ular, and our job is not to fight traffic-foot or equipment. As representatives of golf course management, we want to think in terms of inviting more players to play. We must study the over-all picture with a broader perspective. There are enough tools available to enable us, through sufficient knowledge and imaginative management, to maintain good golf courses.

We should consider traffic on the golf course as a challenge rather than a problem.

Care and Handling of Golf Carts

A PANEL DISCUSSION AMONG:

JAMES L. HOLMES, Moderator; Midwestern Agronomist, Green Section of the United States Golf Association

CHARLES STEWART, Mississippi City, Miss.; Member USGA Green Section Committee

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JAMES L. HOLMES:

What are the financial aspects of handling and care of golf carts? The following data are derived from: (1) "Golf Cart Usage and Control in the Metropolitan New York Area" — a survey among Member Clubs of the Metropolitan Golf Association, March, 1960; (2) Minutes of a meeting on "Golf Carts" held by the Chicago District Golf Association at Riverside Golf Club, January 21, 1961; (3) Personal correspondence with Oliver F. Burnett, Paradise Valley Country Club, Scottsdale, Arizona; (4) Personal experience.

Installation Costs

A. CLUB OWNERSHIP:

1. Four electrically equipped garages, built to house a total of 110 cars, cost $41,000; thus, approximate cost to house one car is $375. This is for completely enclosed building including electrical installation costs.

2. Two clubs installed electrical equipment but left cars in open. Cost $3,600 and $3,000. Unless adequate power is available to club grounds, electrical installation will probably exceed $3,000 for 25 car outlets.

3. Initial investment for electric carts and garage: If cars are purchased in numbers, costs is around $1-000 per unit. Therefore, initial investment for 20 cars is: $1,000 x 20 plus $375 x 20 equals $27,500.

4. Cart owners pay from $1.25 to $25 per month to store carts in club-owned property. The average of 15 clubs in New York and Chicago is about $15 per month during the season and $3 a month for winter storage.

5. An initial garage charge of $300 to $400 is assessed when a member first installs his cart at one club. This is in line with the original $375 cost to garage one electric cart.

B. RENTAL:

1. Every conceivable arrangement has been made with rental agencies. Some clubs merely agree to use the agency's carts, and it is the agency's sole responsibility to deliver them to the first tee. Some clubs supply electricity, others housing and electricity, still others housing, electricity, and maintenance. Consequently, the installation cost to the club varies to such an extent among clubs that it is not practical to suggest any general estimates.

Profit (and Loss)

A. CLUB (OR MEMBER) OWNERSHIP:

This does not include club ownership whereby the club plans to make a

profit through cart rentals.

1. Of 9 clubs in the New York area, 7 reported a profit; 2 a loss. Apparently with a reasonably sensible operation, it is not difficult to break even or show a profit. Two clubs in Chicago reported that any profits were turned over to the grounds department to improve cart traffic facilities and to repair any damage to the course as a result of cart usage. One Chicago club maintains a sinking fund, and any profits are used to repair carts, garages, etc.

B. Club Ownership For Profit:

1. One Chicago club reported 15,311 cart rounds in 1960 with a gross income of $137,790, and expected to gross $175,000 in 1961; I understand it did. Net income was not available. At this club everyone who plays must rent and use a cart. If the player desires a caddie, it is his responsibility to obtain one. Thus, carts can be operated at a profit at a private club if so desired.

2. My experience indicates that other private clubs are beginning to seriously consider the operation of carts for a profit.

C. Rental Ownership:

The profit division between the rental agency and the club depends upon the cost to the agency and is usually in proportion to the extent of the club's assistance in maintaining carts. Normal splits are 70-30, 60-40, and 50-50. In all cases I have observed where it is not 50-50, the rental agency receives the larger share. Last fall I ran across a new plan: for the first 50 rounds a car operates, the rental agency receives 70% of rental income; after 50 rounds, the club receives 90% of the rental income on a seasonal basis.

1. In no instance, to my knowledge, has there been a net loss to a club as a result of using rental golf carts.

2. Three Chicago clubs reported net profits of $3,774; $5,283; $6,508.

3. Four New York clubs reported gross revenues of $8,000, $5,000, $3,100 and $1,900. Costs vary from club to club but are considerably less when rentals are used. In any event, these clubs grossed an average of $4,500 from rental carts. Net profits could not be ascertained from available data.

4. Cart rounds in the northern part of the country at private clubs figure to be around 80 per cart. One club in Arizona reported that 300 rounds per cart netted $160 per cart in 1961. One public course reported an income of $760 per cart, but this figure did not include amortization of the carts which the club owner purchased. It can be derived from this that a private club in the northern part of the country can expect to net a profit of at least $150 per cart rented if an intelligent operation is initiated and followed. A public club may expect to net a greater profit, all factors considered.

