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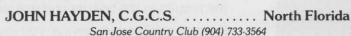
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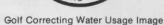
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President's Message

JOIN YOUR GOLF COURSE SUPERINTENDENTS' ASSOCIATION.

This message is directed to those Superintendents who are not members of a FGCSA chapter. By not being a member, chances are you are not fulfilling your responsibility as a Golf Course Superintendent.

By becoming a member of a FGCSA chapter you can:

- 1) Attend monthly educational meetings.
- 2) Becoming acquainted with other Superintedents who deal with the same problems you may have.
- 3) Have the opportunity to play other courses and see how your fellow Superintendents perform and gain new ideas.
- 4) You are welcome to bring club officials to these meetings as guests.
- 5) A monthly newsletter is published by many local Associations to keep members informed of "What's Happening."
- 6) Automatically become a member of the FGCSA.

YOU WILL BECOME A MEMBER OF THE FGCSA WHICH OFFERS YOU:

- 1) Three educational seminars conducted annually.
- 2) Three publications to help keep you up on various educational matters, research and up-to-date news items—the Florida Green, the Green Sheet and the Membership Directory.
- 3) Fund raising events are held. Last year over \$20,000 was given by the FGCSA to the University of Florida for turf research.
- 4) A secretary assists in the overall operation of the Association.
- 5) An attorney and CPA to see that matters are conducted legally.
- 6) You will be eligible to join the GCSAA, attend the International Turf-grass conference, receive their monthly publication "Golf Course Management" and attend a large variety of educational seminars to prepare you to become a "Certified Golf Course Superintendent."
- 7) You become familiar with the FTGA which puts on the largest Annual Turfgrass Educational and Trade Show Conference in the Southeast.
- 8) You are kept abreast of Environmental Affairs concerning water usage, pesticide changes locally, state-wide and nationally.

JOIN NOW — Contact your Local Chapter and become an active part of an involved Association. Keep up with the continually changing times and fulfill your obligation to yourself, to your profession and, most important, to your employer.

Jan Burrous

Letters to the Editor

Dear Dan:

December 21, 1984

Congratulations! Your entry in the Foundation's Harry C. Eckhoff Award contest finished first in its category.

A plaque has been ordered and will be shipped to you as soon as it in engraved. Enclosed is a listing of all 1984 winners. Along with your plaque we will send you an official Eckhoff Award logo sheet which we hope you will use in your masthead.

The NGF is very much appreciative of those who serve golf. Again, congratulations and we look forward to seeing more of your outstanding publication.

Sincerely,

Joe Much Executive Director

Letters

Dear Dan:

Just a short note to thank you for including me on your mailing list to receive The Florida Green. It is by far the finest of all the golf course bulletins being published at this time. Congratulations on such an outstanding publication. I know it takes a great deal of time and organization to produce such a beautiful and informative magazine.

Sincerely,

David C. Harmon Superintendent of Golf Course Colonial Williamsburg

Dear Dan,

I wanted to drop a line to congratulate you on the Top Ten Award from the GCSAA, and to thank you for the hard work that you have done in producing *The Florida Green*.

I just wanted you to know that your commitment to your profession through your hard work, honesty, and willingness to share knowledge (professional and personal) is inspirational to me. I hope that I can also be worthy of the profession that you have represented so well.

My best wishes to you and your family in 1985.

Sincerely,

Joel Jackson

Mr. Michael T. Ayer 815 Greenwood Ct. Brandon, FL 33511

Dear Mike,

This letter will follow-up our conversation concerning the administrative or "overhead" costs charged to grants by IFAS. Under a current agreement with the IFAS Dean for Research within state associations such as FTGA and FGCSA that support IFAS research have no overhead taken from their grants. This means that 100% of the funds collected by your efforts are forwarded to the researcher for his use. This courtesy is not extended to other granting agencies including the USGA Green Section.

I hope this information is useful to you. If I can be of further help to you please contact me.

Sincerely,

CHARLES H. PEACOCK Charles H. Peacock Assistant Professor Extension Turf Specialist

OLDEST ARTISAN CLUB ASKS FLORIDA GREEN FOR HELP

The Editor, 'The Florida Green' P.O. Box 5958, Lake Worth, FL33461, USA

Dear Sir,

I am researching the history of this club, the oldest artisan golf club in the world, with particular reference to the contribution its members have made and are still making to the development of golf in the USA and Canada.

I would welcome from your readers, information about any Carnoustie golfer, e.g. clubs to which they were attached (dates), tournament records (dates, scores, etc.), course developments carried out, administrative contributions, photographs and any anecdotes, etc.

Thanking you all in anticipation.

Yours faithfully,

W.B.R.Coupar Club Historian





Central Florida Crowfoots

By: Joel D. Jackson Lake Buena Vista Club



How Do I Spell Vandalism? FRUSTRATION!

van.dal.ism. (van'deliz'em), n. 1. deliberately mischievous or malicious destruction or damage of property. That's the definition of vandalism. When I ride my golf course and see the spin and skid marks on the greens, the broken flagpoles, the smashed trash containers, the missing tee markers, the chunks of sod ripped from the trap lips, the words that come to mind are anger, disgust, and frustration.

Our resort complex has several hundred rental accommodations and one of the extras available is a two-seat electric cart. These carts are provided to allow the guest to leave his car parked and use the cart to travel to food and shopping locations. Unfortunately, these carts are responsible for 95-99% of the vandalism done on the golf course. The remainder is done by car, truck, or motorcycle that has access from the public roads that pass near several tees and fairways.

In the ten years that I have been here, I was able to trace the tracks of one cart back to its origin and locate the perpetrators. They were company employees. I stress the word WERE. There have been a few other cases where damaged carts were billed to the guests involved, but most of the time the cart is reported missing or was

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taken from the rental area. There are several areas that are being pursued to help combat the "theft" and vandalism:

- 1) Prevent access to the unattended rental cart fleet.
- 2) Install fool proof ignition switches.
- 3) Improve hot-wiring prevention methods.
- 4) Prevent access to the golf course.

Items 1, 2, and 3 are being done gradually. Item 4 is the most effective and most expensive solution. However, there are only a few key areas that would require some attractive fencing to secure the course for the night.

Fortunately, the vandalism that we have sustained has not ruined a major event staged at our course. Of course our daily guest has had the aesthetics marred and has had to contend with the damaged areas. Then there is the special attention that must be given to regenerate the damaged turf and groom the resodded areas. Somehow, the dollar estimates that I am asked to give for the few hours of labor and the sod and top dressing needed for repairs just doesn't seem enough to sooth the ugly scar that lasts until the healing over is complete.

Because the dollar amounts for turf repairs is comparatively low and the revenue from the carts is so high, there hasn't been much incentive to spend the money needed to protect the golf course. I will continue to document the acts of vandalism and hope that one day someone will be willing to invest in the security of that expensive, well maintained, beautiful asset that spends each night at the mercy of the potential vandal. If you have pride in your work and you devote a lot of your time to produce a respectable product, it is very painful to see others treat your efforts with such wanton, vulgar, disregard.

Concepts in Golf Course Design

By: Dr. Michael J. Hurdzan, President American Society of Golf Course Architects

Every talk on golf course design should begin with a reading of the following passage:

GOLF

Golf is a science, the study of a lifetime, in which you may exhaust yourself but never your subject. It is a contest, a duel, or a melee, calling for courage, skill, strategy and self-control. It is a test of temper, a trial of honour, a revealer of character. It affords a chance to play the man and act the gentleman. It means going into God's out-of-doors, getting close to nature, fresh air, exercise, a sweeping away of mental cobwebs, genuine recreation of tired tissues. It is a cure for care, and antidote to worry. It includes companionship with friends, social intercourse, opportunities for courtesy, kindliness and generosity to an opponent. It promotes not only physical health but moral force.

D.R. Forgan

Notice that this was written by D.R. Forgan of the Forgan family who were famous club makers in Scotland since the middle 1800's. In fact this passage on "Golf" was written about the turn of the century - 80 or 90 years ago. Much has changed in golf since 1900 including golf equipment, the golf swing, the golf course, and certainly standards of maintenance; but Forgan's description of this great game is as valid today as it was when he wrote it. The point is that the SPIRIT of golf is the same, it has not changed, and under close inspection the spirit of golf course design has not really changed either. Some have tragically abused it, but this is more out of ignorance about the true concepts, than it is a premeditated maliciousness. So the purpose of this paper is to discuss golf course design concepts in the time parameters of yesterday, today, and tomorrow; and to give you some ideas that might apply to your golf course. But before I begin this discussion we should restate some obvious facts for they are important and should be kept in mind.

First, it must be stressed that maintenance is more important to the golfer than is design. Given a choice between a well designed but poorly maintained golf course, or a poorly designed but well maintained one, the golfer will nearly always choose the best maintained. Secondly it should be remembered that maintenance has a greater influence on the difficultness and speed of play of a course than does design. When greens are kept fast, fairways lush, roughs long, and sand bunkers soft, you can bet the golf course will play difficult and slow. And lastly it is the subtleties or nuances of a golf course, such as flowers, shrubs, selected tree plantings, tee accessories, etc., that make a golf course memorable and enjoyable. Then in summary this means that the golf course superintendent exercises far greater impact on

(continued on page 14)

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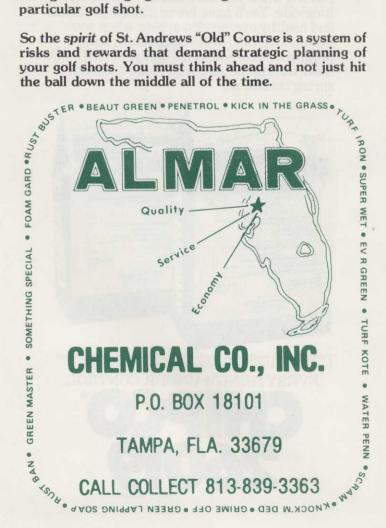


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the golf course and the golfer than does the designer. Hence he should be aware of his power and responsibility and likewise he should be given full credit for making a round of golf an enjoyable experience. (By the way these influences of the golf course superintendent are also 100 or more years old for in researching old magazines for a history book on golf architecture I am writing, I continually find references made to the great condition of this or that course with only occasional mention of the design.)

The place to start to examine golf course design is perhaps the oldest and, in my opinion, the greatest golf course in the world, the Old Course at St. Andrews, Scotland. This course is product of 600 or 700 years of golfers trudging those sandy links, and so rather than being designed, it evolved with the game itself and hence it is the touchstone for design principles. At the Old Course, the basic rule is that the hazards for the drive are on the right side of each hole, and the hazards at the green are on the left or middle left. This means that if you risk the hazards on a drive down the right side, then you are rewarded by an easier approach to the green than the left side driver. Although this may be a bit too simple, it does illustrate that what makes St. Andrews so great a challenge is a complex system of risks and rewards. This is the key element in all golf course design — a finely tuned balance of RISKS AND REWARDS. In addition the penalty should match the crime while always recognizing the average golfer's margin of error with each particular golf shot.

So the spirit of St. Andrews "Old" Course is a system of risks and rewards that demand strategic planning of your golf shots. You must think ahead and not just hit



"Well, how does all of this apply today?" you may ask. The answer is that the most enjoyable golf courses to play demand the golfer be able to apply a precise balance of skill, strength, and strategy. So all golf course design must provide the opportunities for this to occur by producing a system of hazards and safe areas that can be managed by all golfers.

This process begins by analyzing the green or green site, determining what are the margins of error permitted around this green, selecting a fair distance to approach the green, then working backwards to determine where a fair approach shot must by played from, and then defend or improve it. In short it means laying a golf hole out from the green back to the tee, which was how the first golf course architects did it.

Since the golf green is the key element in this process, that is where this discussion should now focus. But here is where we must also remember those obvious facts I mentioned earlier, you remember -

- 1) Conditioning is more important than design.
- 2) The superintendents control conditions.
- 3) The superintendent should get the credit or blame.

Thus if condition is so important, the golf green must be designed with maintenance in mind, which means good surface and subsurface drainage, a compaction resisting soil mix, sufficient cupset space, enough collar area to accommodate maintenance equipment, maintainable slopes outside the green, and a design and placement of bunkers so they fairly protect the green but far enough away to reduce accumulations of blasted sand, confining of foot traffic, and eliminate drying out of putting surfaces through super-heater bunker faces.

Having been trained and worked as a golf course superintendent, we know these factors well and believe that a green can be designed which will meet all of these criteria. The general guidelines are as follows:

- 1) At least 4,200 sq. ft. of usable cupset area with a total green size of around 6,000 ft.2.
- 2) A free-form design of the green with 75%-80% of it not seriously defended by hazards but 25%-30% of it is strongly defended.
- 3) Surface drain the green in 3 or 4 different directions with interior slopes of 2%-4%.
- 4) Tile drain entire putting surface on 15'-18' centers and build with a high infiltration rate material (at least 8"/hour).
- 5) Mounds should "bleed" out into the putting surface and bunkers should be no closer than 12 feet to putting surface.

