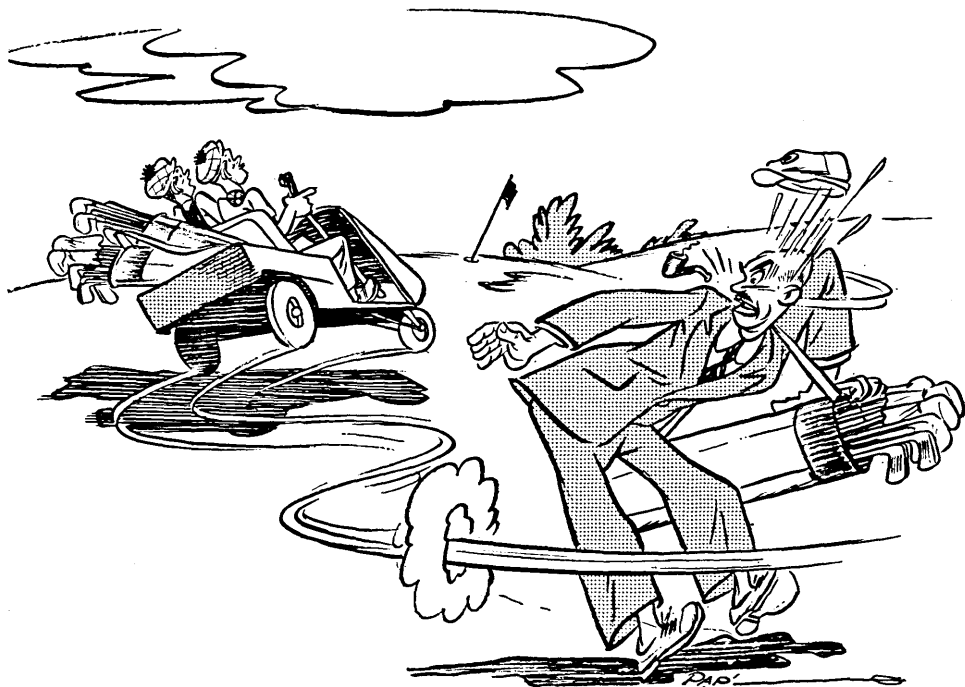


## Will It Come To This?



A futuristic view of a new golf problem, as seen by "Pap", well known sports cartoonist for the Associated Press, who drew this expressly for the *USGA Journal and Turf Management*.

"However, last summer on a visit to Montauk Point, Long Island, a new ray of hope dawned. I noticed they used electric carts. I immediately hired one at \$6 a round. This is a fairly hilly course and for the first time in two years I experienced the pleasure of playing 18 holes.

### **Cart Is Barred**

"This made me very enthusiastic as to the potentialities of the use of carts on my own course. The pro at Montauk cited the case of a man 88 years of age who, through the use of the cart, makes the Montauk course five times a week. I purchased one forthwith. My club barred it on the ground it would harm the course.

### **How Carts Affect Courses: Views of Turf Scientists**

What is the effect of motorized transportation on golf course turf?

The USGA has a Green Section with a staff of six turfgrass scientists—agrono-

"The after-effect of a heart attack is perhaps worse than the attack itself. You are continually living with mental reservations of doing things that are out of your sphere of limitation. Your entire system feels as though it is in a vise. The only way to overcome this fear is by doing things in a most deliberate manner. In my case, after making up the usual foursome I lived in fear that I would be unable to complete the course.

"It is only a question of time when all clubs will see this question in the true light. When boards of directors react favorably, many members who are inactive due to heart conditions will be given a great lift in the morale department."

mists highly experienced in problems of golf course maintenance, both theoretical and practical. They are located in different sections of the country, and deal with wide

varieties of grasses, climates, soils and related factors on hundreds of courses.

Here are their views:

**CHARLES G. WILSON, WESTERN DIRECTOR OF USGA GREEN SECTION, DAVIS, CAL.:**

Golfers' increased use of automotive transportation, either gasoline or electric-powered carts, indicates that riding in preference to walking is not just a passing fancy. Contrary to many manufacturers' opinions, their use has and will continue to cause damage to golf course turf.

Under wet, soggy conditions resulting from either rain or irrigation, ruts or deep wheel tracks may be formed to interfere with the basic concept of playing the ball as it lies. Under so-called dry or ideal use conditions, many soils are more subject to compaction than when wet or saturated as far as visual damage is concerned.

Thus, use at any time taxes the ability of the maintenance crew, and increases the budget for additional fertilizer, aeration, more wear-resistant grasses and, in many instances, construction of asphalt pathways from green to tee and tee to start of the fairway.

In the southern half of the Western Region, where bermuda is the basic grass for fairways and tees, damage is of lesser magnitude than in the north where bluegrasses, fescues and bentgrasses predominate.

**ALEXANDER M. RADKO, NORTHEASTERN DIRECTOR OF USGA GREEN SECTION, NEW BRUNSWICK, N. J.:**

The heavy and continued use of automotive transportation on golf courses in the Northeast may mean the difference between good and poor playing turf.

