the grass growing out instead of growing up. Do not use a new mower with new reels; if you do, you will see 5 years wear in 4 months of operation and waste a good piece of machinery. What I would do and did, is negotiate with the companies you will be buying your equipment from and tell them you will buy from them only if they give you a loaner greens mower and pull behind gang mower for free to grow in the course, otherwise you will do business elsewhere. Other pieces of equipment that are necessities to grow in a course are: a roller for fairways and one for greens, a dump truck and front-end loader (still our most used piece of equipment) with back-hoe, a few good tractors and trailers, and a heavy duty spreader that can easily be loaded from bulk trailers. Each course will need other special sets of equipment and can be ordered as needed.

Yes, building a golf course requires a lot of hard work, long hours, and steady concentration. As long as you remain organized, communicate effectively, keep a close eye on all the sub-contractors, you too will be an integral part of one of the finest golf complexes in the state of Florida. Just remember, the hard work lasts for a couple of years; the rewards last a lifetime!■

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Dangerous New Chemical - Water

Sherry Wood, Womens National Agricultural Aviation Association President, writing in the June, 1983, *Agricultural Aviation* magazine presented the following:

"Imperial Chemical Industries of Australia has announced the discovery of a new fire-eating agent known as WATER (wonderful and total extinguishing resource). It is suitable for dealing with fires in buildings, timber yards, and warehouses, and is cheap to produce. It is intended that quantities of about one and one-half million gallons should be stored in open ponds or reservoirs near urban areas and installations of high fire risk."

"WATER is already encountering opposition from safety and other environment groups. One group member has pointed out that if anyone immersed his head in a bucket of WATER, it would prove fatal in as little as three minutes. Each of the proposed reservoirs will contain enough WATER to fill half a million three-gallon buckets. Each bucketfull could be used 100 or more times, so there is enough WATER in one reservoir to kill the entire population of the United Kingdom."

"It has been reported that WATER is a constituent of beer. Does this mean that fireman could become intoxicated from the fumes when they use it to put out a fire?"

"The 'Friends of the World' said they obtained a sample of WATER and found it made clothes shrink. It shrank cotton, so what would it do to people?" In the House of Commons, the Home Secretary was asked if he would prohibit the manufacture and storage of this lethal new material. 'A full investigation was needed,' he said.

"A group was formed to file a report."

And so it goes ... (PESTICIDE PIPELINE, Cooperative Extension Service, Colorado State University)

—LEE COUNTY AGRICULTURE ROUNDUP
October 1983 ■

Pronouncement By Abraham Lincoln

"If I were to try to read, much less answer, all the attacks made on me, this shop might as well be closed for any other business. I do the very best I know how—the very best I can, and I mean to keep doing so until the end. If the end brings me out all right, what is said against me won't amount to anything. If the end brings me out wrong, 10 gels swearing I was right would make no difference."■

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Eagle's Trace

The dictionary defines an eagle as "A large bird of prey with a strong soaring flight". Another definition is "A former gold coin of the U.S. worth ten dollars". The same dictionary describes the word trace as "A visible mark or sign of the former presence of passage of some person, thing or event", or "To form with special care".

A recent visit to the tournament players Club at Eagles Trace brought all these definitions to mind. It was most certainly formed with special care and Arthur Hills, Golf Course Architect, has left a visible mark on the rolling terrain that was once a landfill, given the extraordinary amount of earth moving (elevation changes from 25-30 feet). The course is worth significantly more than a \$10 gold coin and to cope with the sometimes dramatic undulations, a golfer must project his ball into an eagle-like strong soaring flight.

Located west of the turnpike and Coral Springs, Florida, Eagles Trace is situated on approximately 425 acres, where beautiful homes will encompass the Tournament Players Club. The golf course was built by Wadsworth Golf Construction Company and was officially opened on December 3rd, 1983. As mentioned earlier, the course was built on a designated landfill site and this required the movement of millions of yards of sand. This vast amount of sand and soil was sculptured into a challenging and Scottish-style golf course.

Arthur Hills designed greens that range in size from 4,000 sq. ft. to 16,000 sq. ft. and average approximately 5,500 sq. ft. Actual turf will cover about 120 acres in addition to 25 acres of lakes. The lakes and 35 bunkers are esthetically beautiful but will add menacing numbers to score cards for those with less than accurate shots.

It's been said that behind every great man there is a great woman and visa versa. It can also be said that behind every greatly conditioned golf course there is a great Golf Course Superintendent. The management at Eagles Trace knew they had a special club and therefore needed an eminently qualified Golf Course Superintendent. Their search ended with Fred Klauk, former Golf Superintendent at Pine Tree. He is considered one of Florida's and the nation's top superintendents. In addition to this he is a highly competitive golfer, who carries a 2 handicap and has won several tournaments, including the FTGA Scholarship and Research Tournament, (1981 and 1983) and the Crowfoot Open. For those who like details he has lost the POA Annual Classic twice in sudden death.

Fred Klauk's first job on a golf course was edging bunkers and removing love vine from oak trees for Lou Oxenevad at Lost Tree. During his high school summer months, he also installed irrigation systems and rebuilt greens under Lou's guidance.

After his graduation from the University of Florida, where he received a Bachelor of Science Degree in Ornamental Horticulture, Fred became superintendent, during and after construction, on the north course at John's Island in Vero Beach, Florida. Following John's Island, he was superintendent for nine years at the prestigious Pine Tree Golf Club where he acquired a reputation for superior putting greens. He has brought to Eagles Trace the experience and dedication it will take to satisfy the needs of touring pros and the owner.



Since he began at Eagles Trace in September of 1983, Fred has been busy planting trees, conditioning the course and making modifications. At the time of construction, there were virtually no trees on the property and this has led to extensive planting of Live Oak, Black Olive, Bottlebrush, Gumbo-Limbo and a few Ficus, Royal Poincianna, and Jacarandas. The greens consist of Tifdwarf Bermudagrass, inter-seeded with Penncross Bentgrass in the cool season months. The tees are tifgreen 328 Bermudagrass and fairways and roughs are Tifway 419 Bermudagrass. The golf course has a wall to wall cart path system that spans approximately 30,000 linear feet and aids in minimizing turf damage, due to wet conditions. Excellent surface drainage was created on the course by rolling the terrain and installing catch basins. All of the bunkers have drainage pipe connected to catch basins and as a result of this extensive drainage network, the course can receive 6 inches of rain one day and be open for play the next.

(Continued on page 37)

(Continued from page 36)

The most significant problem Fred faces currently is the torpedo grass in some roughs and fairways. Equipment storage is in the 6,000 sq. ft. maintenance complex that is a good facility with excellent crew accommodations. Presently, the course has no shade problems and being a new development receives relatively light traffic.