These are only general guidelines that can be occasionally modified. But where the skill of the golf course architect comes in is in knowing what is a fair target area

(continued on page 15)

(continued from page 14)

within a green, how to defend it, and how to present it to all golfers of all skills. This topic can not be explained in a paper and some golf course designers work an entire lifetime without ever understanding it. It is not magic either, but rather it is a process that requires knowing how all golfers react to a given shot, knowing their probability of hitting various targets with various clubs under varying condition, and then adjusting risks and rewards in an artistic framework. This ability rests more in experience than on intellect.

This does not mean that the golf course superintendent can ignore these intrinsic factors but rather it requires that the superintendent try to understand the design intent, and adjust maintenance to enhance it. This means understanding speed and slope relationships within the putting surface and keeping putting a skillful pursuit; instead of just mowing short as possible and making it a test of luck. The same can be said of the width of fairway landing areas, the length of rough and collar grasses, and the softness of bunker sand, etc. The goal of maintenance should be to make the game more fun not more difficult.

In the future I believe that golfers will place more emphasis on having a total outdoor environment rather than just a place to play golf. They will expect to see minilandscapes integrated into the golf course such as flower beds, rocks, waterfalls, wooden walls, ornamental trees and shrubs, etc. In America we have normalized the golf car and golf car paths, so much that the naturalness found in linksland would be foreign. This situation may be either good or bad depending on your point of view. It

may be good in that it allows the superintendent to be artistically expressive through the location of these landscapes and the materials he uses. It will force us to learn more about all plant materials and not just turf and trees so we become more multi-dimensional professionals. On the negative side it requires more work, study, and money to meet these expectations. If you believe this trend is inevitable, as I do, you should begin now using and learning about these materials.

A basic rule that I follow is to use formal plants and devices in formal settings such as around tees, walks, signs, ball washer, structures or bridges, etc.; and informal plants out on the golf course proper. Formal plants and devices are such things as flower beds, steps, garden or hybrid flowers, landscape shrubs, and any kind of planting you commonly see around homes. Informal plants and devices refer to ornamental grasses, wildflowers, meadow grasses such as hard and sheep fescues, prairie grasses such as blue gramma, buffalo grass, and wheat grass. Properly used these items can make your golf course distinctive and easier to care for.

In summary I would emphasize:

- 1) Condition is more important than design.
- 2) Make the golf course fun not difficult.
- 3) Be fair to all skill levels of golfers.
- 4) Make the golf course a visual experience through landscape techniques. ■

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Palm Beach Trade Winds

By: Mike Bailey Bo

Boca Green Country Club



Who Says Equipment Doesn't Have Fingerprints?

Vandalism is nearly impossible to deter on a 400-acre, 36-hole golf course, even if you had all the clout of all the king's horses and all the king's men. The fact is, unless the property is totally secured by fences, dense woods or canals, you can best expect to be vandalized at least once a year.

Such was the case years back. Early one morning, just at the crack of dawn, the greensmower operators were returning to the shop with all reports the same "we were hit on the greens last night. The first instinct is "boy, would I like to get my hands on those kids." Well actually this dream wasn't so far off base. I have found that anytime one tends to joy ride a golf course via cars or trucks, "finger prints are evident." By examining the width of the tracks one can conclude if the vehicle is a compact, such as a VW, a large sedan Beer wagon such as an old Chevy Impala, or perhaps the most devastating of all, 4-wheel drive trucks and Jeeps. I have found that in the early morning dew, the fresh silt sand tracks of the tread patterns fingerprints. Along the edges of various cart paths, within the sandtraps and locations on the greens where the grass was shredded down to the soil level, a distinctive tread tire pattern was revealed. Being an avid amateur sports car racing enthusiast, one tends to learn about the brand of tires, softness of compounds. and especially the design of tread patterns and character of "fingerprints." My first goal was to assess the course and to evaluate just how severe the damage was. Fresh dew tracks on the grass were trailed throughout 10 golf holes and severe spinning to 7 greens. As I began to follow the trail, I began to observe a consistent pattern taking place. The width of the tires were of a medium narrow width (that of a sports car); the rear tires were generally spinning most of the time (a rear wheel driven car); and most characteristic of all, the tread foot print was that of a Michelin XAS radial tire, an expensive European tire more commonly found on Sports Cars. By further scrutinizing of the tires, I noticed an odd peculiarity. The right rear tire was not a match with the other three radial tires (appearing to be a less expensive, nonradial spare tire). As I filed my police report, I noted this observation to the patrolman upon where he punched into the computer and revealed the various reports form the previous night dealing with youths and automobile related incidents. Sure enough! Within the same town last night, a juvenile had stolen from his father's garage a Datsun 240Z. The alleged youth had taken a joy ride. which ultimately led into a police chase pursuit where the youth crashed the car into a concrete street sign. A further investigation revealed just what I was hoping for. The right rear tire of the impounded car was not a match to the (you guessed it) other three Michelin XAS tires. Now it was beginning to add up very quickly. The youth stole the car from the house just down the street, took a joy ride throughout the golf course and then proceeded onto the highways whereupon he was ultimately arrested. Later the youth admitted to the crime on the golf course. I felt, not relieved, because there was much work spent on repairing the golf course back to normal. but at least, the kid didn't get by without getting caught. Hopefully the youth will be one less person terrorizing our golf courses at night. He probably thought that since it was nighttime, no one would ever see him and he would never get caught.

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Expanded educational sessions, more exhibitor booth spaces, and the addition of workshops promise to make the 1985 Florida Turf-Grass Association Conference and Show the biggest and most successful ever. Tampa, Florida will again host the event to be held September 29-October 2, 1985 at the Curtis Hixon Convention Center and Hyatt Regency Hotel.

"Due to the success of last year's show, we're aggressively going after the turf market both here in Florida and the Southeast," says Bill Wagner, 1985 Conference and Show Chairman. "Last year, our Conference topped 1500 and we're aiming for 2000. We expect a banner year."

This year, the Conference and Show will expand its educational sessions from three to four. These sessions include GOLF TURF, LAWN CARE AND GROUNDS MAINTENANCE, BASIC PRINCIPLES OF TURFGRASS CULTURE, AND ADVANCED PRINCIPLES OF TURFGRASS CULTURE. "Our intention is to provide a well-rounded, educational experience to a diversi-

fied group of turf professionals," says Dr. Tom Latta, FT-GA President. "This Conference will be remembered for offering something for everyone."

Exhibitor booth spaces have also been on the increase in 1985 and turfgrass professionals will have the opportunity to spend more time with exhibitors this year.

The addition of workshops at this year's Conference promises to offer practical, "hands on" experience in three areas: Turfgrass Disease Identification and Control, Estimating and Bidding Landscape Installation and Maintenance Cost, and Computer Use in Turf Management. These workshops will be limited to 24 in each workshop and will be open to FT-GA members only.

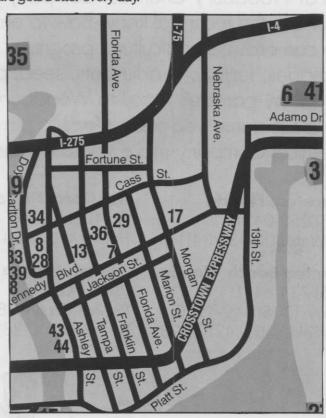
Tampa will be the place for a great Conference and Show in 1985! For more information, contact Bill Nass, Florida Turf-Grass Association, 302 S. Graham Avenue, Orlando, Florida 32803-6332. The telephone number is (305) 898-6721. ■

VISITOR'S GUIDE& MAP TAMPA

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- 13. Franklin Street Mall
- 15. Gasparilla Pirate Invasion Ship
- 17. Greater Tampa Chamber of Commerce and Visitor Information Center
- 19. Henry B. Plant Museum
- 27. Phosphate docks and elevators
- 28. Rose Garden
- 29. Sacred Heart Catholic Church
- 33. Tampa Museum
- 34. Tampa Public Library
- 36. Tampa Theatre
- 38. University of Tampa
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Gene Baston
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WHAT MAKES A GOLF COURSE SUPERINTENDENT SUCCESSFUL

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"Keeping Golf Courses Green"

Watching Your Tees & Q's

By: Bud White Southeastern Director USGA Green Section



Soil Test Awareness

As I travel from golf course to golf course, it is sometimes amazing the lack of reality that some golf course managers have for soil nutrient conditions. Many do not take soil tests with any type of frequency, and some take annual spot tests on their golf course. Unfortunately, the levels of various nutrients and in particular, potassium, magnesium and manganese are not measured with the degree of seriousness that they should be.

If potash levels are low or deficient in the soil, which is often the case, applying a 3:2 ratio or even a 1:1 ration of nitrogen and potassium two to three times per year is by no means adequate to build the potash levels up in the soil. It is critical to make separate potash applications three to four times through the year and also use fertilizers low in nitrogen and high in potash. Potash is a nutrient that is taken up in luxury consumption by the plant, but potash also leaches out of the soil as does nitrogen. Remember that potash is vital in:

- 1) Improving wear tolerance.
- 2) Improving drought tolerance.
- 3) Improving the root, rhizome and stolon vigor of the plant.
- 4) Improving the cold tolerance of bermudagrass.

Potassium displaces water in the individual plant cells and thus lowers the freezing point of that cell.

Magnesium and manganese are required in much less quantities in the soil and therefore their levels are more easily built up. However, I do strongly recommend you take a serious look at levels of these various nutrients and apply fertilizers accordingly. Oftentimes, many other problems that turf managers believe they have such as root rot or nematode damage is in reality a very poor nutrient base in the soil.

Establishing and maintaining proper nutritional bases frequently offset high to moderate nematode levels. In areas of high traffic, nematodes or other stress, proper nutrition is most critical to keep the turf as active as possible.

Sul-Po-Mag, for example, is an excellent material for building up magnesium and potash levels, but then there are many other low nitrogen/high potash fertilizers on the market with minors to supplement. A common ratio of a low nitrogen/high potash fertilizer which is ideal for building up potash levels is potassium nitrate (13-0-44) or a complete analysis fertilizer such as a 5-10-30. Providing a small amount of nitrogen with a high potash application is helpful in improving the uptake of the potash, but it is not critical. Remember that the turfgrass does not know the difference in sources of nutrients. The important thing is to get the right amount of nutrients down at the proper time of the year.

Let's all be more aware of soil tests and the information they provide. It is impossible to plan a completely efficient fertilization program without basing materials and rates on current and routine soil tests. Using soil tests to plan fertilizer regimes and especially potassium, magnesium and manganese is one of the best tools available to us as turf managers today.



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It's not surprising that such an exceptional mower carries with it more of a guarantee than most — a full 12 months for professional usage.



"Night Shift on the Golf Course"

Finally, the end of the day and our golf course superintendent is ready for a good supper and an extra good night's sleep. Arriving at work the next morning, the superintendent finds that the "Night Shift" has paid him a visit. Golf course flags are ripped from the standards, tee markers have disappeared. Looking further, the superintendent finds golf carts in traps, on top of greens, and carts sitting on top of irrigation controllers. The dreaded Night Shift has been around and left vandalism, its ugly trademark.

This type of Night Shift activity will rarely happen at clubs having roving 24-hour security and camera monitoring systems. Not every superintendent has these luxuries. So how do the rest of us folks deter the Night Shift and its unfortunate consequences?

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Sustained
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Pradictable Release
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Pradictable Release
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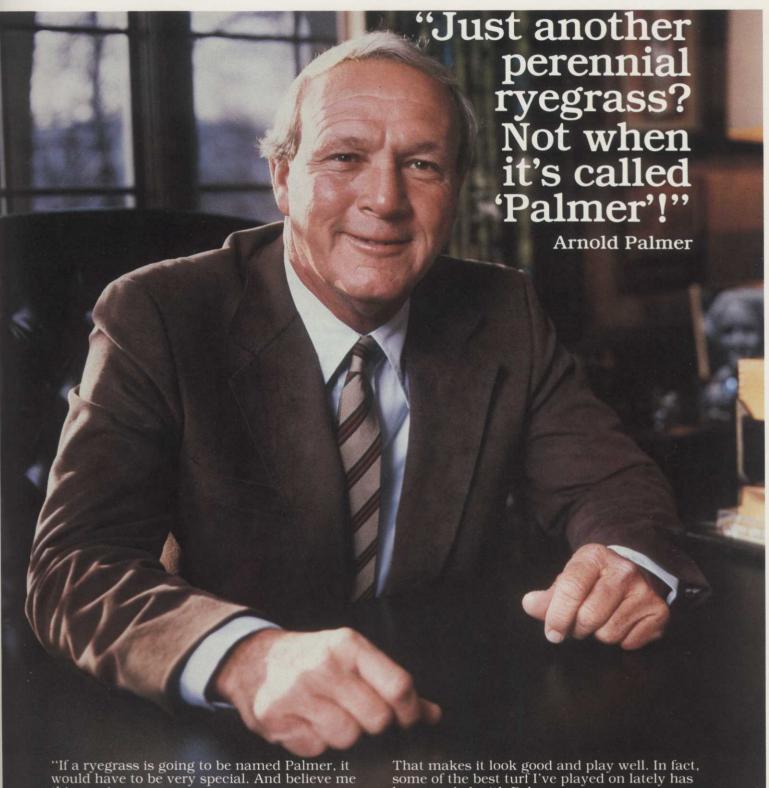
If your golf course is fortunate enough to be surrounded by dwellings of some type (homes, condos, etc.), the superintendent should try to make friends with as many neighbors as possible. The more friendly eyes watching the course the better. So put on that public relations smile and go to it!

