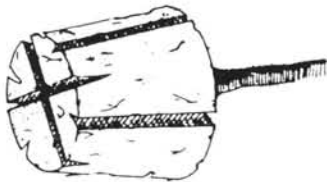


(Proper Planting continued)

from the trunk and top of ball. Water slowly to saturate the soil ball and to remove air pockets in the backfill. Finish filling the hole with soil. No burlap should remain above the soil surface as it may act as a wick and dry the root ball. Evergreens should not be planted later than October so the roots will have a change to become established.

Container Grown and Containerized Stock: Carefully remove the container *at the planting site*. Cutting the container may be necessary. Remove all containers, including biodegradable papier-mache' pots. Newly containerized stock may be only slightly rooted; the container must be removed with great care so as not to disturb the root ball. In contrast, container grown stock may be rootbound. If roots are growing in a spiral around the soil ball, the plant is rootbound. These roots need to be separated or they will eventually girdle the plant. Make vertical cuts on the sides of the ball just deep enough to cut the net of roots (*Figure 1*). Also make a criss-cross cut across the bottom of the ball. Plant the plant the same as a B & B plant. Don't plant evergreens later than October so the roots will have a chance to become established.



Tree Spade: The use of mechanical tree spades has become a common method of tree planting. Trees should be watered thoroughly before moving to hydrate the plant and to avoid soil sifting out during transport. The sides of the planting holes should be roughed up with a shovel, rake, etc., to break up compaction caused by the spade. Trees should be placed at or slightly higher than the original grade to allow for settling. After planting, work loose soil into the area between the hole and the tree plug, and water thoroughly.

Credit: "Hole Notes", 5/91

Carts and Cart Paths The Best or Worst Invention for Golf?

Larry W. Gilhuly₂

₁Presented at the 38th Northwest Turfgrass Conference, Sheraton Hotel, Spokane, WA, September 18-20, 1984.

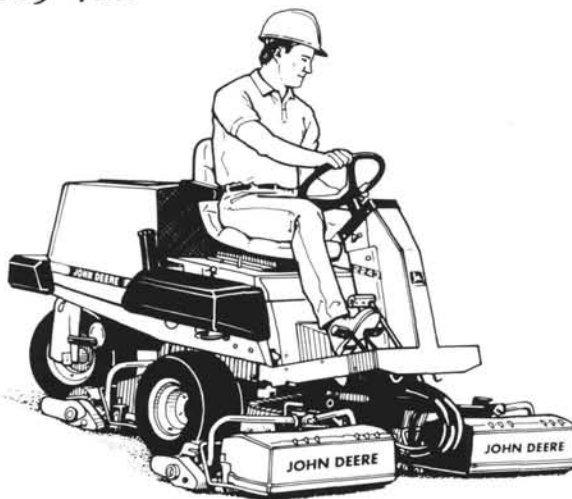
₂Western Director, United States Golf Association Green Section, Tustin, CA.

A little bit is good, a lot is better. How many times have we heard that old adage used in the field of agriculture? It has also been used in other areas. For example, an agronomist wished to go fishing on a crisp spring day. The only problem was he had no angleworms to fish with. To solve this dilemma, he went down the main street of the local town and found a small roadside stand that had a sign out front that said, "Angleworms for Sale". The agronomist inquired as to the price. "All you can take for \$1", replied the salesman. "Good", said the agronomist, "I will take \$2 worth!" (continued page 22)

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(Cart Paths continued)

Although this does not represent the clearest of thinking, I sometimes wonder if clear thinking is being done in regards to carts and cart paths on golf courses. In my personal opinion, there has been no finer invention than the golf cart to produce revenue for a golf club. At the same time, there has been no worse invention made for the growing of fine quality turf on a golf course. It appears to be the "Catch 22" of the golf course operation.

Since golf carts are here to stay, let's address the means of control and techniques used to lessen turfgrass wear.

MEANS OF CONTROL

Ropes and Signs — Perhaps the most visually unpleasant method of controlling carts is with the use of ropes and signs. While there are many different methods of use, it is best to keep ropes and signs to a minimum. Use them around particularly difficult areas such as high traffic tee and green areas. Remember, the more signs and ropes that are put up, the more the equipment operator must get off the machine, take them down, mow, and then replace them. Also, members sometimes have a habit of pulling out stakes when hitting a shot and not putting the stakes back in. If your club is on a limited budget, this may be the only method of controlling carts on your golf course.

Painted Areas — This practice has been used with mixed results (depending on the membership) for control of carts in front of greens and around green surfaces. It is by far cheaper than the use of ropes and signs; however, the membership must be cognizant of your efforts and must comply with the rules put forth. At some clubs this has worked very well while at others, it has been a waste of time. Special emphasis and communication are important to make this technique work.