Situated approximately 1/2 mile west of the golf course is the Everglades, with a variety of wildlife. This includes ducks, Great Herons, and the famous Florida alligator. Perhaps they will assist Fred with his current nineteen item course change list. This list was accumulated as a result of suggestions from players who participated in the first TPC at Eagles Trace. Take the 8th hole for example, Fred is in the process of removing a mound in the landing area that previously would accelerate shots hit off the tee into a lake if the shot hit on the downshape of the mound. The severity of the mound has been reduced and the area will be re-sodded. Three new tees on numbers 3, 5 and 11 are being built for better alignment toward the green and part of the Par 4, 12th green is going to be redesigned to reduce the severity of the contour.

The irrigation system is Toro Vari-time II, hydraulic and is virtually wall to wall. There are 1100 heads on the golf course consisting of 640's, 650's, 670's and Fred's favorite, the 690. There is one pumping station enclosed in a \$100,000+ house that includes a 20, 40, 60 and 100 horse power pump. Fred is currently in the process of balancing his irrigation system and limiting demand which ultimately will lower his electric bill.

The TPC at Eagles Trace was deemed a successful event by the majority of people who played or were involved with the tournament. Bruce Lietzke won the first tournament and Gary Koch and Mark McCumber share the course record of 66.



Under the capable leadership of Fred Klauk and his assistant, Scott Bell, Eagles Trace will undoubtedly continue to improve as the course ages. Each year as newly planted trees mature and modifications for improvements are initiated, the course will assume a slightly different character. As long as Fred Klauk is involved it is safe to assume that the character will be a reflection of his own professional reputation, constantly seeking ways to improve and perhaps like the Eagle, soaring above the rest and leaving a Trace of something significant and worthwhile. That's the essence of Eagles Trace and Fred Klauk. ■

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Palm Beach Trade Winds



By MICHAEL J. BAILEY
Boca Greens Country Club

Geologists generally regard Florida as being nothing more than one humongous sand bar. Golf Course Superintendents can concur with such thoughts, as we all find golf courses to be excessive in sand content. When one thinks of sand, one imagines of a soil that is coarse in particular size, poor in nutrient retention, and excessive percolative rates with virtually no water holding capacity. However, as we discuss the problems associated with sandy soils, it seems peculiar that most all of us experience some sort of wet areas with poor drainage on our golf courses. That brings us to the topic of drainage and the ways of ridding excessive water in an environment where most golfers are usually unsympathetic of our dilemma.

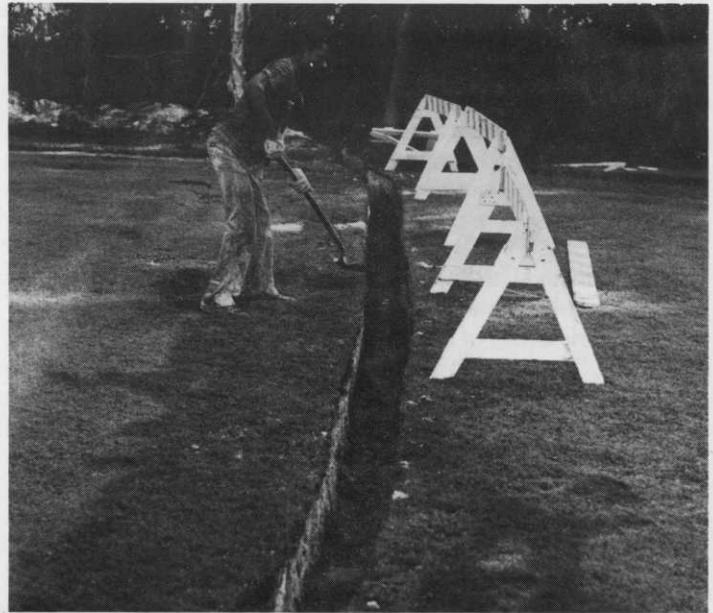
The reasons for poor drainage are generally a direct result of the extremely flat native land. Man-made lakes and canals are excavated to create landfills for the contours of tees, fairways and greens. It is here the problem begins. Sub strata layers varying from fine silt to coarse coral rock are reconstructed whereby your Excedrin begins. Do you have mounds of dryness where irrigational means fail to produce adequate moisture, however at the base of the mound excessive moisture produces a condition of being desert like to swampland within the distance of just a wedge shot.

Because everything is not perfect, we find ourselves forced upon a situation of modifying soil conditions in order to agronomically produce sound turf within such varied conditions.

As I began my evaluation on the type of drainage projects and their respective rates of success, there is one golf course that has employed a unique concept that is producing playable golf conditions with the ability to maintain quality turf, even though the course received 129 inches of rain last year and is found deep within the woods of Cypress and Malelucas, synonyms for soggy soil. That golf course is the Banyan Country Club where certified Golf Course Superintendent Dan Jones has shared his concepts with me for this article.

There are regions of the golf course where water run off must travel hundreds of yards to nearby lakes and canals. Such long linear distances with less than a 1% elevational pitch obviously results in wet areas. Dan Jones has cured the problems of long runs by a practice of calculating the correct pitch within a given distance and then installing a pump, a device similar in nature to a lift station commonly found within the design of sewer systems. He can then pump the water from its lowest given point back up to a

respective subsurface elevational pitch to once again have enough positive drain to draw the water on down the line to a given run-off area such as a canal or lake.



Upon a recent visit, only one day after a heavy rain, I found the course to be open, heavy with play and only minimal moisture as compared to standing water of previous history. Jones has evaluated the many designs for drainage whereby the process of elimination and going a little above and beyond has created a design of exceptional results. First of all, Jones cites, "Don't just go out with a trencher and insert some drain pipe down in the ground, cover it over with some rock and assume all your prob-



(Continued on page 39)

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lems are over." Jones feels the basic key to success is to create a trench of proper width and depth to collect the ground water. Jones insists upon a backhoe attachment which can be coupled to the back of an existing tractor for the employment of digging. A width of 12 to 18 inches is important as compared to a typical 6 inch width of just a trencher which can age faster and produce only short term results. As you are digging the trench, pull a dump truck next to the backhoe and haul off all the excavated material offsite. Jones states, "If the soil wouldn't perc before, why push it back into the trench"—instead haul it away and refill with the proper type of soil, more specifically; Coarse DOT Type Trap Sand.



Once the trench is dug with the proper 1% elevational pitch (See Fig. 1), then the design of the drainage hole itself begins to be revealed (See Fig. 2). Place a 3 to 4 inch depth of rock on the bottom of the trench bed. A filter cloth material bought in rolls of 14' x 1200' are cut literally in half to create (2) 7' x 1200' lengths. Place the blanket within the walls of the trench and again place 3 to 4 inches of 1" drain rock within the blanket. Next the ADS Drain Pipe with holes located all the way around is placed into the middle of the trench. (The sock type cover is not used because the filter cloth accomplishes the same purpose with a less chance of clogging because of a greater circumference surface area in the filter cloth.) Then rock is placed totally around the pipe to 3 inches above the top of the drain pipe, thereby encasing the drain with a column of rock. The filter cloth is then dropped over the top to overlap and seal the drain rock within. Coarse DOT trap sand is then filled to the top of the remaining trench line whereby sod is placed as the icing on the cake. Even the type of sod can make a difference. Jones states, "Make sure you buy a sand base grown sod rather than a muck base, as yes, the muck hinders initial water penetration."