On the golf course, flags having numbers or logos might be substituted for solid color flags that have less attractive value for vandals or "night time tourists." Use your nicer flags for special occasions. This would also apply to special tee markers that some Night Shift personnel see as excellent souvenirs. Trap rakes that are made of fiberglass might also save you from having to replace broken wooden ones.

Around the maintenance building, good lighting is essential as a deterrent for Night Shift visitors. The more lighting the better. Check door jambs and windows for potential jimmying or pry points. Using metal strips to cover these areas where crowbars or pipes can be used to pry open an entrance way would be advised. Use extra heavy locks and clasps which make removing them time consuming and noisy. Bars over window areas that are easily accessible might also aid in saving entry of Night Shift people into your maintenance complex. Postings of "No Trespassing" or guard dog signs might be useful as a psychological deterrent whether you have a guard dog in your maintenance area or not. Giving your local police and fire departments a back gate key or a key to gain entrance to your golf course for patrolling or in case of fire is also an excellent idea.

Check with local authorities to find out what you legally have the right to do if Night Shift people are caught by you on your club grounds. Laws can be confusing so protect yourself by knowing what actions you can take when witnessing Night Shift people at work. Do not over react and take the law into your own hands. This could be far more detrimental to yourself than the vandals.

Hopefully, you have already taken preventative measures to stop the dreaded Night Shift visitors. If not, take a good look at your maintenance area and golf course borders. Implement as many safeguards as you can and get that extra good night sleep with a pleasant morning combination.



this one is.

"As you know, I'm a golf course owner and I'm involved in golf course design and construction with the Palmer Course Design Company. That makes me very critical of turfgrass. Let me tell you some of the qualities we're finding in this variety. First of all, whether used in the North or South, Palmer shows excellent heat and drought tolerance and exceptional resistance to brown patch and leaf spot. Secondly, it estab-lishes very quickly. In no time flat you can have a cover of fine-leafed, attractive, dark green turf. When it comes to mowing, it cuts neat and clean. been seeded with Palmer ryegrass.

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Selecting Annuals for Golf Course Planting

By: Lynn Griffith

In addition to mowing, fertilizing, spraying, irrigation, personnel management and club member relations, a number of golf course superintendents are responsible for general grounds maintenance as well. While the extra responsibility can be a real burden to the turf professional, his non-turf duties can be almost as important. The planting and maintenance of good shrubbery, especially flowering plants, will go a long way toward complementing a well-manicured golf course.

Annual flowers have long been used to add seasonal color. They are used both in peripheral areas, such as around the clubhouse, as well as on the course itself. Favorite spots for planting of annual flower beds include near the practice green, on tee slopes, and near the bridges over water hazards. One of the best places to plant a flower bed is anywhere that grass has difficulty growing. Of course, flower beds cannot interfere with play, but an out-of-bounds area where the turf tends to do poorly may look much better planted in annuals.

The key to success in annual flower beds on the golf course is the selection of the varieties themselves. However, nothing is going to do well unless the soil in the bed is of proper texture. Since most soils in annual beds are used for several years in succession, it is essential to select a quality soil. If you skimp on soil quality, sooner or later the plant vigor and longevity will suffer.

Most annuals are somewhat prone to over-watering and root rot, so proper aeration and drainage are important. I prefer soil amendments which last for several seasons without breaking down. Such ingredients include sand, perlite, styrofoam beads, and pine bark. Whether you choose a bagged or bulk potting soil for your beds, at least one third of the mix should consist of these ingredients. Wood chips and sawdust don't last much beyond the first season. A good mix for annual beds might consist of something like 50% peat, 20% pine bark, 20% styro beads or perlite, and 10% sand.

The next question is how will the beds be irrigated. Water can be supplied by the regular golf course irrigation system where applicable. In these cases, however, good drainage is a must. If the course is watered at night, then annuals which are subject to leaf spot diseases may have to be avoided. Flower beds which are away from the course itself can have their own irrigation system, or work off of the lawn sprinkler system.

Besides removal of spent flowers, occasional weeding is usually the primary maintenance job. Cypress mulch is generally used to hold down weed growth and to maintain more even moisture levels. Dark peat soils tend to absorb a great deal of heat, and a two-inch thick layer of mulch will help moderate soil temperatures.

(continued on page 30)



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Fred Tucker, Superintendent U.S. Homes Timber Pines Retirement Community Spring Hill, Florida

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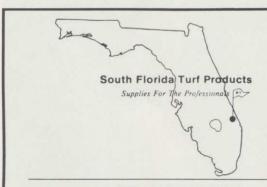
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With all the modern technologies available to us, we have been able to predict weather, prevent disease and prevent weeds with increasing accuracy. There still remains a major problem which plagues all of us, the mindless destruction of golf course properties.

Depending on the severity of your vandalism problem, some sort of preventive measures should be looked into to help minimize future attacks. If you make things tougher to vandalize, possibly the offenders will give up and go elsewhere. Here is a list of old standbys that have been successful in many different areas.

 Storage areas for golf carts and maintenance equipment should be well lit and properly secured (alarm systems, fencing, etc.).



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- 2) Minimize access points to the golf course property. Plantings along roadways have been successful but sterner measures might need to be taken in the form of man-made obstacles. Fencing can be unsigntly but can be hidden with natural plantings.
- 3) Keep accurate records on when, where and the extent of damage in each instance of vandalism. Local police should be contacted. They may not investigate each incident but at least you will be on record should further incidents occur. This may also result in stepped up patrols to your property by local police agencies.
- 4) Golf courses with homes and condominiums lining the fairways have the potential for built-in security. By making the residents aware of the problem, they could report any suspicious activities and avert the damage before it's done. Some developments have organized their own security patrols that have proved to be good deterrents to crime and vandalism. They are usually happy to incorporate maintenance and cart storage areas into their routine patrols.

Hopefully by limiting access and availability to the property, large scale vandalism will be cut back. Making it tougher on vandals will, hopefully, take the fun out of it for them.

Since costs are on the rise, vandalism is fast becoming a burden on golf course operating budgets. The time may have come to include a vandalism prevention program in your next budget proposal.

Think

If you think you are beaten, you are, If you think you dare not, you don't. If you like to win — but you think you can't, It's almost certain you won't.

If you think you'll lose, you've lost, For out of this world we find Success begins will a fellow's will, It's all in the state of mind.

If you think you're out-classed, you are. You've got to think high to rise. You've gotta be sure of yourself, Before you can win the prize.

Life's battles don't always go
To the stronger or faster man,
But sooner or later the man who wins,
Is the man who thinks he can.



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How Fast Is Fast?

By: Sherwood A. Moore Superintendent of Golf Courses Winged Foot Golf Club (New York)

Editor's Note: Many discussions with colleagues and turf professionals this summer have focused on problems associated with turf being maintained under low mowing heights. The following article is quite timely and informative — from a professional's point-of-view. CHP

In the English language, the word "fast" has many meanings such as you can run fast, go for a fast, have fast women, and have fast greens. The topic of conversation around the locker and grill rooms of most golf clubs these days is "How fast are the greens today?" In some areas of the country it is referred to as the "roll of the green." It all boils doen to the speed of the ball on the

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green. Lost is the art of stroking the ball—today, a tap is all that is required. I think some of the golfers want the ball to roll into the cup just by looking at it. At some clubs they post the speed of the green on their bulletin board for the day.

Are we becoming victims of the stimpmeter, fast greens and tournament play? When big tournaments are on TV, all we hear about is how fast the greens putt; that they doublecut the greens daily, even triple-cut and yes, on some greens quadruple-cut to increase the speed.

Whenever a group of golfers or superintendents congregate, golf and turf are naturally discussed, green speed for the average club is a favorite topic. Seven, 8, 9, 10 or more feet is suggested.

Has the superintendent contributed to the dilemma? Yes, in a way. He probably has perfected his course to the point where only incredibly fast greens will save par. Also, the competition to have faster greens than your neighbor is not helping the situation in any way.

In any event, an increasing amount of pressure is put on the superintendent to increase the speed of the greens. Every superintendent has heard the following remarks: "Are the greens going to be mowed today?" "When are you going to lower the height of cut?" "The greens at such-and-such a club are faster than ours."

Seriously, I am concerned about this trend of "fast greens." Can we afford to maintain greens of this caliber—that require frequent topdressings; frequent verticutting; daily cutting or double-cutting of greens; close, close mowing—even to the point of grinding the under side of already thin bed knives.

And, in all my conversation and reading and listening, I have never heard anyone mention a thing about the little grass plant. How is it standing up under all this abuse? I was tutored under the late Professor Lawrence Dickenson of Massachusetts, and one of his often quoted phrases was, "Give the little grass plant half a chance. It wants to live." Under these conditions of shaving the grass plant to $\frac{1}{8}$ inch or less, are we giving it "half a chance?" I do not think so. We are giving it very little chance. Sooner or later we are headed for trouble.

We all know that the root growth of a grass plant is in proportion to the top growth. That the grass plant needs leaf surface for survival, for transpiration, respiration, the manufacturing of carbohydrates to maintain life and growth. It also needs nitrogen and other nutrients that we are withholding so as to increase speed by limiting plant growth.

I predict that in the not too distant future we will get back to the basics of a good putting green surface—that the demands of the grass plant will be given equal or more consideration than the demands of the golfers. A firm, true, healthy green with reasonable speed is much more pleasurable than putting on dead grass and plain soil. We will return to stroking the ball, not tapping it.

CREDIT: Northwest Turf Topics. ■

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Finally, scheduling of annuals is critical to their performance. Florida is a big state, however, and planting dates vary considerably from the Panhandle to the Everglades. Use the enclosed table to guide you in the right selection for the time of year.

Summer is now upon us, and only some annual varieties can take the summers here. Some of the best summer annuals include Salvia, Marigolds, Lizianthus, Jacob's Coat, Purslane, Dianthus, and Gazania. If you are not sure of the requirements of a particular variety, the best thing to do is ask the grower from the bedding plant wholesaler you buy from.

Growing annual plants in pots is something of a specialty, and most landscape nurseries do not grow them. Ask a landscape nursery you deal with who grows good quality annual in your area. Another method is to ask at one of the large garden centers in your area where they buy their annuals. They should be happy to help you once you explain that you are a golf course employee and a wholesale customer.

One good way to test the suitability of annual species for your course is to plant a "combination" bed of several different varieties. That way you can see which ones perform well, and which ones your members like. Members, and especially potential members, notice attractive flower beds immediately, and they can add a touch of class and a great deal of beauty to a golf course.



Table 1. Annual¹ Flower Planting Guide

Name	Exposure ²				North Florida ³		Central Florida		South Florida		
	Full Sun	Morning or Afternoon Sun	No Direct Sunlight	Cold Tolerance	Planting Date	Removal Date	Planting Date	Removal Date	Planting Date	Removal Date	Spacing (inches)
Ageratum	XX			Tender	Mar. 1-15	August	Feb. 15-Mar. 15	July	Feb. 1-Mar. 1	June	10-12
Alyssum	XX			Tender	Mar. 1-15	July	Feb. 15-Mar. 15	July	Oct. 1-15 Feb. 1-Mar. 1	March June	6
Amaranthus	XX			Tender	Mar. 15-30	September	Mar. 15-30	July	July-August Mar. 1-15	First Frost July	14-18
Asters	XX			Tender	Mar. 1-15	July	Feb. 15-28	June	OctNov. Feb. 1-5	June	12
Baby's Breath	XX	X		Hardy	Feb. 15-Mar. 15	June	FebMar.	June	AugDec.	MarApr.	12
Balsam	XX	X		Tender	Mar. 15-30	August	Mar. 1-30	July	Mar. 1-30	June-July	8-12
Begonia (Nonstop)		xx	x	Tender	Mar. 1-15	June	Feb. 15-28	May	NovFeb. JanMar.	May May	12-14
Begonia (Tuberous)		х	xx	Tender	Mar. 1-15	June	Feb. 15-28	May	OctJan.	April	12-14
Begonia (Wax)	XX	X		Tender	Mar. 15-30	SeptOct.	Feb. 15-28	Sept.	SeptNov.	August	12-14