Cool-season grasses, such as the bluegrasses, fescues and bentgrasses, which predominate in the Northeast, are in their "danger period" during the hot months of July and August, when electric car-owners would use their cars most.

At some time during that period unwatered cool-season turfgrasses are at the wilting stage; if they are in a state of wilt, the use of many electric cars may mean the difference between turf and no turf.

On watered fairways or just after heavy rainfall, wheel marks and soil compaction will be other factors to consider. Undoubtedly, too, the compaction that would result from the heavy use of automotive transportation on wet soils will result in the loss of some of the permanent grasses.

Soil compaction has been one of our more serious problems on turf areas previous to the innovation of electric cars. What the heavy use of these vehicles will do, only time would tell.

We have all observed the damage to turfgrasses as a result of the use of the small bag-toting caddie carts, especially on areas where players are channeled around greens and tees. Player education is a difficult program to get across to a membership of 300 to 400 golfers. There is no reason to believe that electric car-users will be any easier to educate.

At one course last summer some "legalized vandalism" was observed. The owner played his shot from a trap, hopped into the car, drove through the trap, and went up across the green. Unfortunately, the sand was not soft enough to bury the "beast".

The only use we now see for these cars is by persons who, because of reasons of health (age or physical infirmity), cannot now get around a golf course. We would, however, leave to the superintendent and his green committee the decision as to whether cars should be allowed on the course on any given day.

Of course, there are many other factors to consider—not least among which is the difficult question of rules and regulations governing play among users vs. non-users. In any case we feel that the prime consideration should be the protection of the tremendous country club investment—the golf course and its greenway.

**CHARLES K. HALLOWELL, MID-ATLANTIC DIRECTOR OF USGA GREEN SECTION, BELTSVILLE, MD.:**

The operation of electric carts over fairways is likely to increase soil compaction.

In studies at The Pennsylvania State University, Dr. R. B. Alderfer found evidence indicating that compaction can de-

velop rather rapidly. On a soil subjected to occasional trampling, 11% runoff was measured. After soil had been allowed to dry for 24 hours, it was given a fair amount of compaction by trampling. Runoff again was determined and water loss had increased from 11% to 55%.

A good sandy soil is not insurance against compaction. Employing two soils—one a clay loam and the other a sandy loam—Dr. Alderfer made determinations of non-capillary porosity, runoff and infiltration capacity. There was no appreciable difference between the two soil types—a fact that has been verified many times.

More frequent use of mechanical aerifying equipment to overcome the compacting effect on the soil is the superintendent's solution to the use of electric carts.

B. P. ROBINSON, SOUTHEASTERN DIRECTOR OF USGA GREEN SECTION, TIFTON, GA.:

Only a few clubs apparently have enough carts where there is enough traffic for one to evaluate the damage.

Damage to bermuda and ryegrass turf from automotive transportation has been largely due to continuous traffic on an area and operation on wet turf.

## What Clubs Can Do About Motorized Carts

By DR. MARVIN H. FERGUSON

*Southwestern Director and National Research Coordinator,  
USGA Green Section, College Station, Texas*

Golf course superintendents have cause to be concerned about the damage which motorized carts may inflict. Carts were first used by older golfers and physically handicapped persons who had difficulty in walking. Now they are used by many golfers regardless of physical fitness or ability. Types range from "one-seater" gasoline-powered scooters to small automobiles equipped to carry six passengers.

Nearly everyone agrees that they are capable of doing a great deal of damage to the turf. There is no evidence, however, which would lead one to believe that the use of carts will be diminished, regardless of opposition.

Therefore, the superintendent who tries to keep up with new developments and

Turf producers are faced with a problem which must be solved by education of members, application of knowledge now on hand, and by additional study.

WILLIAM H. BENGUEYFIELD, AGRONOMIST, USGA GREEN SECTION, BELTSVILLE, MD.:

Golf is played on grass. Hard and fast rules cannot be adopted as to when electric carts may or may not damage turf. There are too many variables—weather conditions, soil types, grass types, soil moisture, and the past and the present seasons must be considered. For good turf it is best that such carts be not used at all.

Limited numbers, properly regulated, would cause no concern. Wide acceptance of the carts would be ruinous to the course. Once fairway turf is gone, due to disease, carts, insects or weeds, the use of electric carts would be out of the question for a year or more. Can you visualize a fairway after crabgrass has taken it over during the summer and electric carts during a wet fall?

Proper and considerate use of carts may make them acceptable under certain conditions. The more considerate of the course each operator is, the more carts each golf course could handle without undue damage.

prepare for changes in the demands upon his turf must seek ways to keep good turf despite this new development. Several approaches to the problem seem to offer some promise. Some of these approaches are not altogether under the control of the superintendent. Close cooperation between club members and the superintendent is essential if an answer to damage by buggies is to be found.

### Regulation of Carts

Some clubs have banned certain types of vehicles which have objectionable features, such as narrow tread tires, single-wheel drives, or noisy engines.

The regulations which concern the superintendent primarily are those which pertain to the condition of the course.