Now that we have analyzed the cross section design of the drain trench, let us now analyze the linear distance of the lateral drain. The given pitch can only go for a certain percentage of a distant drop. The second key of the design is employed which ultimately makes the project "drain so well". A sump pump is placed at the end of a given line. The water is pumped upward to a satisfactory subsurface pitch to have enough positive pitch to drain again. The pump operates on a float valve which automatically turns on when the well fills up with water. Electricity was run from a nearby source. The amperage draw is minimal while design of such can last for years. The concept of an automatic float valve virtually eliminates any need for care and supervision. Jones showed me the pump which immediately brought to mind of several locations of where I plan for future projects. Any of us who have, lets say two or three holes of parallel design, such as the case at Banyan: the driving range, and holes #1 and #18, the system will definitely pull excessive ground water a distance of approximately 300 yards. When golfers consider the facts of such flat land coupled with the astronomical amounts of rainfall that we can receive, it seems amazing that we are even able to play golf, not to mention any such high quality golf courses.

With innovative concepts of the discussed drainage work that are successfully working throughout the golf industry, I believe we can be proud of such fabulous results considering we are usually not engineers, however -we are instead...Golf Course Superintendents.■



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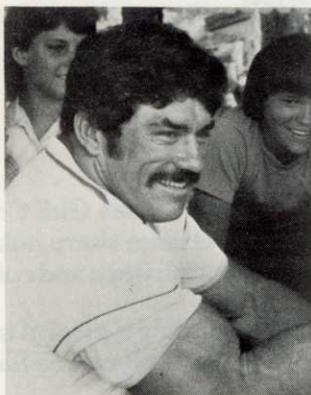
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WHO: Bobby Hopkins — World Champion Arm Wrestler and former Tampa Bay Bandit, Right Guard.

WHAT: "Living in Today's World."

WHEN: Tuesday, October 2, 1984, 7 A.M.

WHERE: F.T.G.A. Prayer Breakfast.

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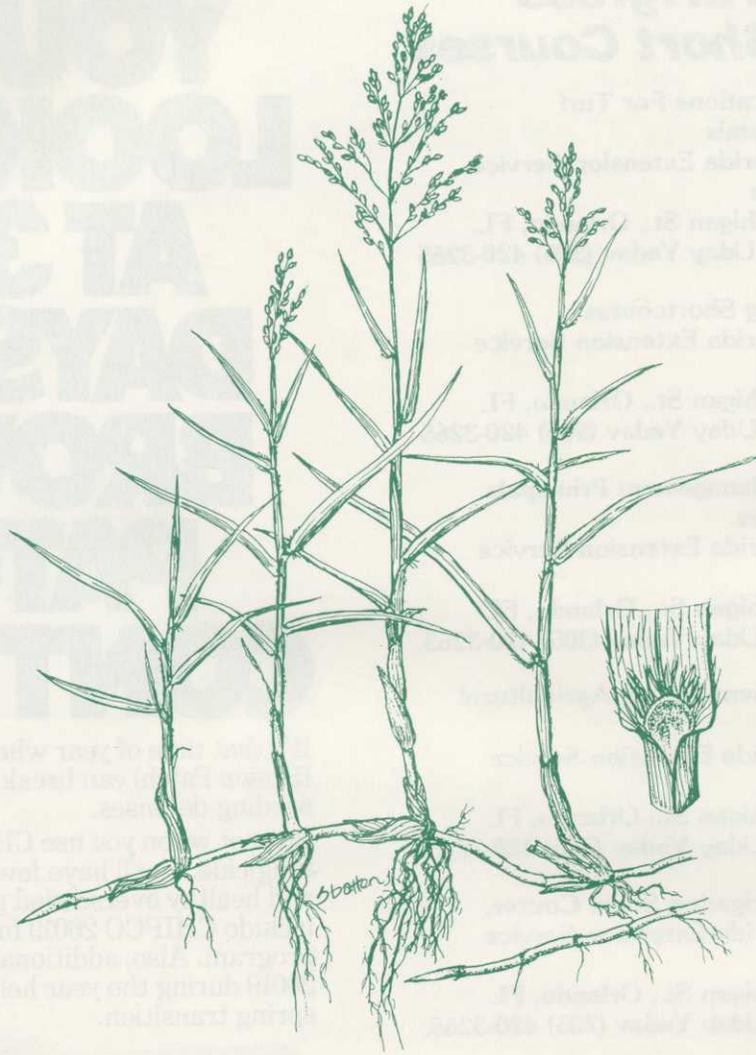


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Torpedograss

(*Panicum roeens* L.)

By Steve Batten

Torpedograss can be found in sandy soils throughout the southeastern United States along the Gulf Coast. It spreads primarily by an extensive rhizome network although it is a vigorous seed producer. The large sharp pointed elongated rhizomes allows the torpedograss to form a turf, so it can quickly invade bermudagrass fairways and collars on greens.

The seeds are produced on open panicles 7 to 12 cm long with the branches stiffly ascending typical of most *Panicums*. The sheaths have overlapping loose hairy margins and the leaf blades are flat or folded and can be hairy or smooth.

Its preference for wet soils makes torpedograss a common sight on lake banks and drainageways of most Florida golf courses. The herbicides that control torpedograss will also control bermudagrass. Non-selective herbicides such as glyphosate (Round up) is the best control. On bermudagrass turf, a few superintendents have even used paint brushes to selectively place glyphosate for torpedograss control. Excavation is often tried, but care has to be taken to completely remove all of the rhizomes. More likely than not excavation will only cultivate a denser torpedograss population.

Fisherman will find torpedograss attractive on lake banks, because it is a favorite hiding place for large mouth bass.

(Illustration from **TURF MANAGEMENT FOR GOLF COURSES**, Fall 1982, by James Beard, published by Burgess Publishing Co., Minneapolis, Minn., illustrated by Steve Batten) ■

Watching Your Tees & Q's

By STEVE BATTEN AND BUD WHITE
United States Golf Association-Green Section
Southeastern Region



Fire Insurance Is More Than Just A Policy

Fires are a constant threat to golf course maintenance buildings because of the presence of gasoline engines, lubricants, elaborate electrical systems, and storage of many commodities. But there's more to good fire insurance than a purchased policy. This would include good fire prevention, a well educated maintenance crew, an updated insurance policy, and a researched source of additional equipment.