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Browallia	XX	Х		Hardy	Mar. 1-15	August	Feb. 15-28	August	OctFeb.	August	12
Calendula	XX			Hardy	NovDec. FebMar.	June June	NovFeb.	June	MarJan.	May	8-10
Carnation									Jan. 15	April	
(China Doll)	XX			Hardy	Feb. 15-28	June	Feb. 1-28	May	OctDec.	April	8-10
Celosia	XX			Tender	Mar. 15-July	Seed Set	MarJuly	Seed Set	FebSept.	Seed Set	14
Coleus	X	XX		Tender	AprAug.	October	AprAug.	OctNov.	MarSept.	NovDec.	18-24
Calliopsis	XX	X		Hardy	MarMay	First Frost	MarMay	First Frost	FebJune	First Frost	12
Cosmos	XX			Tender	Mar. 15	August	February	July	NovFeb.	June	12-14
Crossandra		XX	XX	Tender	May-July	October	AprMay	October	MarAug.	November	8-12
Dahlia	X	XX		Tender	Mar. 15-30	August	Mar. 1-15	August	FebMar. SeptNov.	July July	18-20
Dianthus	XX			Hardy	Feb. 15-30	July-Aug.	Feb. 15-28	July	OctFeb.	June	10-12
Digitalis (Foxglove))	XX	х		Hardy	SeptDec.	July	SeptDec.	July	Not Recommended		12
Dusty Miller	XX	X		Tender	FebApr.	September	FebApr.	August	OctMar.	August	12
						When Plants		When Plants		When Plants	10
Exacum	XX	XX		Tender		Are Overgrown	MarJuly	Are Overgrown		Are Overgrown	12
Gaillardia	XX	X		Semi-Hardy	MarMay	August	MarMay	August	FebMay	August	12-18
Gazania	XX			Tender	MarMay	November	Feb. 15-May	November	NovMay	November	8
Geranium Hollyhock	XX	Х		Tender	MarApr.	July	FebMar.	July	OctMar.	June	16-30
(Althaea Rosea)	XX	X		Hardy	Mar. 15-June	First Frost	Feb. 15-July	First Frost	AugSept.	First Frost	12
Impatiens		XX	X	Tender	Mar. 15-July	First Frost	Mar. 1-July	First Frost	SeptJune	First Frost	8-12
Kalanchoe	XX	X		Tender	May-July	First Frost	May-Sept.	First Frost	SeptDec.	First Frost	12
Lobelia	XX	X		Tender	Mar. 15-Apr.	August	Feb. 15-Apr.	August	SeptFeb.	July	6-8
Marguerite Daisy	XX			Tender	Feb. 15-Apr.	June-July	FebApr.	June-July	OctFeb.	June	12-14
Marigold	XX			Tender	Mar. 15-May	3-4 Months After Planting	MarAug.	3-4 Months After Planting	FebDec.	3-4 Months After Planting	8-24
Nicotiana	XX	X		Tender	Mar. 15-July	AugSept.	Mar. 1-July	AugSept.	FebMay AugSept.	July-Aug. AprMay	16-24
Ornamental Pepper	XX			Tender	MarJuly	October	MarJuly	October	MarAug.	November	8-10
Pansy	XX			Hardy	OctFeb.	June	OctFeb.	May	OctJan.	April	10-14
						When Disease		When Disease		When Disease	
Penta	XX	X		Tender	MarMay	Affects Leaves	MarMay	Affects Leaves		Affects Leaves	12-14
Petunia	XX	X		Hardy	OctFeb.	May-June	OctFeb.	June	SeptFeb.	May	12-18
Phlox Portulaca	XX			Hardy	MarApr.	August	MarApr.	August	FebMar.	July	8-14
(Rose Moss)	XX			Tender	AprJuly	First Frost	AprJuly	First Frost	MarAug.	First Frost	10-12
Rudbeckia	XX			Hardy	MarApr.	August	MarApr.	August	FebMar.	July	15-18
Salvia	XX	x		Tender	Mar. 15-Aug.	When Plants Deteriorate	Mar. 1-Aug.	When Plants Deteriorate	Feb. 15-Dec.	When Plants Deteriorate	8-12
Cl . D .	3/3/				0.5		0 . 0	material bases	Not		10
Shasta Daisy	XX	X		Hardy	OctDec.	July	OctDec.	July	Recommended		12
Snapdragon	XX	X		Hardy	OctFeb.	June	OctFeb.	May	NovFeb.	AprMay	10-15
Statice	XX			Hardy	Feb. 15	June	DecJan.	June	SeptJan.	May	8-10
Strawflower	XX	****	38,5	Tender	Mar. 15	August	February	July	NovFeb.	June	12-14
Streptocarpus		XX	. X	Tender	MarApr.	June	MarApr.	June	FebMar.	May	10
Sweet Williams Thunbergia	XX	X		Hardy	MarApr.	August	MarApr.	August	FebMar.	May	10-12
(Alata)	XX	x		Tender	MarMay	First Frost	MarMay	First Frost	FebApr.	First Frost	8-10
Torenia	XX	X		Tender	Mar. 15-June	When Leaves Yellow	Mar. 1-June	When Leaves Yellow	FebOct.	When Leaves Yellow	12-18
Verbena	xx			Hardy	Mar. 1-May	When No Longer Desired	Feb. 15-May	When No Longer Desired	SeptNov.	When No Longer Desired	12
Vinca (Periwinkle)	xx	x		Tender	MarJuly	When No Longer Desired	Feb. 15-July	When No Longer Desired	All Year	When No Longer Desired	12
Zinnia	XX			Tender	MarJune	When Disease Affects Leaves	MarJune	When Disease Affects Leaves		When Disease Affects Leaves	12-15

¹Several plants in this table are perennials but may be grown as annuals.

X - Acceptable Performance

XX - Optimum Performance

²Exposure

³North Florida - Pensacola to Jacksonville and south to Ocala Central Florida - Leesburg south to Punta Gorda and Fort Pierce South Florida - Stuart to Fort Myers and south to Homestead

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Golf Course Vandalism - Manager's Nightmare

By: Bill Haycock Manager, Dubsdread Golf Facility

It's 2:00 a.m. on a Saturday morning and you are awakened by the ring of your telephone. A voice on the other end of the line informs you that it is a local law enforcement department and that your golf course has just been vandalized by an automobile. You are asked to come to the golf course to give the police or sheriff an estimate of the cost of the damage. If the damage is over \$1,000 it's classified as a felony; less than \$1,000 is a misdemeanor. If you are a golf course manager or superintendent, the chances are you have experienced one or more similar types of situations as mentioned above.

The City of Orlando has only been in the municipal golf course business for a little over one year, and already we have been vandalized in excess of 30 times. Stolen flags, tee markers, golf carts, damaged greens, tees and fairways, burglaries and "doughnuts" spun by vehicles are among the most frequent types of incidents experienced. Our golf course is in the middle of a residential area with literally hundreds of vehicular access points. You must cross seven public streets to play the 18 holes. Of the 30 vandalism cases against Dubsdread, we have solved and/or prosecuted five. Total cost of damage is estimated at \$20,000, of which we have been awarded \$3,000 restitution by local courts of law. We still have two cases pending for vehicular vandalism which could result in an additional \$3,500 in restitution.

Each golf facility manager must decide if it is worth investing time, money and energy in a program to curb vandalism on the basis of local experience. It is a hard, cold fact that damage, beyond inevitable wear and tear, has been and continues to be a very costly problem for golf courses. It is costly not only in dollars spent on maintenance, repair and replacement, but also in terms of lowered staff morale, and perhaps most important of all, in lost income because of playing conditions which are unsightly as well as inferior, for periods of time ranging from two or three hours to four or five months. When greens or tees are seriously damaged as Dubsdread's were in February of this year (\$5,800 in damage by several vehicles) it adversely affects playing conditions for as long as four or five months because during the winter dormant season, damaged grass will take much longer to recover.

Even the most imaginative strategy will not eliminate the vandalism problem. However, damage can be reduced and most of us have at our disposal the means to reduce it. Being a municipal golf course, we have the advantage of calling upon various City departments for assistance. For instance, our Police Department in conjunction with the Orange County Sheriff's Department, was able to apprehend one person in the act of spinning doughnuts with his automobile on number 7 fairway and who was apparently heading towards number 7 green when the

Sheriff's helicopter spotted his car with flood lights from overhead and followed him to his residence where he was arrested and charged with criminal mischief. Another person in an automobile was arrested when spotted by a police stake-out on the golf course.

The City Street Department and Engineering Department are currently assisting us in determining on which holes we can best use large drainage ditches to deter automobiles as well as assist in our drainage problems. Our Parks Department is assisting us in providing shrubs and bushes at certain locations on the golf course in order to deter automobiles from entering the golf course.

We have just completed a detailed hole-by-hole study of our golf course which is an 18-hole, 6,222 vard course with driving range, practice putting greens, etc., totaling 115 acres. The purpose of this study was to ascertain the best way to prevent or discourage vandals from damaging the course with automobiles, trucks, motorcycles, mopeds, etc. Unfortunately there is no simple solution. Each hole has its particular characteristics and must be considered individually. For instance, a chain link fence may be appropriate beside one fairway which may be adjacent to a street. However, this type of fence cannot be used on another fairway because it will interfere with play. At Dubsdread Golf Course we are convinced we will have to use a combination of chain link fence, ranchtype fence, ditches, utility poles laying on the ground, poles placed in the ground, chains attached to posts and between trees lining fairways, and curbing, to discourage vehicular vandalism. It is estimated that the cost of this work will be approximately \$20,000. This seems like an excessive amount to prevent vandalism, until you stop to realize that if you lose two or three greens because of vandalism you will spend that much replacing them if the damage is severe.

In summarizing I might add that after numerous cases of unpublicized vandalism against our golf facility, we decided to ask the news media to assist us in informing the public of this senseless but very costly type of crime being committed against golf courses throughout the country. We also solicited the assistance of local residents bordering the golf course to immediately report any unusual lights or sound on the golf course. The immediate citizen response was actually overwhelming. A group of our regular golfers pledged a \$300.00 reward for information leading to the arrest and conviction of the vandals and we were also able to provide a reward through the Orlando Police Department Crime Watch Program. Once these rewards were publicized, we immediately received approximately ten telephone calls from informants referring not only to our most recent incident but also referring to vandalism committed against our course as far back as six months ago.



Overseeding for Real Estate Profit

By: Todd Miller Heritage Ridge Golf Club

Overseeding of tees and greens in South Florida has always been looked upon as a method of improving playability during the winter months. As more and more courses are being developed for real estate purposes, overseeding is becoming a sales tool.

Most northerners have a preconceived notion that Florida is palm trees, sunshine and green grass. As Florida superintendents know, delivering a lush green golf course throughout the winter can be made impossible by the weather.

One way to produce green fairways and rough is to overseed the entire golf course "wall to wall." While this practice does improve playing conditions to some extent, as a general rule it doesn't justify the expense of the seed and additional mowings. Two notable exceptions to this rule would be overseeding unhealthy grassy areas that would not be suitable for play during the winter months and overseeding for aesthetic appeal to bolster real estate sales.

Heritage Ridge Golf Club has practiced "wall to wall" overseeding for the past five years. This all began the first season the club opened. The course was planted in September and in order to open the course for the winter season overseeding fairways and rough was deemed necessary. The response from the membership, sales department and management was so overwhelming that the practice has been continued every year since.

Agronomically, the overseeding of fairways and rough is not easy to justify, but as most superintendents know, sound agronomic principles must sometimes be pushed aside for economic reasons.

Overseeding has been proven to be a highly profitable tool at Heritage Ridge due to our specific circumstances. The club is privately owned and maintained and must maintain high levels of real estate and golf membership sales during the first years of operation.

The cost of overseeding a 120 acre golf course "wall to wall" with perennial rye-grass effectively is roughly

\$18,000 (depending on the variety of seed, seeding rate, cost of seed, etc.). Taking into consideration the cost of increased mowing, equipment wear, fuel usage, etc., the cost would rise to approximately \$28,000.

After the brutal cold snap last winter, Heritage Ridge was one of the only inland golf clubs with any color for a six week period. This time period also coincided with the peak of our playing season. Needless to say, the membership and sales department were overjoyed.

It has been estimated that our improved condition throughout the winter season is responsible for approximately fifteen of the fifty new memberships each year. The profit made in new memberships and subsequent renewals can quite possibly offset the cost of overseeding on its own.

The effect of overseeding on real estate sales is somewhat harder to estimate, but take for example a developer that has 300 homesites or homes to sell. What is the value of the increased aesthetic appeal of the development on each? \$2,000 per unit? \$5,000 per unit? Quite possibly more. This increased value multiplied by the number of units can easily justify the cost of overseeding.

Overseeding "wall to wall" is not a practice that would be profitable to most clubs. If there is little or no real estate or memberships to be sold, overseeding to this extent would not be fiscally responsible. Clubs in this position that would like to increase the aesthetic appeal might consider overseeding one or two holes near the clubhouse or other main focal points. Another option that has been used with great success has been the overseeding of roughs but not fairways. This will maintain the roughs' playability and give outstanding definition to the fairways.

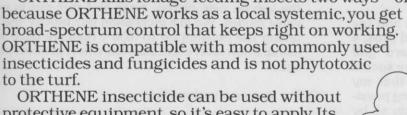
Overseeding of large turf areas may not be economically feasible for many clubs, but with the majority of golf courses being constructed for development reasons, this practice may become a highly profitable tool.

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Tree & Ornamental Spray



Gulf Coast Sun Beams

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

Rebuilding Equipment

Are you doing everything you can to extend the life of your equipment? If your answer is no, go out and price a new greens mower; after you find out that they are now selling for \$12,000.00 I'll bet that you will be very interested.