General Data

1. The 1963 Annual Issue of "Golf", Vol. 5, No. 2, reports that in 1953 there were 1,000 carts in use; now there are 70,000. Manufacturers estimate 100,000 will be in use by 1965. It is a $100,000,000 gross business at present.

2. Depreciation of both gas and electric carts is between $250 and $300 per year.

3. Electric motors on carts run 27 to 30 minutes on an 18-hole round. Batteries usually last 3 years in the north and 14 months in the South with about the same amount of use. Cost per round is 12c to 18c for electricity. Maintaining exact tire pressure is vitally important.

4. Approximately ½ gallon of gasoline is used per round in gasoline carts. Installation price is cheaper than for electric carts. Low pressure, 12-inch

tires can be used more effectively on gasoline carts. Maintenance costs are somewhat higher.

5. There is a noticeable percentage increase in the use of gasoline carts.

Conclusion

Obviously, mechanized golf is here to stay. Clubs have learned that handsome profits can be obtained from cart operation. If the operation is maintained in a business-like fashion, each mechanical unit should net at least $150 per season in the northern part of the country for a private club operation and more for a public type of operation; farther south, net profit will be correspondingly greater.

Rounds per car vary from an average of 80 in the north to 300 in the "year 'round" southern area. There is a greater emphasis on use of carts in the south and southwest.

There is violent disagreement as to which is better—rental carts or club-owned carts. The rental cart school seems to be gradually gaining pupils.

CHARLES STEWART:

The following recommendations are offered to clubs which anticipate the acquisition of golf carts:

1. Have club appoint an efficient Golf Cart Committee that will work conscientiously with maintenance men as well as the course superintendent.

2. Have committee, after careful study, decide on make of cart.

3. Purchase number that club can afford, or assist in financing the professional so that he may purchase the required number.

4. Hire a good maintenance man. Arrange with cart factory for maintenance man to visit plant to see how cart is made from start to finish and get a general schooling. Then send him to the battery distributor for like schooling. This education, which will take all of about a week, should be done before carts arrive.

5. Purchase no carts with tires smaller than 8.00 x 6.

6. All carts should have six heavy duty batteries, and definitely not the regular automobile battery.

7. No carts should be allowed to be rented that have a hydrometer reading of under 1200 (at sea level).

8. After each rental, maintenance man should be required to:

(a) Hose off batteries with pressure water.

(b) Hose over-all cart and wipe dry.

(c) Check tires for required pressure.

(d) Check batteries and charge not to exceed 1260 (sea level).

(e) Check water in batteries.

9. Have spare parts such as batteries, switches, tires, spindle, motor belts, and the like.

10. If course is wet enough to damage any areas, have steadfast rule of "NO CARTS ALLOWED TODAY."

11. Give maintenance man salary plus commission.

ROBERT W. WILLITS:

We have been told about the damage that normal golf cart traffic does to turfgrasses. Think, then, for a moment of what the misuse of golf carts can do to a golf course — to greens, traps, teeing areas, and particularly to those areas likely to hold moisture. The misuse of carts increases the golf course superintendent's maintenance problems beyond all reason.

As a direct result of misuse, we have "misetiquette" to fellow-golfers. There is the speed driver who thinks that there is only one speed—that is, with his foot through the floor. A gentleman anticipates an afternoon of golf, relaxing in the fresh air; and by the

time he gets through trying to run up and down the hills with wide-open speed, he cannot get hold of the golf club because of the death grip he has had to maintain to keep himself in the golf cart.

Here are a few examples of accidents:

We had the Women's District golf tournament at the club. The distance from the 14th green to the 15th tee is approximately 50 yards, with a gradual slope in which a golf cart would maintain a normal speed of travel without acceleration. Upon approaching the teeing area, the driver of a cart applied the throttle instead of the brake. Ten feet in front of the tee was a creek with a 6-foot drop. Off they went! Fortunately there was a 3-foot pool of water there to absorb the shock, and there were no injuries to the passengers; but there was need for one new cart.

A gentleman out in our country had been in a very serious automobile accident; he was restrained from playing golf for a period of seven years. His first outing was in a golf cart. (The golf cart had come into being during his lay-off.) The driver saw a white line protecting a loosely sodded area and he made a quick turn to the right. Out went the fellow. Result, one broken ankle. Needless to say, he is not a cart enthusiast.

We had another example of a fellow playing in the semi-finals of the club championship, and this might have some further ramifications. At the end of the 13th hole, the victim was 3 up. His opponent was driving him or was the operator of the vehicle, and he thought he was in reverse when he was in forward speed; he ran over the gentleman and broke his leg in two places. What do you do? The victim was 3 up with 5 holes to play. Perhaps the Rules Committee of the USGA will be asked to pass a rule, thereby putting the responsibility of safe transport of one's opponent on the driver. Failure to transport an opponent safely might mean forfeiture of the match.

The things that happen in the misuse and mishandling of golf carts are unbelievable. There is only one answer —a vigorous and constant program of indoctrination in the proper operation of these potentially lethal weapons.

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