The first place to start a fire prevention program would be in the building itself. You can minimize many of the daily fire hazards by asking a local fire marshal for an inspection. They will gladly help you select the right size and type of fire extinguisher, detector system, and advise the superintendent and golf club on the best method of chemical storage. Some items to consider would be to separate storage of aerosol cans, fuels, lubricants, and commodities such as fertilizers and pesticides. Separation of these items lowers the risk of accidents and increases the control of fires.

Design of the building should include a three way fire detection system for heat, smoke, and chemical fires. Fire exit lanes should be clearly marked. Insulated walls should be considered for fertilizer storage areas and the doors to chemical storage rooms should be clearly marked. The list can go on and on and all these considerations for building design and maintenance can be outlined with the help of the local fire marshal or an insurance inspector.

Education of the maintenance crew is a continuing process. They should know the location of all fire extinguishers and alarm or detector systems. Keeping a clean house will prevent many accidental fires. This could begin with personal lockers to clean up cluttered floor space so that traffic flow through machinery areas is unobstructed. Everyone on the crew should know where the electrical breaker box is located. This extra time spent on education could pay big dividends.

Don't get caught with your pants down without a fire insurance policy. A good policy should be able to replace large mowing equipment at the present cost. The only way to keep the replacement cost current is to update the policy every year and revise the list of insured equipment. The superintendent should be the main consultant with the club management for revising the insured equipment list.

Each time a new piece of equipment is purchased, then it needs to be reported and added to the insurance list the same day as arrival. Be sure to file two to three copies of the insured equipment list in separate offices, such as with the financial office, the club management office, and the superintendent's office. This just adds a little insurance against loss of your records.

If a major fire does happen, then hopefully all of your research and vested hours of paperwork will payoff. Expect the building to be the first insurance settlement.

(Continued on page 44)

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(Continued from page 43)

Commodities and maintenance supplied will be lost, but these are readily available. The first concern will be to find mowing equipment. Neighboring golf courses and equipment distributors can often lend a helping hand to allow the continued maintenance of the course.

This will mean extra work time for the maintenance crew to mow the turfgrass because machinery will be limited. One of the first priorities is a good temporary work area for the mechanic. Borrowed equipment will mean that special consideration will have to be given to keep up repairs. With an informed crew and good insurance, the reorganization of maintenance priorities will proceed after a fire without affecting the daily loss of golf traffic.

Strictly Personal...

It's a truism that a good credit rating is based on more than wealth. You also have to have roots, substance, an attachment to the community. Not to mention a record of having paid what you owed.

Tom De Bari of Hoboken, New Jersey, offers new proof of this. A lottery winner, he is assured of an annual income of \$71,000 for the next twenty years. Yet he wasn't able to get a credit card.

CREDIT CARD NOT ASSURED EVEN IF YOU'RE VERY RICH

The reason the 60-year-old longshoreman wants a credit card is that, although he has always paid cash for everything, he doesn't want to carry cash any longer; there's been too much publicity about his new wealth.

Yet he was turned down for both a Visa card and an American Express gold card. The banks that issue the cards were suspicious not because Tom's record was bad but because he didn't have any record at all. A big income alone doesn't mean anything, they said — that can be frittered away as easily as a small one. And if one isn't firmly attached to the community, what's to keep him from taking off for parts unknown, leaving bills unpaid?

Among the steps Tom might take would be:

- Opening a bank account or two — checking and savings. He might even be able to get a type of account that includes a small amount of credit — to help him establish a good record.
- Opening charge accounts with local merchants — especially department stores that subscribe to a credit-rating service.
- Buying items on the installment plan.
- Paying all bills promptly.
- If he has moved recently, getting any creditors from his old area to report his credit worthiness to credit bureaus where he now lives.

PROFILE OF A GOOD CREDIT RISK

Credit seekers who are not in Mr. De Bari's special situation should know some of the other factors that can help one establish a favorable credit rating:

- Age (Over 40 is good; over 50 is even better).
- Job duration. The longer you have held your present position, the higher you rate.
- Time at present address. Again, longer is better (The *location* of one's home is also considered a good credit indicator; zip codes used to be a key credit-rating factor. But the Federal Trade Commission interpreted that as a source of racial discrimination, so zip codes now are out.)
- Income. Here Tom De Bari would do fine.
- Ownership of assets that suggest stability, such as a home and car. (If necessary these could be sold, of course, to repay any debts.)

Credit people say that essentially there are three types of assurance they want about any credit seeker: Does the person have the *means* to pay what is owed? Are there *assets* that could be sold if payment is not made? Does he or she have the *inclination* to repay — the honesty, integrity, concern for reputation or whatever you wish to call it? ■