Here at Tiger Point we operate with 8 green and tee mowers, 2 fairway units, 3 rough units, 3 sand pros, 4 tractors, 3 trucks plus all of the other "standard" golf course operations equipment. Because we have such a large equipment inventory, it is imperative that my mechanic, Randy Wick, and myself do everything possible to extend the life of our equipment. We do so by training the operators, using the right piece of equipment for the right job, use a rigid preventative maintenance schedule and rebuild in-house as much as possible.

According to Ed Combest, shop management and mechanics teacher at Lake City Community College "When considering rebuilding equipment in-house, the organization between the superintendent and mechanic on scheduling down time is the most important factor. Once you are capable of taking the particular piece off the line you must have the capabilities which includes: knowledge (a good mechanic), proper tools and proper parts."

Randy and myself walked into a situation where the company had just purchased 5 new greens mowers and weren't ready to buy any more new mowers. We had three Jacobsen Greens Kings from 5 to 8 years old that needed replacing badly. Knowing we couldn't buy any more new equipment, our only option was to look into rebuilding. Here in the Panhandle, the distributors charge \$30 per hour labor and it was estimated that the cost of rebuilding our 8 year old mower would cost \$6,000. We guesstimated that it would cost us \$1,500 plus our labor and decided it would be much more beneficial to try it in-house. What we did was this:

- 1) Completely strip down the unit, sand and painted it.
- 2) Bought new reels with bearings and seals.
- 3) Bought new bushings for the lift arms.

- 4) Instead of buying new lift arms, we ground the pin off of the yolk assembly and replaced with our own pin, saving \$80 and kept the same quality.
- 5) Bored the engine; turned the crank shaft; ground the valves: new piston, rings and rod; put in new valve guides. We are increasing our blocks' life by taking the housing up to .030"; then we bore and install a new sleeve and start the whole process over again.
- 6) Put in a new carburetor.
- 7) Put a new seat on for the operator.
- 8) New tires (on our equipment not used on greens, we use the treaded tires saving \$10 at original cost plus lasting longer due to less wear).
- 9) Installed a new muffler.
- 10) Put on new throttle and steering cables.

In the process of rebuilding our equipment, we shop around for all replacement parts. The dealers are not the only people selling parts these days and it's our job as managers to get the cheapest price for the same quality parts. We did all of the work I've listed above for \$1,300 with 40 hours labor not included. Our estimated savings in-house rebuilding verses sending it out, \$4,000.

If you have got the time, a good mechanic, proper parts and tools, I strongly recommend trying to rebuild when ever possible and maybe your owners or greens committee will split the savings with you and put it in your pay check!

BE HAPPY

For every minute you are angry, you lose 60 seconds of happiness.



Harbour Town Golf Links, Sea Pines Plantation, 18th hole (458 yards — par 4)

The real star of this tournament was the turf.



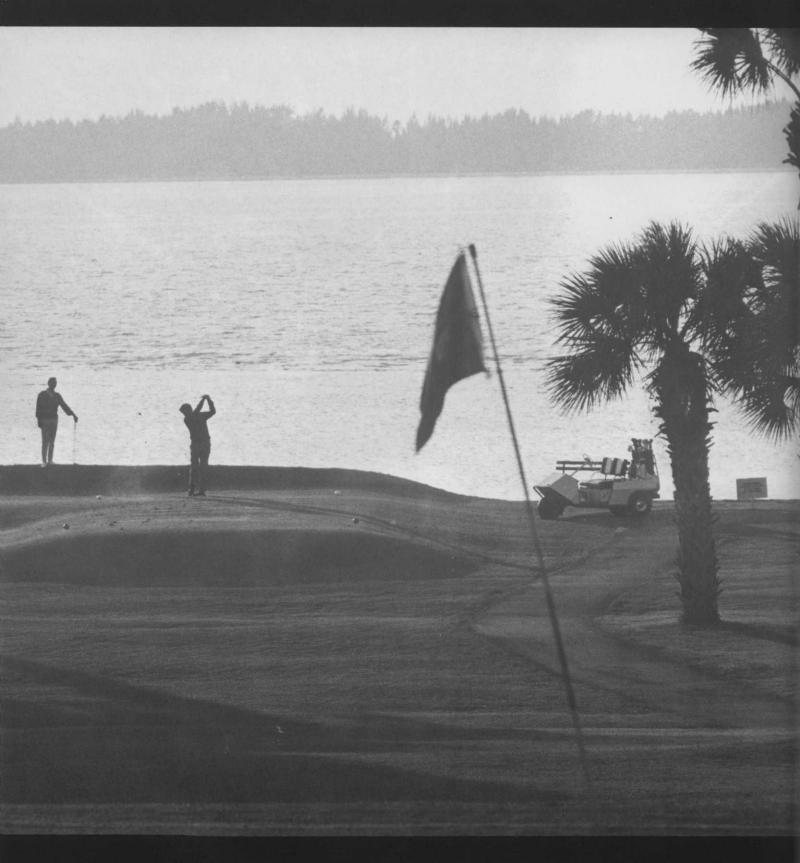
It was overseeded with MARVELGREEN !!

The game was great. But the turf was sensational! Because Tom Rader, Golf Course Superintendent of Harbour Town Golf Links, Sea Pines Plantation, overseeded with a Marvelgreen blend.

Marvelgreen was chosen at this Hilton Head resort for several reasons: it germinates quickly to provide an early cover of fine-leafed, dense, fairway turf. And on the greens, Marvelgreen promises a smooth, grain-free putting surface. It looks great throughout the winter season, and provides an easy spring transition.

Marvelgreen blends contain just the right amount of the leading turf-type ryegrass varieties: Palmer, Prelude and Yorktown II. Marvelgreen is used at some of the most prestigious courses in the country. And it performs long after the game is over.

Belleview Biltmore Country Club



A Jewel Along the Gulf

HARVEY E. PHILLIPS

Superintendent / GC & Grounds The Belleview Biltmore Resort Hotel

By: Irene Jones

Take a moment to remember your first high school job...how many jobs ago was that anyway? I worked at Lamb's Pharmacy on St. Petersburg Beach over on the West Coast, recently I had occasion to drive by the place only to find that it is no longer there. It seems like another life time, getting off the school bus and going to work at the drug store.

This week I asked Harvey Phillips about his position as the Superintendent of Golf Course & Grounds at The Belleview Biltmore Resort in Clearwater, Florida. (featured on our cover this issue)

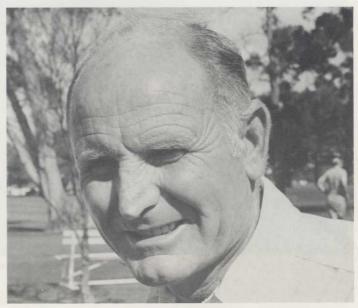
My first question: "When did you start to work for The Belleview Biltmore Golf Course?"

Harvey's answer: "When I was in high school, in December 1950, I went to work for one season. My first job was general golf course labor, raking sand traps and using hand rotary mowers."

The job that was to last "for only one season," turned into a life time profession which has allowed Harvey to realize his full potential in the golf course industry. He remained



18th Fairway, West Course, with Hotel in the background.



Harvey Phillips

constant in his employment at The Belleview Biltmore Golf Course and in 1953 was promoted to Assistant Superintendent. In 1956 Harvey accepted the position of Golf Course Superintendent, which he has held up until this time.

Harvey's father, James Thomas Phillips, was a citrus grower in the 1930's, 40's and early 50's. Harvey was studying agriculture to follow in his father's footsteps as a citrus grower but recognized in the early 1950's that the groves in and around Clearwater were going out. That was when he applied for work at the Belleview Biltmore Golf Course.

One year after going to work for the golf course Harvey married Thelma Mascé in December 1951. Married thirty-four years Harvey and Thelma have one daughter, Janet who is currently attending The University of South Florida in Tampa. Janet is majoring in Education; this is her third year of study.

Some of the contributions Harvey has made to the golf industry here in Florida are: President of all local Golf Course Organizations on the West Coast of Florida, Florida Golf Course Superintendents Association President, President of The Florida Turf-Grass Association for the years 1979 and 1980, and recipient of the Wreath of Grass award in 1977.



Construction of Biltmore Hotel in 1895-1896.



Golf at the Belleview Biltmore C.C. in the early 1900's. Henry B. Plant on the tee.

(continued from page 39)

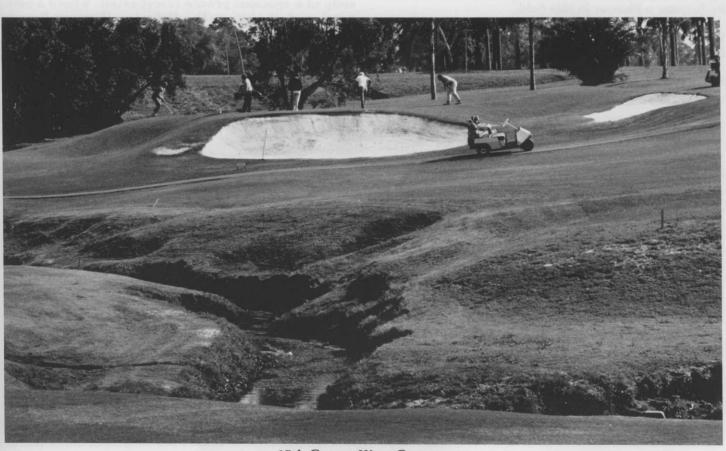
As I was interviewing Harvey for this article he was checking the plaques in his office regarding the dates in which he served in the different offices. He couldn't come up with the exact year for his term as President of The Florida Golf Course Superintendents Association, because as he explained it, "I was about the 2nd or 3rd President way, way back about 15 years ago and no plagues were given out then."

After reading up on The Belleview Biltmore Hotel and Country Club it is easy to see why Harvey was motivated to remain with the resort for all these years. Called by some the "White Queen of the Gulf," the Belleview opened its doors on January 15, 1897. Construction of the hotel was begun in 1895 and continued through 1896. An army of workmen with mule-powered scrapers, wagons and carts graded the area and set the stage for masons and carpenters who erected the original one hundred forty-five room hotel. "Heart Pine," or Yellow Pine was brought in from north Florida and south Georgia. This type of pine solidifies with age and today the wood used to build the original West Wing rejects both carpenters' tools and termites' jaws.

Henry Bradley Plant, recognized as Florida's greatest 19th century railroad developer was more than any other person responsible for the identification of upper Pinellas County as the ideal location for a luxury resort which was to later become the Belleair and the Harbor Oaks section of Clearwater which includes the Belleview property. Mr. Plant's agents purchased those thousands of acres.

(continued on page 42)





15th Green, West Course.

(continued from page 41)

When on January 15, 1897, the Belleview opened its doors it soon became the favored winter retreat of railroad presidents, steel magnates, and other industrial barons. A special siding east of the hotel accommodated private railroad cars. Recreations most recognized at that time were: bicycling and walking, along with "SIX SPORTY HOLES OF GOLF WITH SHELL GREENS."

The SHELL GREENS caught my attention and I asked Harvey about them, "Shell was ground up to construct the greens, the surface was brushed and rolled daily," Harvey was quick to point out, "That was before my day, everything was grass when I came on board."

"The White Queen of the Gulf," the largest occupied wooden structure in the world, "The Grand Dame," 89 years old is now recognized as having introduced the world to resort golf. It may actually have been The Belleview that began the movement of golf towards the resort hotels.

Morton Plant, who took over the hotel after his father died in 1899, was an avid golfer. History states that, "From the time when Morton Plant took the helm at the Belleview, he felt strongly that golf, then in its infancy in this country, would play an important part in the resort's growth and development," since it was generally accepted then that grasses suitable for golf greens would not thrive in Florida and that sand greens were the only answer Mr. Plant began extensive experiments with grasses, soils, fertilizers and methods aimed at a solution. At his order, trainloads of gondola freight cars filled with rich topsoil from Indiana rolled over the rails...thus he became a pioneer in this field.

When Morton Plant assumed control of the hotel in 1899, the six holes were promptly expanded to a nine-hole course with sand greens, designed and constructed by Launcelot Cressy Servos. By 1909, the layout was extended to 18 holes. And by 1915, Plant hired Donald J.

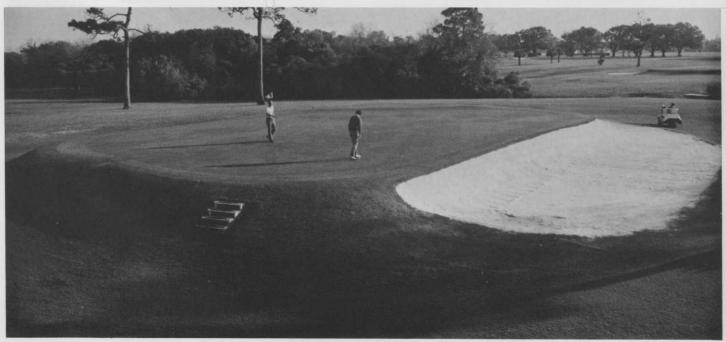
Ross to design and oversee the construction of two 18hole golf courses on the hotel grounds. Ross was and still remains one of the world's celebrated golf architects.