Curbing — Whether it be asphalt, concrete or railroad ties, the use of curbing provides the most effective method for cart control. At the very least, every club should strive for curbing around tees and especially greens. The curb should be no more than 5 or 6 inches high and the soil should be flush on the turf side to provide for normal maintenance practices. Try to avoid any extra hand labor when installing curbs. Nearly every club that has used this method of cart control has been pleased with the results and their turf quality around the cart paths by greens and tees has greatly improved.

Some clubs have gone so far as to curb all their par-3's and other have curbed nearly the entire golf course. This would be a severe monetary undertaking for most clubs and is seen very little in the western states.

Angles of Entry/Exit — On those golf courses that have paths on tees and greens only, the angle of entry onto the fairway and exit onto the green path are critical. To reduce turfgrass loss near the tee exit area, the path should be angled towards the rough. Then, by the use of signs and roping, try to distribute the wear pattern into the rough rather than the fairway area. Many times, areas that are in play are devoid of turf simply because the cart path is angled the wrong direction.

The path entering the green should also be off into the rough so that the worn area again will occur in the taller rough grass. The combination of the painted white line with a properly positioned cart path in the green area, can reduce turf loss in this vital area.

The 90 Degree Rule — Many clubs have a standard policy



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of using the 90 degree rule. Basically, this rule states that the golfer must drive his/her cart down the path or rough until he reaches the point 90 degrees away from the ball. At this point, he may drive onto the fairway, park his cart, hit his shot, and then return on the same line and proceed up the rough or cart path in the same manner. This method also takes good communication and understanding from the membership. However, success has been very good using this method and reducing turf loss.

Restricted Use Days —

When the soil is frozen, excessively wet or when temperatures are too hot, the superintendent should have the right, along with the golf professional, to restrict carts to paths for the sake of the turf. If the membership is willing to accept poor playing conditions in their fairways, then this rule can be eliminated. However, if the membership desires good fairway playing conditions and demands good turf throughout the facility, then they must understand the reasons for controlling carts on these specific areas on specific days.

(continued page 24)



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(Cart Paths continued)

Bring Back Caddies — Isn't it interesting how the United States has been on such a health kick for the last 15 or 20 years and everyone is interested in jogging, tennis, swimming, etc. At the same time, golf carts have increased dramatically in this time period and when one goes out to play golf, very little exercise is achieved when riding in a cart. Of course, there are many with health reasons who are unable to walk the golf course. However, I have vivid memories in the 1960's, prior to electric carts, of the large scale caddy programs that helped many young boys make a little bit of money during the summer. It is also an excellent method to introduce the youth to the game of golf. Become involved by showing these young people the proper way to fix ball marks, rake bunkers, replace divots, etc. If for no other reason, do it for the sake of your turf!

TYPES OF SURFACES

Gravel or Rock — While this type of surface may be the least expensive, it may prove the most expensive in the long run. Continual fixing of pot holes, dust problems and severe damage to fairway and rough units are just some of the reasons why many courses are going to the more permanent, harder surfaces. When a club has 25 or more carts, it is time to start considering cart paths for minimizing turf loss. For example, in 1982 at Pebble Beach, the USGA requested elimination of carts from fairways two months prior to the U.S. Open. The resulting response in fairway growth and vigor was quite astounding according to Bill Bengeyfield, National Director of the Green Section. This has also been reported at other golf courses where excessive cart use has caused problems.

Asphalt — Although asphalt is a better answer than gravel,

it too has its problems. It can be easily prone to invasion from grass and weeds and can begin breaking down in a short period of time. Roots from trees can also cause problems with asphalt and resurfacing and repatching are a constant need. For financial reasons, many clubs ultimately go to asphalt paths thinking they are cheaper; this may not necessarily be the case.

Concrete — Even though the initial expense will run higher with concrete paths, they will last longer and ultimately be the most cost effective method for cart paths. On all paths, the best width is 8 feet with curbing around greens and tees. This width will accommodate all vehicles. The width from green to tee should be 7 feet. Experience has shown any path narrower than this will develop problems of weak turf and broken-down edges from carts and maintenance vehicles.

CONCLUSIONS

Installing cart paths is not an inexpensive proposition. If a club is going to spend anywhere from \$50,000 to \$250,000 to install paths, the main point is that they be used. Currently, many paths are not used to their fullest and resulting turf loss is the by-product. A little bit is good, a lot is better? In the case of carts, a little bit is good, control is better.

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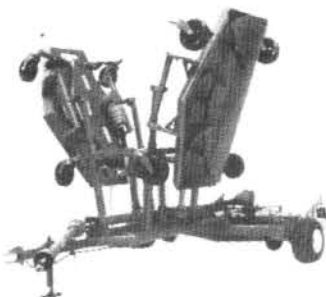
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