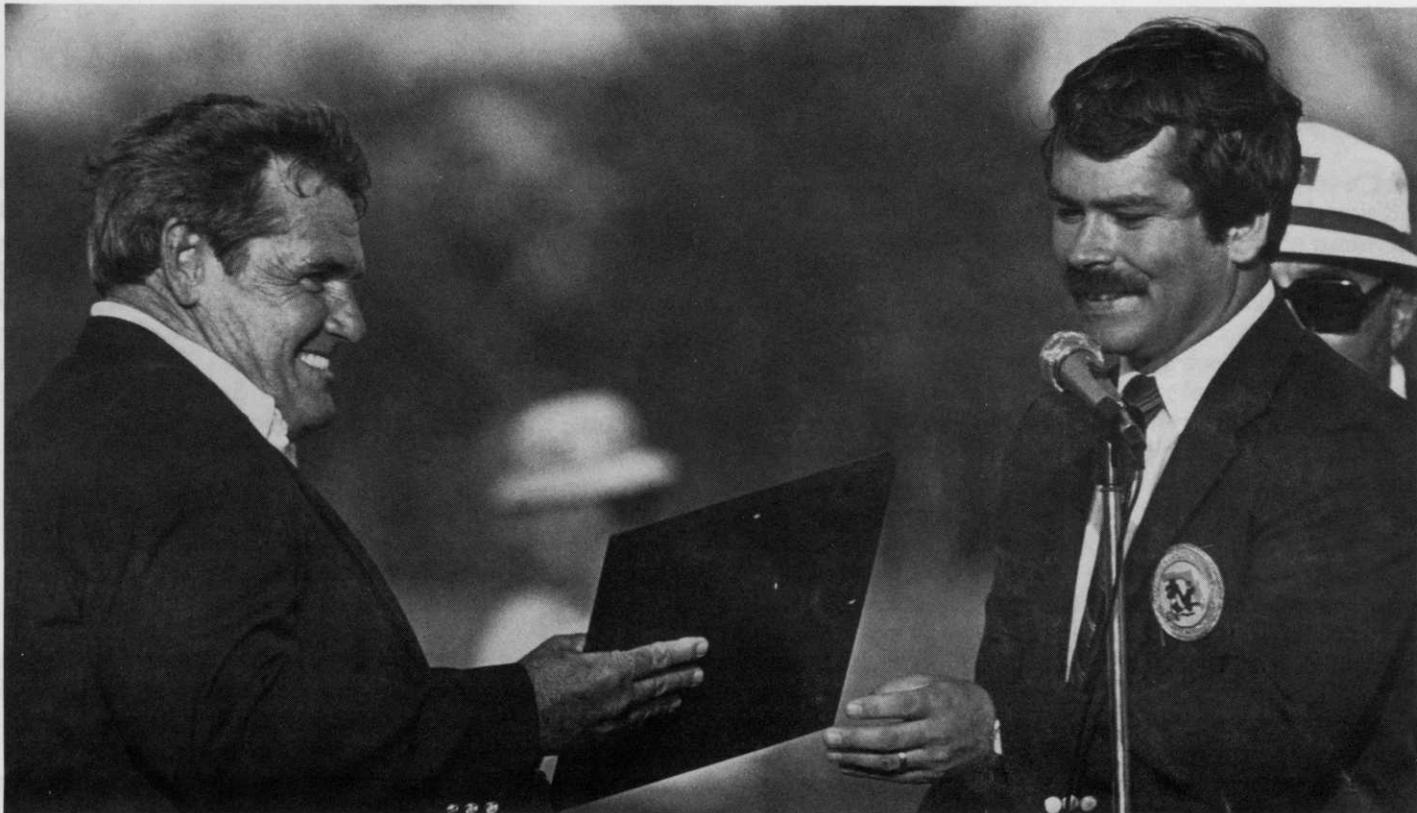


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The awards ceremony presentation at the S & H Classic LPGA Event at Pasadena Country Club in St. Petersburg, Florida made on Sunday April 22, 1984 to Bud Quandt, Golf Course Superintendent. The plaque was presented on the 18th green just before the tournament winner was announced. Bud received a standing ovation from the 10,000 in attendance.

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Physical Measurements Of Soils

By LYNN GRIFFITH

Most everyone in the turf industry is familiar with the traditional soil test. They measure pH, soluble salts, major and minor nutrients, etc. Less familiar are the physical soil test, which measure the physical properties and characteristics of soils.

One basic difference between chemical and physical analysis is that chemical properties can be quickly changed, by adding such materials as lime, fertilizers or trace elements, or by leaching with irrigation. Physical properties of soils can only be changed very slowly, if at all. Because physical structure is so hard to adjust once a golf course is constructed, it is especially important to know the physical characteristics of soils when building courses or rebuilding greens or fairways. Other major uses include the physical measurements of soils for suitability as top-dressing or trap sand, and checking the compatibility of topdressing with existing soils. This article deals with these physical soil analysis, as well as what to look for when interpreting them.

A simple, well known physical test is the texture analysis. This test breaks down the percentages of sand, silt, and clay in a soil. The texture analysis data is then used to characterize the soil into a category, such as silt loam or sand clay. For Florida turf, high percentages of silt and clay are undesirable because of their fine particle sizes. The higher sand percentages are preferred.

A more precise particle measurement is the sand fractions, or particle size analysis. In this test, the soil is passed through a series of screens to determine the percentages of the various particle sizes. The sand fraction test is to determine the percentage of sand in a commercial top-dressing. An example of a sand fraction would be:

ANALYSIS:

%Very Coarse Sand on #18 Sieve (2-1 MM) ..	6.16
%Coarse Sand on #35 Sieve (1-0.5 MM)	32.79
%Medium Sand on #60 Sieve (0.5-0.25 MM) .	24.39
%Fine Sand on #140 Sieve (0.25-0.10 MM) ..	33.68
%Very Fine Sand on #325 Sieve (0.10-0.05 MM)	0.98
TOTAL SAND	98.00%

The coarser sands are preferred, and the percentage of very fine sand should be kept to a minimum.

Moisture holding capacity is an important soil characteristic, especially in non-irrigated areas. To perform the test, artificially saturated soil must be weighed, and then the soil is oven dried and weighed again. The difference between the weights is the moisture holding capacity, expressed as a percentage. Moist soils, especially organic ones, will absorb several times their weight in water.

Percent moisture is a physical test which isn't used much in turf. It is a measure of the existing moisture content of a soil at any given time, and is determined by comparing wet and oven dry weights. The test is primarily used for bagged materials, or materials sold by weight.

Infiltration is a measurement of the ability of moisture to enter a soil. It could tell you, for instance, whether a soil would tend to "puddle" during rainy periods. The sample is placed in a vertical column, and water is gravity-fed through the soil for 30 minutes to simulate natural field settling. Then the amount of water which will enter the column is measured for 5 minutes. The analysis is expressed in millilitres of water per 5 minutes, the more the better. The ratings for infiltration of field soils are:

	ml/5 min.	
0-50	Poor
50-100	Fair
100-150	Good
150-200	High

A test often done on peat or muck is loss on ignition. In this test, the peat is placed in a very hot oven to burn off the organic portion, leaving the mineral portion behind. Loss on ignition determines the purity of a peat or muck sample, and tells, for instance, whether it contains sand or other mineral impurities.

Bulk density is a physical measurement used to give a typical weight of a soil. It is usually expressed in pounds per cubic foot. Bulk density tests are important in determining shipping weights of both bagged and bulk materials. It is often used to convert tons to cubic yards, or vice versa.

There are a few other special physical tests available in some situations, but those listed here are available at most soil testing laboratories. They are widely used by top-dressing and peat companies, fertilizer companies, potting soil producers, research labs, architects, and superintendents. A good physical soil structure can make the superintendent's job a breeze or a nightmare, and it helps a great deal to know what your dealing with.■

It Isn't Easy

To apologize,
To begin over,
To be unselfish,
To take advice,
To admit error,
To face a sneer,
To be charitable,
To keep on trying,
To be considerate,
To avoid mistakes,
To forgive and forget,
To think and then act,
To keep out of a rut,
To make the best of time,
To shoulder a deserved blame,
To recognize the silver lining,
...BUT IT ALWAYS PAYS!

Is A Picture Worth A Thousands Words?

By MIKE BAILEY
Boca Greens Country Club

EDITORS NOTE: PART ONE OF A THREE PART SERIES

How many times have you said, "If only I had a picture of that". Well, photography need not only be for just the professionals. Most amateurs think of the instamatic box type camera and often feel anything beyond a simple camera is much too complex to handle, thereby shrugging off any further advancement in photography. The intent of this article is to stimulate the non-photographer into comprehending that photography is not quite that difficult. This will be the first of a three part series on the aspects of photography. We will discuss the initial purchase of the camera, basic concepts of photography and lastly, advanced photographic techniques.