In the 1920's, golf course maintenance men were sent out in the early morning to remove snakes sunning in the sand traps. Today Harvey manages the 36 holes with a maintenance crew of 18 people and the snake detail has been eliminated. The golf holes stretch over a long, high bluff...the highest elevation in all coastal Florida...fairways follow natural terrain and features of the land as Ross found them. The high plateau, cut by creeks and ravines draining into the bay below, make for many rolling fairways and many natural water hazards uncommon in Florida.

The golf courses bordered by giant live oaks and lush tropical foliage with the blue waters of Clearwater Bay as a backdrop soon helped to cause the hotel to sprout wings, The East Wind was added in 1910, doubling the capacity of the hotel and The South Wing was opened in 1925 bringing the hotel up to its present room capacity of 400. The Belleview Biltmore has developed an identification with golf and with golfers that it will never lose. Having had the responsibility for maintenance and management of the golf courses for the past thirty-five years Harvey Phillips has a lot to be proud of.

On March 8, 1980, the Belleview Biltmore Hotel was recognized as a Historic Site and placed on The National Registry of Historic Places. The hotel has served four generations who have sought warm sunshine, gracious leisure, a wide variety of recreation and the relaxed serenity of a spacious private resort estate. I have a personal goal of visiting The Belleview Biltmore Resort Hotel in the very near future....

*The hotel is only open four months a year (January through late April). The seasonal private country club serves both members and hotel guests. ■



4th Green, West Course, as Donald Ross designed it.



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Tom Burrows, President, FGCSA accepts first place plaque for The Florida Green from Director and Awards Committee Chairman Jim Taylor. The Florida Green took first place for best cover and best overall.

The Gator Growls



Tempting Targets

By: Sandra P. Carmouche

Doughnuts on the greens; sunken golf carts in the lake behind the clubhouse; serpentine flagpoles wrapped around tree limbs.

Golf courses are tempting targets for vandals and the responsibility of dealing with them and the havoc they create usually falls to the superintendent.

Because the culprits generally strike at night on weekends and holidays, catching them is not easy. There aren't many people around and, even when witnesses are present, visibility is poor and identification is difficult.

Taking steps to reduce the chances of being vandalized is therefore the best solution to the problem and will result in fewer property losses.

According to Captain John McDougall, Director of Crime Prevention for the Lee County Sheriff's Department, most vandals are boys between the ages of 14 and 19. But Captain McDougall adds that disgruntled employees and dissatisfied members also make good vandals.

He further made the following suggestions as deterrents to vandalism.

- Adequate Lighting Vandals don't like being seen and areas of particular concern, such as the clubhouse and maintenance buildings, should be well lit. Entrances, exits and service roads that allow access to the golf course should also have good lighting.
- Reinforce Problem Areas If, for instance, there is a section of fence where vandals are getting through, string barbed wire at the top and bottom of the fence and if possible, light it.
- Secure Items Left Outside Golf carts and equipment that must be left outside should be placed in areas that provide good lighting. Chain them if possible and make certain that the keys are removed.
- Neighborhood Watches Make homeowners on the golf course aware of any problems with regard to vandalism and have them report anyone who looks suspicious.

Security Patrols

Security guards are the most effective means of preventing vandalism. Hire an agency or an off-duty deputv: or, depending on the golf course, find out if homeowners and members would be willing to patrol the area. Also, local law enforcement agencies are very cooperative in providing area patrols when requested.

As a final suggestion, Captain McDougall cautions that vandals are frequently under the influence of alcohol or drugs and care should be used in dealing with them. He adds that prosecution is good once the vandals are caught and offenders may be made to pay for damages either with money or by working on the golf course.

Unfortunately though, by the time they are caught the damage has been done. Through prevention, a golf course superintendent can avert costly property damage.

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An Attempt to Reduce Vandalism

By: Jack Fogel, Director Rock Island Park & Recreation Dept. Illinois

The Rock Island Park and Recreation Department has recently compiled a complete report on vandalism during the calendar year of 1977. A similar report was compiled for the calendar year 1976, in which over \$21,000.00 was spent in vandalism related maintenance. The purpose of this inventory was to obtain an estimated dollar figure on the cost of vandalism and malicious mischief during a 12 month period throughout the facilities under the jurisdiction of the Park and Recreation Department.

The total cost included in the report reflects the damaged item, replacement value, and man hours involved. The vandalism impact related to loss of user participation cannot be determined but in the case of golf course damage, hundreds of rounds may be refused due to damaged greens or unfavorable playing conditions.

The amount of damage occurred during the year of 1977 totaled over \$9,000.00 Same time period in 1976, \$21,000.00 These figures are within a 5% variance for the periods involved. Vandalism does not only involve the

immediate loss of facilities, materials and time, but also involves the need to reschedule man power on such projects. This reduces the total production of the Department and many times normal capital improvement projects must be postponed.

The Rock Island Park and Recreation Department extended their research period over a 2 year span in an attempt to make various changes in their operational procedures in the combatants of vandalism. The total vandalism cost factor was reduced one half in the 2 year period. The reason for such a drastic cost reduction cannot be pin-pointed but certain rational can be mentioned.

Security patrols on a special contract basis were hired during the 1976 (\$21,000.00 period). At the end of 1976, with a \$21,000.00 cost factor and private security patrols, we felt we could afford to gamble. We did so by cutting the patrols and depended entirely on the city's police force. In doing this, we reduced overhead by \$3,200.00, plus spent 50% less on vandalism.

Vandalism in general, was down in Rock Island from 1976 to 1977. This information was substantiated through city police department information, plus experiences encountered by area school districts. School districts do not have accurate data to compare "dollars," but general consensus is that school facility damage is down approximately 15% to 20%.

All of this is in direct relation to a change in the attitudes of the general teenage population. The early 1970's teen, of which most of the vandalism revolved around, has changed. We feel the vandal prone teen of the late 70's has had a change of attitude either through education, a care for facilities, nature or whatever. In any case, we feel they are thinking before acting. This comment is based on more "assumption" than on fact.

In addition to the above statements, the Department has aggressively been working on vandal prevention precautionary methods. This we are sure has also had an effect in the 1977 reduced cost. In late 1975 through 1977, the Department has intiated various preventative measures. These steps have included:

- Burglar alarm systems on all concession stands, pro shops, office buildings and major building sites.
- 2) A step-up in awareness, plus better city police patrol of park facilities.
- 3) Added lighting in troubled areas.



(continued on page 47)

(continued from page 46)

- 4) Up-graded illumination street light and security systems, by adding 80% higher wattage.
- 5) Constant inventory and replacement of "out" street lamps and security lamps.
- 6) Trimming of all trees and shrubs to provide greater light penetration and reduce potential hiding areas.
- 7) The promotion of more adult activities in facilities where vandal prone youth have created problems.
- 8) Publicity announcements making citizens aware of the cost involved and urging their support in notifying police when vandalism is in progress.
- 9) Revision of lock replacements to curtail break-ins.
- 10) Plus immediate repairs to damaged areas so as not to invite and/or suggest continued vandalism by later occupants of the facility.

Although the above methods will not eliminate vandalism completely, they do represent a step in the right direction in lessening the damage.

Arnold Palmer/Lofts Relationship Extended

Bound Brook, NJ — Arnold Palmer will continue to act as spokesman for Lofts products. That announcement was made recently by Palmer and Jon Loft, President of Lofts Inc., one of the leading U.S. seed companies.

The Palmer/Lofts relationship is somewhat unique in Palmer's involvement with the use of Lofts products. Lofts turf varieties are seeded on Palmer's golf courses at Latrobe Country Club in Latrobe, PA; The Bay Hill Club in Orlando, FL; and Ironwood Country Club in Palm Springs, CA. Lofts products also play an important role in the Palmer Course Design Company; Palmer and Golf Course Architect, Ed Seay, not only design courses throughout the world, but also develop special seed mixtures using Lofts turf varieties.

For the past several years, Palmer has represented Lofts on its packaging and advertising. Lofts even named a perennial ryegrass after Palmer, because of its outstanding performance.

Palmer was chosen by Lofts because of his unique position as pro golfer and course owner. In the latter capacity, Palmer takes an active interest in turf management, evaluating turf varieties from a performance and maintenance standpoint. His experience as pro golfer enables him to appreciate the special qualities needed for a playing surface.

Palmer's contract with Lofts has now been extended until 1989.



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The Art of Aerifying

By: Rich Roth

It's that time of year when most, if not all, Superintendents get geared up for their spring aerifying programs, some have already begun. It's also time to get out the antacids to relieve an ulcer, which if you don't have already you will probably develop real soon! Between the Membership's only not accepting but not understanding why you're punching those holes all over the course, you also can be guaranteed of your machinery going haywire during the course of your operations. I'd like to discuss the aerifying of greens and the three different techniques I've seen used on courses that I've been associated with.

The first course was in Tamarac, Florida. Ken Nicholson was the Superintendent at The Woodlands Golf Club and his procedure was as follows: Ken utilized a Dedoes Aerifier attached to a cushman truckster. Since the Dedoes aerifys and picks up the plugs and the operator

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goes to a given area to dump the plugs to be used in areas where hopefully they will grow, the cost for man power is much less than aerifying with the Ryan Greensaire II's. But the penetration of the tines is not as good as with the Ryan's, which Ken did utilize on his most compacted greens.

At Boca Pointe Country Club in Boca Raton, Florida, Bill Jeffreys techniques was completely different. This year I understand he is using the solid hardened tines. But during the time when I was there we aerified the greens with two Rvan Greensaire II's. This operation is more time consuming than with the Dedoes and more man power is required to clean up the greens, but it gives the quality results that Bill strives for. Since the plugs are left on the green, you have to remove them. This requires three men to do the following: One to verti-cut the plugs, one to vacuum the plugs and one to mow the greens plus the two men who are running the aerifiers. All this is taken place before you can think about topdressing the greens. The only drawback to using the vacuum was that in the morning the plugs were moist and difficult to pick up, but by 10:00 or so they dried within the time it took to go from 1 green to another.

Now as Glen Klauks, Assistant at Delray Dunes Golf & Country Club in Boynton Beach, Florida, a third technique will be discussed. Just like Bill's method at Boca Pointe, two Ryan Greensaires are used, one which should be in the Smithsonian Institute!!! The cleaning up procedure is much more time consuming than either of the other two ways I've already mentioned. The plugs are removed by pushing the plugs into piles with the use of a trap rake. As you push the plugs the soil separates from the plug and starts to fill the holes, which means less topdressing will be needed. Again, man power is needed in this operation. Two men run the aerifiers, while four push the plugs and two pick up the plugs and drop them off in the weak areas that are designated around the course. As you can see there are alot of techniques available to us, but as you can also see, some considerations have to be taken. First there is the cost, how much money do you want to spend? Second is the time, time is money and the more time spent the more the cost! Third is the equipment, what equipment is available to you? If you have the right equipment for your situation you can usually justify the initial cost because of the time and man power (cost) saved in the future. Fourth is the soil structure, can your greens take some of the heavy equipment I've mentioned? Fifth is the design of the greens. they have to be thought of, as I stated at Boca Pointe a Rak-O-Vac was used on the greens. But at Delray Dunes that same idea would not apply due to the knolls, undulations and dropoffs around the greens. The old-fashioned way of turning over your trap rakes and pushing the plugs to the side is the only alternative. And finally, what it all comes down to is the Superintendent, he knows what he has and what results he is looking for and what the Membership wants.

In conclusion, these Superintendents use different techniques for their aerifying programs and alot of hard work and thinking goes into the process to get the results and quality they work for to complete the "ART OF AERIFY-ING."



Palm Beach Trade Winds



By MICHAEL BAILEY Boca Greens Country Club

The Midnight Shift

The following is a true story. Nothing has been exaggerated. The point of this situation is to acknowledge the fact that this peculiar incident could probably happen to anyone of us tonight. Unless you are quite confident that your maintenance building is well secured, you just might experience the same nightmare.

I am deep into a sleep at 2:00 a.m. on Monday morning and I hear the phone ring. You can figure on either of two situations. It's your best friend playing a prank on you by calling to ask you what brand of wiper blades you use on your car, or its something serious, like the police calling to notify you of an emergency. Unfortunately, the latter is correct. In somewaht of a daze, I hear an officer say, "Mr. Bailey, we need you to come down to the maintenance building because there has been a break-in and some of the equipment has been stolen." Within the half hour, I drive up the road to the complex only to be so bewildered to view a building that normally services a 36-hole golf course to be virtually empty! Equipment is parked all over the place as if someone said, "Let's make this place look like a junkyard." Still being dark and in the middle of the night, the police begin to try and assess the situation. The only lead into the beginning of this fiasco is the fact that a police officer in the nearby town observed at midnight "an agricultural machine clanging down the middle of main street without any headlights on." Because of such a violation, the person was stopped, whereupon further questioning concluded the machine was hot. It all began to add up. This guy was the culprit of breaking and entering, possession of stolen property and who knows what else. I was requested to drive up the road and see if in fact, this was part of my equipment. As I pulled up to the machine, the headlights of the truck revealed what used to be a 7 gang Fairway mower laid out in the mowing position. After having mowed 8 miles of asphalt, now it's official, "blacktop actually is harder in density than turfgrass!" Most of the reels were either totally missing or so severely abused that only we in the turfgrass industry would still be able to recognize the scrap metal.

