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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

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. ■

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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, kindness 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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(continued from page 13)

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 the ball down the middle all of the time.

"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 be 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

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(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 mini-landscapes 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, wild-flowers, 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 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, non-radial 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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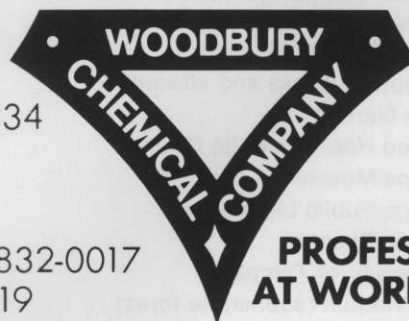
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Expanded educational sessions, more exhibitor booth spaces, and the addition of workshops promise to make the 1985 Florida Turf-Grass Association Conference and Show the biggest and most successful ever. Tampa, Florida will again host the event to 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.

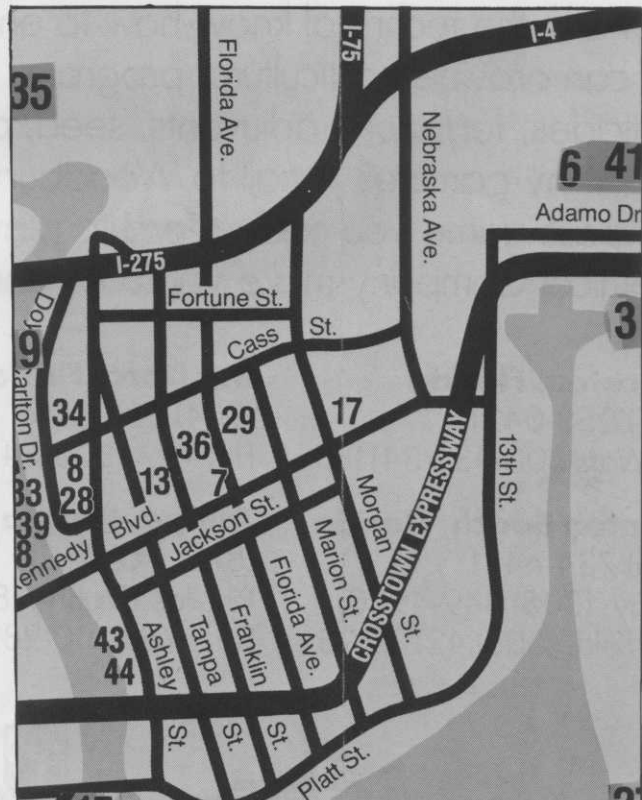
Tampa will be the place for a great Conference and Show in 1985! For more information, contact Bill Nass, Florida Turf-Grass Association, 302 S. Graham Avenue, Orlando, Florida 32803-6332. The telephone number is (305) 898-6721. ■

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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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