The first major issue to contemplate is the initial cash outlay of a camera, which if spent on the correct product, could be a lifetime investment that will provide fruitful rewards within our profession, not to mention your own personal satisfaction. In order to achieve a great picture, one generally must have a relatively good camera. Anything short of a several hundred dollar expenditure will result with just a little black box and fuzzy small photographs. The overall most practical camera to purchase is the 35mm SLR (Single Lens Reflex) Camera with the ability to couple interchangeable lenses of which you will expand upon at a latter date. The newer more modern electronically automated cameras are relatively goof proof, whereby the technical knowledge of shutter speeds, aperture settings, depth of field and compensations for contrast are performed automatically. The so called sophisticated cameras can be set into an automatic mode to be almost as simple to operate as an instamatic camera.

You now say "what type of 35mm SLR camera should I buy"? Most any manufacturer, given enough money can proclaim their product as the official camera of the PGA. Look inside the ropes of any major golf tournament and observe what type of camera the professionals use and you have answered your question with the product being dominated as NIKON CAMERAS. With the advent of the increased value of the American dollar and the decreased value of the yen, coupled with keenly competitive marketing, a rather complete photographic ensemble can be purchased for less than \$350. The key here, is to buy the photographic equipment that can be expanded upon or coupled with existing equipment. You are best advised to steer away from equipment that will only temporarily fulfill your needs because you do not want to trade in an obsolete item as you upgrade your system.

First of all, let us consider the very basics; the camera body. That's right, there is the camera body and secondly, the lense which attaches to the camera. Do not buy the

camera with the standard 50mm lense, as right off to bat, you have just bought an obsolete item; being the lense. Instead, look for just the camera body alone: Nikon EM, NY mail order cost \$80. This item will most certainly perform all of your photographic needs forever, unless you plan on turning professional whereby you should consider the Nikon F3AF \$850.

Secondly, the lense must be considered. This item is the key to either viewing pictures of fine sharp resolution or a grainy photograph that is a blur. The standard 50mm lense is virtually useless, when instead, one can purchase multi-focal length zoom lense of wide angle 28mm to slight telephotic range of 80mm such as the Vivitar Automatic 28mm/90mm at a cost of \$140. There are several brands of varying length and cost, however Vivitar manufactures a good product at a fair price.

Thirdly, consider an electronic flash attachment, for those times when existing light is not quite adequate enough to produce a bright clear photograph. Again Vivitar has several good models such as the model 5600 at a cost of \$50.

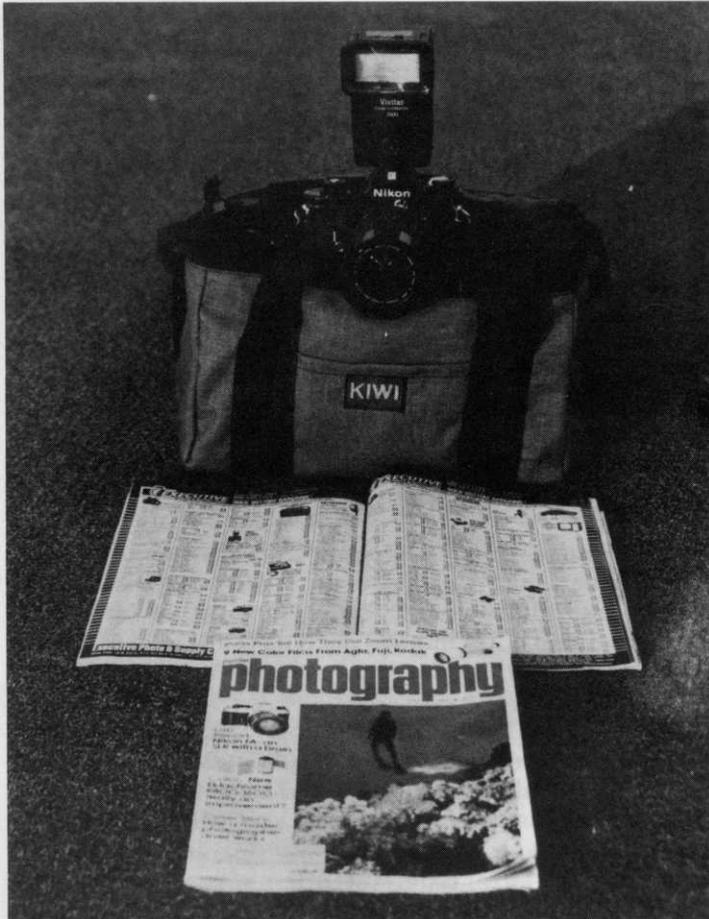
Fourth, and finally in the initial first order, purchase a gadget bag to carry all of your paraphenalia. The key here, is to order a gadget bag that is too large for now, rather than one of just the right size. You will undoubtedly expand upon your system, thereby needing more room for storage at a latter date. Kiwi offers several gadget bags in various colors with high quality zippers that are plastic coated because normal metal zippers will scratch your nice new camera. Don't buy an inexpensive one, instead you will average \$50 for one such as the Kiwi model 425. These four items are the basics for the beginner. Most importantly, one can expand upon this system and feel proud of what has bought...so far.

Next you say, "How do I go about buying this outfit"? Answer -through the mail. That's right! New York Mail Order Camera Companies offer basically the very best available price because of their sheer volume. Don't worry about the famous fear of receiving a broken camera through the mail with no warranties or service. This is the complete opposite. Instead your purchase will arrive securely packaged, completely insured for face value, warranty cards, options to a complete refund or exchange if damaged upon receipt, not to mention the absence of paying the Florida Sales Tax. One generally regards a local purchase as being more sound because of local service -but lets reveal the facts. If a camera proves to become defective while on warranty, the product will have to be shipped away to an authorized factory repair center, for Nikon that being back to New York City, so -where's the local service?

(Continued on page 48)

(Continued from page 47)

Now that you will consider such an unorthodox manner of purchasing, you ask, "How do I go about looking at what I'm going to buy"? The easiest way to investigate your purchase is to go to your local photo shop and let them give you their typical sales pitch. Evaluate the different products and most importantly, take note of their very best available price.



Now that you have found the theoretical best price available, go to your local newstand and buy a current issue of Popular Photography. The back half of the magazine is packed full of ads. Find your model and compare prices. If they try to upgrade your choice or say they are temporarily out of stock of your choice call someone else who is more receptive to your order. I am totally confident of this style of purchasing as I have made many purchases over the past ten years without one complaint yet. I am not going to say you might not have a problem arise, however if a positive approach is taken with the company you call, you can generally tell from just their attitude on the telephone, if they really want your business. The consumer has the upper hand if you follow these procedures; arrange your method of payment via a major credit card. This way you have recourse if shipment fails to arrive rather than a cashiers check, personal check and never just straight cash. Your shipping address is best to be at a location where you know someone will definitely be there to sign for your camera, such as your place of work, where UPS shipments to a clubhouse address are more common. Do not have it dropped off at your home doorstep and assume it will be there when you get home.