By now, dawn is beginning to break, so it's best to head back to the course and see what's still salvageable. The building is completely cleaned out except for a few tractors and other various machines that fortunately had dead batteries and the jumper cables were nowhere to be found. An extremely peculiar situation was still plaguing my mind. How many individuals were involved, when did all of this begin and where in the world is the rest of

the equipment? An investigation revealed the fact that only one person was involved with this whole incident. Evidently, the person broke into the building before sunset. He then put on a company uniform found within the lunchroom. Eyewitnesses were unaware of any such problems. The golfers simply observed what appeared to be the mechanic moving and working on equipment as preparing for the next week's work. Now that the damage was done, the next goal was to locate all of the equipment, bring back to the shop and evaluate, and then determine what was deemed fit to be used for today's crew. Much of the equipment was simply driven around as joy rides. Since most of the equipment was extremely low on fuel, from all of Friday's work, most of the equipment was found within a matter of a few holes from the building. Much of the equipment must have been found to be boring or frustrating to drive. The greensmowers and Sandpros were driven just a few hundred yards and then abandoned. Such was not the case however for a few of the other pieces. A golf cart tire path of dew tracks revealed circles within the 18th fairway, whereupon either the cart drove across the lake, or it lies deep below the surface. A few hours later, the diver concluded my second guess to be true.

The pick-up truck was found out on the back nine complete with 6 flymos in the back (an ambitious lad I would say). A couple of the tractors were found just at the lake bank's edge, some machines stuck in sand traps, and two mowers driven into trees, however the most irritating (but what can now be reflected upon as the most humorous) a Parkmaster parked smack dab in the middle of #7 green, with all seven reels laid out, but stalled, because of the lack of diesel fuel. When was the last time you tried to air bleed a diesel fairway mower atop a green? If this should ever happen to you, about the only thing one can do is set out some plastic underneath the engine and bleed it off until the engine catches. At first I thought of simply pulling the Parkmaster off of the green, however since all the reels were laid out and the green was totally surrounded by sand traps, it seemed evident the only procedure was to simply bleed off the engine until the diesel catches. Once the engine fires and will maintain idle, casually lift the reels into the transport position, let the clutch out slowly and drive off the green and say, "No, I'm not weird, this is the only way to mow."

After eight hours of temper and frustration, it is now noontime. After lunch (what now seems like dinner), the crew begins to take out various pieces of equipment that have been evaluated by the mechanics to be deemed fit

(continued on page 50)

(continued from page 49) to take back out onto the course.

The only place left to sit down and feel at home was at my office desk — wrong. Even here, I was hit. The office was a complete shambles (now I know what it's really like to keep a messy office). Anything of materialistic value was gone, however fortunately valuable records and various paper work were left; only problem, I just had to find it amongst the piles of paper.

By 4:00 p.m., the end of the day for a "typical Monday" proved to be an experience that I shall never forget.

There was really very little one could do except to think back and say, if only.....the building had a burglar alarm system, interconnected to either the police or a monitoring service. Perhaps a roving guard patroling the building on a nightly route would have been nice too, but these are all ifs.....

Most golf course maintenance buildings are built on the extreme corner, out of view locations of the course which makes them easy for prey. The building represents a tremendous value of money, but it is only situations like this, that will convince owners to invent upon an efficient burglar alarm system that will secure all until the next day's work.

Sure all is insured and assuming the vendors have all of the machinery in inventory, theoretically this would be an easy way to get new equipment, but we all know this is not the case. Be glad for what you have and hold onto it as if it were worth a million bucks, because after all, it just about is.

Suncoast Sponsors First Benefit Tournament

The Suncoast Golf Course Superintendent's Association is proud to announce the success of its Third Annual Suncoast Scramble Tournament held March 26, 1985. The event benefits local Sara-Manatee Junior Golf, Research Fund for Florida Turf-Grass Association and Scholarship Fund.

A full field of superintendents, club managers, golf professionals and suppliers enjoyed a great day of golf which was enhanced by the beautiful surroundings of the Lakes course of Palm-Aire in Sarasota. Superintendent Jim Larner and crew had the course in excellent condition for the tournament.

The team from River Wilderness came away victorious with a 60.

Through sales of "hole" sponsorships the event raised \$1,000 for local junior golf and \$1,000 for turf research. Both figures were up from previous years. Each year the tournament has grown in size and support.

Hugh Bebout of Sarasota Country Club should be commended for his fine efforts as Tournament Director. ■



Gardner Becomes V.P.

LESCO, Inc., Rocky River, OH, has named Phillip R. Gardner as a new vice president.

Gardner, who started with the company in 1976, works out of LESCO's Sebring, FL, facility. He has worked in LESCO's Florida operations since joining the company in 1976 as a LESCO salesman calling on golf courses with the first "warehouse-on-wheels."

In 1979 Gardner was named a regional sales manager for the southeastern United States. In January 1983 he was promoted to South East Regional Manager for all operations as well as regional sales.

Gardner is a 1961 graduate of Westerville High School. Before joining LESCO, he worked for eight years with Groezinger Golf Enterprises as golf course superintendent of Black Hawk and Minerva Lake Golf Courses near Columbus, OH.

A member of the Florida Turfgrass Association, the Southern Florida Golf Course Superintendents Association, the Palm Beach GCSA and the Florida Pest Control Association, Gardner now resides in Sebring.



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Gaseous Loss of Nitrogen from Turf

Nitrogen is the most important nutrient for turfgrass culture in terms of how much is required, how often it needs to be applied, total cost, and the amount of "greening-up" caused by an application of nitrogen fertilizer as compared with other fertilizer applications. There is a wealth of information on the above parameters, but less is known about the fate of nitrogen fertilizers after application. People applying nitrogen fertilizer usually assume that the turfgrass plants take-up all the fertilizer that is applied. If there is not the usual "greenup" response, then they will blame the fertilizer for not working properly. But all fertilizers do indeed respond very predictably to weather, soil, and cultural conditions. Understanding the possible fates after application is key to making fertilizers efficient and maximizing the response.

We have been primarily concerned in Florida with the loss of nitrogen fertilizers by leaching because of the sand soils with low cation exchange capacity, high rainfall, and excessive irrigation. Research at the Ft. Lauderdale R.E.C. has shown that these conditions favorable for nitrogen leaching combined with the use of nitrate nitrogen fertilizers can lead to potentially large amounts of fertilizer losses (up to 60% of that applied).

However, everyone should be aware that potentially large gaseous losses into the atmosphere of applied nitrogen fertilizers can occur. Under certain conditions in Florida, gaseous losses can be as significant as leaching losses. One of the processes of gaseous losses of fertilizers is volatilization.

Volatilization is the loss into the atmosphere of ammonia (NH3) as a gas. It can occur with any ammoniacal fertilizer materials, such as ammonium sulfate or ammonium nitrate, when the soil pH is above 7.5. Under these conditions as much as one-third of the amount of fertilizer applied can be lost into the atmosphere. Very little ammonia (1%) is lost from these materials when the soils are acid.

The greatest concern with ammonia volatilization is with urea fertilizer, because of the large amount of gaseous losses under varying conditions. Urea is the alkaline form of ammonia. It is readily converted to ammonium carbonate by an enzyme called "urease." This enzyme is present wherever there is microbial activity, such as on leaves, or in thatch and soil. The ammonium carbonate is an unstable chemical form and ammonia is readily released into the atmosphere. Urea fertilizers are usually broken down within 3 days of application.

Field tests on turf have shown ammonia volatilization losses to average 20-30% after an urea fertilizer application. When urea was applied to bare acid sand soils, the volatile losses were up to 59% of the urea applied. The higher the soil pH, the greater were the losses. The study also showed that by increasing soil moisture and temperatures ammonia losses were also increased. It was interesting to note that these studies showed about 95% of the volatile losses occurred within 7 days of application.

A recent laboratory study examined the differences in ammonia volatilization from urea applied as either a granular or a liquid. Ammonia losses from granular urea ranged from 1 to 55% of that applied, whereas ammonia losses from liquid urea were 2-26% of the urea applied. The actual losses depended upon the temperature and relative humidity conditions in the experiment. Increasing temperature and humidity generally increased the losses observed. Periodic wetting and drying of the turf caused surges of ammonia losses. Irrigation immediately after fertilization by either method of urea application significantly reduced volatilization to minor losses.

To obtain the maximum fertilizer efficiency (greatest turf response), the turf manager must carefully plan and implement a fertilizer program. Fertilizers should be applied to turf that has soil moisture near field capacity. This will help minimize potential leaching. The proper fertilizer source should be selected for the particular turf situation. If one is using urea fertilizers, the above research information indicates it is essential to water-in the fertilizer to minimize volatilization losses. Likewise, other nitrogen fertilizer sources will also benefit from being washed into the soil, not only to reduced volatilization, but also to get the fertilizer into the soil for root uptake. An application of a 1/8 to 1/4 inch of water is sufficient to wash the fertilizer into the thatch and soil. This should be done as soon as possible after fertilizer application. Using these techniques, a turf manager can make the most efficient use of fertilizer applications.

References: 1) Tito, S., J.R. Street, and T.J. Logan. 1984. Factors affecting ammonia volatilization from urea applied to turfgrass in a laboratory study. Proc. Amer. Soc. Agron. p. 155. 2) Volk, G.M. 1959. Volatile loss of ammonia following surface application of urea to turf or bare soils. Agron. J. 51:746-749. ■

LESCO Truck Territories

Five new LESCO Truck territories are being added by the company for 1985. With this expansion, LESCO Trucks will now serve golf courses on both coasts.

With the 1985 season, LESCO Trucks will be calling on courses in the Hartford, CT, area; the Florida panhandle and in New Orleans. Beginning in Spring 1985, LESCO, Inc., will initiate truck routes in Palm Springs and San Diego, California.

With the addition of the five new territories, a total of 32 LESCO Trucks will serve over 4,000 golf courses nationwide.

LESCO Trucks began serving turf managers in 1976 in Florida. The warehouse-on-wheels takes the LESCO salesman on a regular route to scheduled stops to serve the special needs of golf course accounts. Customers are notified in advance so they can plan orders and take advantage of monthly specials and sales.

LESCO, Inc., 20005 Lake Road, Rocky River, OH, Vice President Herb Cole believes the geographic expansion will have great advantage for customers in the new territories. "All those courses in the new areas we have been serving on a mail-order basis will now have the convenience and the service of buying material directly off the truck from a salesman trained to make recommendations for a particular area. The customer gains a 'store to his door' and a turf consultant.

In addition to the five new trucks, LESCO also serves courses in Florida, Michigan, New York, Maryland, Pennsylvania, the Carolinas, Illinois, Indiana, Ohio, the Hudson Valley, Kentucky, Wisconsin, Texas and Arizona.

The LESCO Truck maintains a complete line of golf course accessories, replacement parts, irrigation supplies, chemicals, fertilizers and seed. Large orders of seed, chemicals and fertilizer placed through the truck salesman are shipped directly from the warehouse.

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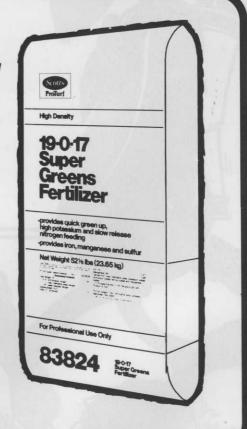
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Hector Donates Equipment to IFAS

The Ft. Lauderdale Research and Education Center has recently received a gift of a Toro Series IV Greensmower and a Ryan RideAire from Hector Turf Incorporated of Miami. Thanks to the generosity of James Mantey and Ralph Baxter of Hector, the Research Center is able to utilize the latest turf equipment in its research programs. This donation is part of an ongoing effort by the Research Center to obtain turf equipment to keep its research programs current with the latest technology available to the turf industry.

The Toro greens mower from Hector will be used on new golf green research plots of Tifdwarf, Tifgreen, and Tifgreen II recently established at the Research Center. Plans for using the Ryan RideAire already include aerification of numerous turf areas of the Research Center including field plots of bermudagrass, St. Augustinegrass and bahiagrass.

READY TO DEMONSTRATE?

Nine people were found guilty of obstructive demonstrating at the Three Mile Island nuclear plant. Their attorney said they acted to prevent "the enormity of danger which they reasonably believed we all faced" from the plant.

At about the same time, the Consumer Products Safety Commission revealed a *real* danger to us all: Some 8,000 people wind up in hospital rooms each year with toothpick-related injuries. At least three toothpick deaths have been reported from swallowing the deadly wooden slivers — just about three more than the total power plant casualties.

When, oh when, will we have an anti-toothpick demonstration?

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Tampa: Ideal City for FTGA Conference & Show

By: Irene Jones

Tampa...the hub city of Florida's West Coast...a picturesque vacationland and a bustling megatrend city will host The 1985 Florida Turf-Grass Association Conference and Show at The Curtis Hixon Convention Center and the Hyatt Regency Hotel, on September 29 October 2, 1985. The show promises to be the best ever with increased educational sessions, the introduction of "hands on" workshop sessions and very qualified speakers.