Upon receipt of your photographic outfit, immediately open all boxes and examine for possible damage. Factory packed boxes are generally so well secured you will not find a problem with such. Locate your owners manuals and carefully read your instructions to familiarize yourself with the equipment. Take note of the warranty cards, fill out all pertinent information and mail off to activate your full factory warranties. Now that you have all this fancy gismo you say, "How in the world do I take a picture"? Good question! The next of a three part series, will deal with the basics of good photography. P.S. Pay your charge card off because your camera really will work.■



Mark Jerrel, President of the Palm Beach Chapter of the Florida Golf Course Superintendents holds the flag while David Bailey "sweeps up" the trophies. Palm Beach is now the proud owner of every Superintendents Golf Trophy in Florida this year. Crow Foot Open LOOK OUT!

GUIDELINES FOR MAKING "THE BIG DECISION"

By: **DAVID L. DeBRA**
Executive Vice President
DeBra Turf & Industrial Equipment Company

Selecting the company to supply your turf and lawn maintenance equipment and service can be a tedious job.

But it doesn't have to be. The decision can be made easily and quickly — with complete confidence — by following these guidelines:

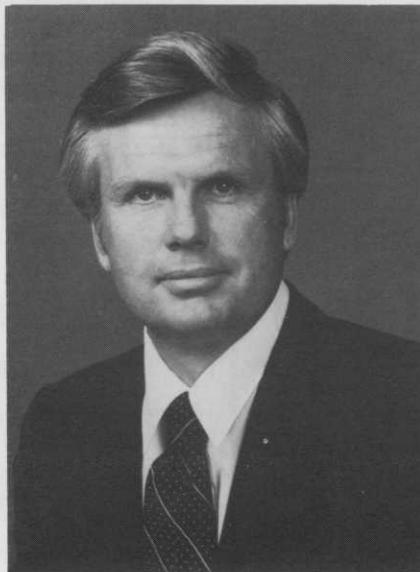
1. Investigate the product lines available. You want a company that can provide the equipment you need from a manufacturer who stands behind the product. Suppliers who handle a limited number of product lines or lines with dubious credentials should be avoided. At DeBra, we offer more than 70 product lines, including the highest quality Jacobsen equipment.

2. Consider the service staff and facilities. Finalizing a sale is only the beginning of an agreement with any supplier. Providing the necessary service from a trained professional is equally important. DeBra features the largest, factory-trained staff and the most complete service facilities in South Florida — including mobile service trucks.

3. Ask about the availability of parts. Down time caused by waiting for parts can be disastrously expensive. If parts are not routinely kept in inventory, ask how long the delivery times average. Our computerized

parts system inventories more than 20,000 of the most commonly needed replacement parts. That equates to more than a million dollar's worth of parts!

4. Read the fine print on cost structures. Special discounts are not always as beneficial as they may first appear. Because DeBra is the world's leading distributor of lawn and turf maintenance equipment, we can offer equipment packages at discounts that other suppliers are not able to compete with. We also work with customers on lease and special terms arrangements.



In short, when selecting your supplier of lawn and turf maintenance equipment it pays to work with the leader in the field. Because of our size and volume, DeBra is able to supply a bigger selection of the finest equipment, outstanding service, and financial packages geared to help you. Our

more than 70 employees work out of the Hollywood headquarters and branch facilities in Tampa and Fort Myers.

And it does not end there. We are constantly looking for new markets to expand into to better serve our customers. It is all in keeping with our 38-year tradition of promises kept.

For additional information regarding the equipment and services offered by DeBra, visit any of the three offices or call: 5921 North Oak Street, Hollywood, 305/987-1400; 6025 U.S. Hwy. 301 Tampa, 813/621-3077; 2857 Hanson Street, Ft. Myers, 813/332-4663.

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Lake Shore Has New Name

LESCO, Inc., is the new name of a major supplier to the turfgrass and horticultural industries.

Effective March 1, 1984, after almost 23 years of operation, Lakeshore Equipment & Supply Co. officially became LESCO, Inc. Lakeshore has had a LESCO Products Division for the past 14 years as a golf course sales unit and manufacturing section. The name change, according to LESCO President Jim FitzGibbon, unifies the organization and facilitates identification.

LESCO recently moved into new offices at 20005 Lake Road, Rocky River, OH, following renovation and completion of manufacturing, formulating and warehouse facilities at Wellington, OH, and Sebring, FL. LESCO also has warehouse and formulating at Windsor, NJ, and a warehouse in Landover, MD. Ag Industries Mfg., a division of LESCO, has a sulfur-coated fertilizer plant in Columbia, AL.

Geographic and product line expansion has moved LESCO from a regional turf distributor to a position as a primary national supplier for golf courses, lawn care companies, cemeteries, government and nurseries. LESCO, Inc., maintains an outside sales force of nearly 60 persons and produces and sells a wide range of products including grass seed, fertilizer, chemicals, replacement parts, golf course and lawn care accessories, sprayers and spreaders. For 1984, 27 direct-sale, routed, warehouse-on-wheels LESCO Trucks will serve golf course and turf care markets. ■

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Treating Burns: Promptness Pays

Burns are among the most painful injuries, simply because their effects are immediate. However, prompt action can minimize the injury, alleviate the pain and lessen the chances of long-term scarring.

First-degree burns, those caused by hot water or steam, usually don't require medical treatment. Submerge the injured area in cold water (not ice) until the pain subsides, then blot the area dry with a sterile cloth and apply a dry dressing.

The same treatment is effective for second-degree burns. Second-degree burns usually can be identified by a red or mottled appearance and blisters.

For third-degree burns, which look white or charred, don't immerse in water. Simply cover the burned area with a sterile dressing and seek immediate help.

Contrary to some folk remedies, you should not put ointments, butter, or any other medicine on a burn. In the case of chemical burns, it is essential to wash away the chemical completely, using large quantities of water from a shower or a hose. Immediate washing is more important than neutralizing the chemical and should be continued for at least five minutes. ■

"Divots"- May 83

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Editorial

Communication Important To Golf Course

Communication Important To Golf Course

The following is from a speech by William C. Cambell to the Golf Course Superintendents Association of America

Communication is important in any endeavor, but is crucial for golfers to develop a close relationship with their golf course superintendents.

Under the ideal situation, there would be a key person, and only one person who would represent all golfers at a course and communicate with the superintendent. That key person should be respected by his fellow members and should be knowledgeable enough to understand what a superintendent may explain.

The key person out to be honest in his dealings with the superintendent, meet frequently with the superintendent and be practical in his suggestions.

At a private club, the key person normally will be the Chairman of the Green Committee, but too often the Chairmanship changes hands every year. If the club has a Green Chairman who is really effective, really trusted and works well with the superintendent, the club ought to keep him in that position for as long as it can.

The same arrangement should also exist at public and daily-fee courses. It might even be more important at such courses.

A daily fee player is just as interested in the condition of the course as a country club player. But the daily fee player plays anywhere he wants. The owner of the course needs to work closely with the superintendent if he wants to attract business.

That should mean something other than just keeping the course cut back so it is conducive to moving a large number of golfers through each day. It should mean keeping the golf course in as good a condition as it can be, so players will enjoy it and come back.

It is important for a superintendent to encourage such a relationship. If the condition of a course goes bad, everyone suffers. That is when a club must have confidence in its superintendent. They will, if they know him and understand his situation.

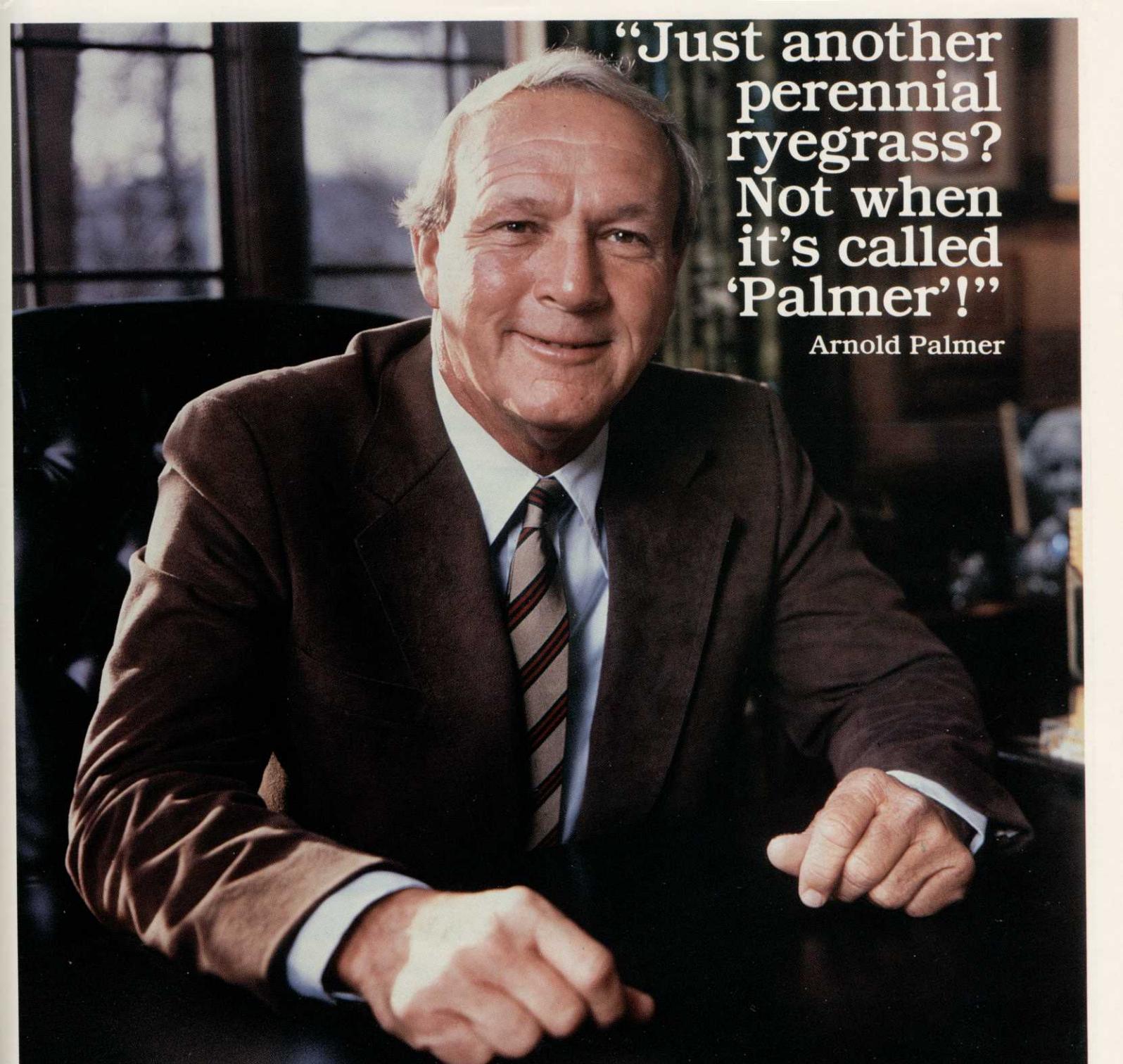
On the other hand, if the course is in good shape, the superintendent wants to feel that his efforts are appreciated.

I'm not saying that a superintendent should be free of criticism. But any criticism has to be constructive and should come from a single source. It should come from that key person, the one who also provides the superintendent with a lot of support when he deserves it.

It also is important to open channels of communication to people outside his club. Consultants — such as those employed by the USGA Green Section — are good sources of support.

A superintendent should not have to go it alone. Green Section consultants are trained as experts and have a wealth of observations and experience to draw upon. They can supply objective opinions to any problems the superintendent might have.

The ideal situation would be one where all golfers are educated enough to appreciate the role of the golf course superintendent. ■



“Just another perennial ryegrass? Not when it’s called ‘Palmer!’”

Arnold Palmer

“If a ryegrass is going to be named Palmer, it would have to be very special. And believe me this one is.

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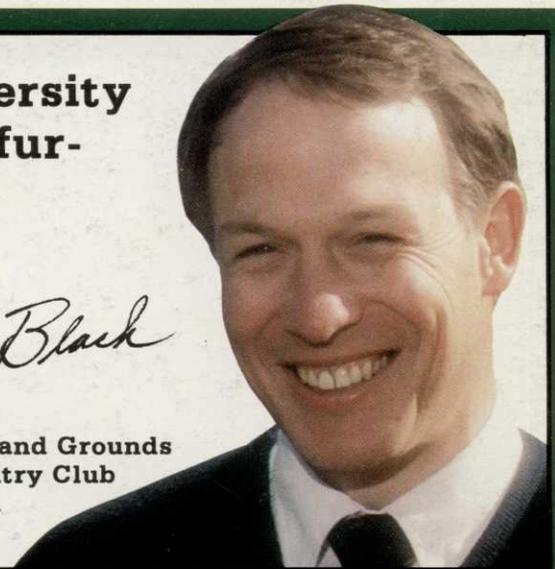
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Bill Black

**Bill Black, CGCS
Manager of Greens and Grounds
Congressional Country Club
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"It used to be you had to bring in the entire crew to unload the truck," Black said. "With LESCO Spyder delivery you don't even touch the product — you just have to make sure an area is cleared for

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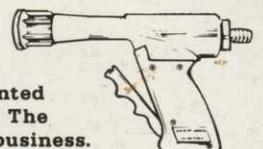


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