The new "hands on" workshop sessions are designed to provide a practical, every-day approach to the subject covered. Three workshops are planned. They include:

ESTIMATING LANDSCAPE INSTALLATION AND MAINTENANCE COSTS. Conducted by Ms. Kathy Kerr of Kerr and Associates, Minneapolis, Mn. This workshop is designed to provide up-to-date information on how to effectively determine costs. The workshop will help you avoid making costly mistakes, help improve making projections, and improve profit margins.

TURF DISEASE IDENTIFICATION AND CONTROL. Conducted by Dr. Gary Simone and Mr. Richard Cullen, this workshop will provide the participant with everything necessary to accurately diagnose the common diseases that afflict southern turf. Microscopes will be provided to help appreciate, and reinforce what is needed to make sound decisions when accurate disease identification is vital.

COMPUTER USE IN TURF MANAGEMENT is designed to help a turf manager make his or her job easier. Turfgrass management is more than just agronomics. It also combines making sound business decisions, knowing how to budget, make projections, and keep various records regarding financial and equipment matters. These workshops, conducted by Dr. Fedro Zazueta and Ms. Justine Wellington from IFAS, in Gainesville will provide the answers needed to run an efficient, profitable operation.

(continued on page 58)



Curtis Hixon Convention Center.

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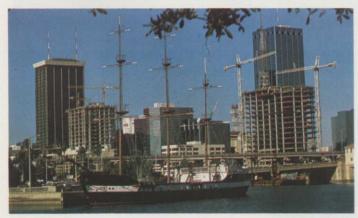
The workshops will be conducted for 3 days. Enrollment will be limited to 24 individuals in each workshop. Enrollment is on a first come, first serve basis with priority given to FTGA members. More information will be released shortly regarding these workshops and the Conference and Show.

Dan and I plan to attend the show this year. We always enjoy visiting the Tampa/St. Petersburg area because growing up my family home was located on Treasure Island over on the St. Petersburg side of Tampa Bay. Tampa and St. Petersburg are separated by a large body of water, the Tampa Bay. Memories of that time in my life include visiting cigar factories in Ybor City, Tampa's Latin Quarter with my Uncle. The cigar industry was the catalyst that created Ybor City when cigar makers migrated from Havana to Key West and then to Ybor City in 1885. My Uncle Paul, a retired policeman from Pennsylvania, came down twice a year and we visited the cigar factories looking over "seconds." Seconds were top quality cigars hand rolled from Cuban tobacco leaves but the price of those cigars was greatly reduced because of flaws in the leaves. Uncle Paul would buy them and repair the air holes by rewrapping the damaged parts. Fine cigars are still rolled by hand by practitioners of this fading craft.

Tampa is well known for its industry, factories, commerce and world trade. Recognized as a major port for both cruise ship lines and barge traffic as well as for its "Pink Gold," Tampa is the home of one of the world's large shrimp fleets. About a dozen of these trawlers are usually in port. And, the Tampa Port Authority wants three downtown docks for cruise ships built sometime between 1987 and 1988, according to Frank Clewis, marketing director. On the 20-acre tract, the authority also wants to arrange for development of 1.5 million square feet of space in two office towers and two hotels with 600 rooms each.

If you are flying in for the Conference you will enjoy a "Five Star Airport" because Tampa International Airport is rated by many, including Esquire and Fortune Magazines, as the finest airport in the world. In addition to being beautiful and efficient, the flight departures are reported to be 99.6% reliable.

The annual FTGA Scholarship & Research Golf Tournament will start things off for the Conference. The tourna-



Downtown Tampa.



Ybor Square in Ybor City.

ment will be held at the Sun City Center Golf Course on The Lakes, The Oaks and The Palms which all together include 27 beautiful holes. Dan Morgan, CGCS is the Superintendent, Dan has put in a lot of hard work to coordinate this major event. Tournament monies will support turf-grass scholarship and research. Following the tournament, it's off to Simmons Ranch for a Ruskin Corn Boil and Steak Fry. Since the tournament is open to everyone, even if you don't play golf you can cheer on those who do. The corn boil is a must because you will meet old friends and make some new ones. Superintendents should plan to support this event.

FTGA funded research presentations will start the General Sessions on Monday afternoon, September 30. Topics to be covered include: Bermudagrass Decline, Salinity Studies, Nematode Research, and Overseeding Trials. FTGA lobbyist, Joe Fuller, will update attendees on legislative action affecting turf interests.

A highlight at this year's Conference and Show will be the featured speaker, Art Holst. Mr. Holst is a former NFL official with the ability to motivate, entertain, and challenge his audience. His talk, the "Challenge of Excellence" promises to leave us all with a very strong message.

Educational sessions this year have been expanded to four. They include: GOLF TURF, LAWN CARE AND GROUNDS MAINTENANCE, BASIC PRINCIPLES OF TURF CULTURE AND ADVANCED PRINCIPLES OF TURF CULTURE. In addition, HRS credits will be awarded for several of the Basic and Advanced Principle Sessions. The following is a summary of the educational sessions for Tuesday, October 1, 1985:

GOLF TURF SESSION:

Golfing Trends in Florida — Dr. Joe Beditz, National Golf Foundation.

Golf Course Aerification — Dr. Robert Carrow, Georgia Agricultural Experiment Station.

What Makes a Golf Course Superintendent Successful — Gene Baston, President of G.C.S.A.A.

Putting Green Speed Update - Dr. Joe Duich, Pennsylvania State University.

Preventing Fires in the Maintenance Facility — Todd (continued on page 59)

(continued from page 58)

Spear, Public Education Officer, Tampa Fire Department.

How Long Can You Mow Greens — Charles "Bud" White, United States Golf Association.

IAWN CARE AND GROUNDS MAINTENANCE:

Selecting Quality Landscape Plants — James Salmon, Salmon's Wholesale Nursery, Ocala.

Design of Landscape Plantings — John Piersol, Lake City Community College, Lake City.

Maintenance of Landscape Plantings — John Aoki, Aoki Landscaping & Maintenance, Tampa.

Calibrating Centrifugal Spreaders — Art Wick, Lesco, Inc. Rocky River, Ohio.

Hiring and Retaining Personnel — Dr. G.C. Nutter, Sunburst Ridge Farm, Buford, Georgia.

Compatibility of Pesticide and Fertilizer Combinations — Dr. Charles Darrah, ChemLawn Services Corp., Columbus, Ohio.

BASIC PRINCIPLES OF TURF CULTURE:

Fundamentals I. Turf Selections and Establishment — Harold Jones, Duval Co. Cooperative Extension, Jacksonville.

Fundamentals II. Turf Mowing, Fertility, and Irrigation — David Lambert, Charlotte Co. Cooperative Extension, Punta Gorda.

Fundamentals III. Trouble Shooting Turf Problems – Bob Rehberg, Estech, Inc., Winter Haven.

Fundamentals IV. Biological and Chemical Aquatic Weed Control — Dr. Vernon Vandiver, University of Florida, IFAS, Ft. Lauderdale.

ADVANCED PRINCIPLES OF TURF CULTURE:

Turfgrass Growth and Development — Dr. Jeffrey Krans, Mississippi State University, Mississippi.

Selecting Equipment for Turf Maintenance — Frank Buckingham, Equipment Consultant, Springfield, Missouri.

Insecticide Mode of Action — Dr. James Reinert, Texas Agricultural Experiment Station, Dallas.

 $\label{eq:continuous} \begin{tabular}{l} Herbicide Mode of Action $-B.J.$ Johnson, Georgia Agricultural Experiment Station, Experiment. \end{tabular}$

A giant new convention center is also targeted for completion in Tampa in 1987. The center will be among the nation's largest, with 200,000 square feet set aside just for an exhibit hall. Proposals for the project are currently under review. This new center would be available for future Golf Course and Turf-Grass conventions.

Some families may want to plan to visit Busch Gardens where Africa of old comes to life. The adventure and romanticism of exotic Africa, The Dark Continent...celebrated its 25th anniversary in 1984, here you will find seven distinctly themed African sections complete with wild jungle animals, wilder thrill rides, colorful open-air bazaars and authentic foods. Lush gardens, exotic birds and the famed Bird Circus, with trained macaws and cockatoos, are still among the most popular park attraction. Located at 3000 Busch Boulevard, two miles east of Interstate 275, Busch Gardens is open daily from 9:30 A.M. to 6:00 P.M., with extended hours in the summer. The single admission price of \$13.50 includes all rides, shows and attractions. Children two years and under are admitted free. Parking is \$1 per vehicle.

For me the flavor and color of Tampa's Latin American Heritage expresses itself in the dining cuisine of The Columbia Restaurant in Ybor City. Black Bean Soup (the world's best), chicken and rice, flan and strong sweet coffee served in a courtyard filled with the music and rhythm of Spanish Dancers and you're on your way to creating a memorable evening. Two years ago Dan and I enjoyed one such evening with Max and Sally Brown. How about if we plan it again this year?

The final day provides a grand finale to a successful Conference and Show. General sessions on Wednesday, October 2 are designed to be controversial, provocative and enlightening. Victoria Tschinkel, Secretary, Department of Environmental Regulation will discuss the DER and how it affects sensitive issues regarding water quality, protection of ground water, and other problems important to the turf industry. Dr. D.L. Shankland, Chairman of the Department of Entomology and Nematology will discuss "Environmental Toxicants and Public Risks in Florida." His discussion will clarify some of the perceived risks as compared to the actual risks of using chemicals. Many of the chemicals we're exposed to on an every day basis right in the home are far more toxic and dangerous than are the chemicals used in agriculture. Dr. Shankland will compare these risks and illustrate how all these risks need to be outweighed.

Dr. J.M. Davidson, Assistant Dean of Research at IFAS will discuss the "Role of IFAS in Evaluation and Recommendation of Pesticides." He will discuss the testing and recommendation procedures that IFAS goes through in their process of making recommendations. This is an important talk not to be missed since we must now reevaluate many factors before a recommendation can be made especially as a result of increased pesticide awareness and contamination of ground water supplies.

Finally, Drs. Bruce Augustin and Charles Peacock will discuss the latest in insect, disease, nematodes, and weed controls. Their presentation will provide the latest information available for controlling these pests.

The 1985 Conference and Show promises to surpass all others in the past. Be sure to plan now for this grand event to be held September 29 through October 2, 1985 in Tampa, Florida. For more information contact the Florida Turf-Grass Association, 302 S. Graham Ave., Orlando, Florida 32803-6322, Telephone: (305) 898-6721.

Editorial

The annual Florida Turf-Grass Association Conference and Show is fast becoming "The Show" in The Southeastern United States. People are registered from as far away as Hawaii. This show should be especially appealing for any turf professional who can not attend a national conference.

With 2,000 registrants, 130 booths, 4 separate simultaneous sessions, and the very best speakers from throughout the USA this promises to be a blockbuster affair.

Can you as Greens Chairman, Owner or General Manager afford not to send your Golf Course Superintendent to this once a year educational update of what is working best on Florida Golf Courses? The absence of this kind of knowledge could cost your golf operation thousands of dollars.

Can you as a Golf Course Superintendent afford not to give your golf course the latest technology and management technique? Do you care about your future and the future of your profession? Make arrangements now to meet with your fellow professionals September 29 to October 2, 1985 in Tampa, Florida.

For registration material contact Bill Nass at FTGA headquarters in Orlando, phone number: (305) 898-6721. ■

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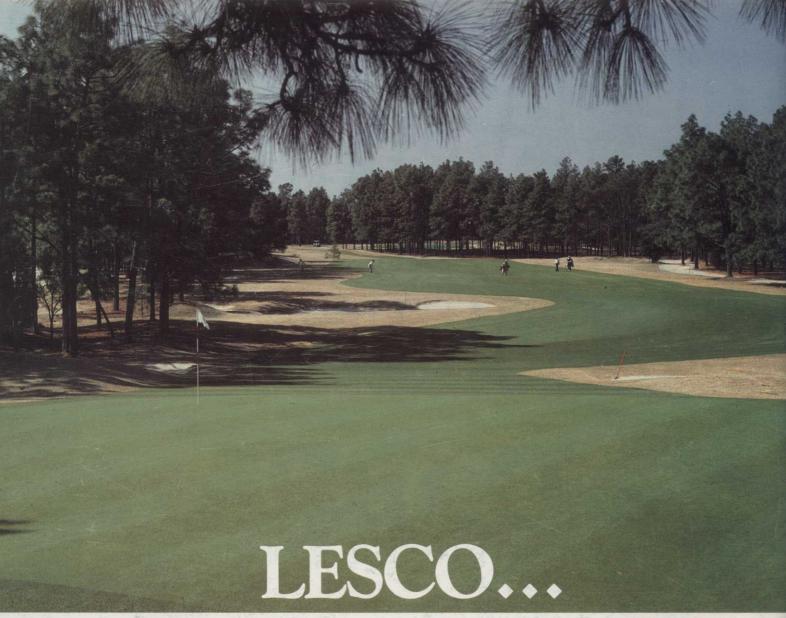
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