

**COMPARITIVE TURF WEAR TESTS
FOR THE SEGWAY-GT AND
A GOLF CART**

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INTRODUCTION

The Segway-GT (Golf Transport) has been available in the USA for approximately 12 months. This machine has recently been introduced to the UK market. As with all wheeled devices used on golf courses it is appropriate to assess any damage that its use may cause. In this case it would be important to compare the Segway with the golf cart, which is commonly used on UK golf courses to transport equipment and players. A simple “look-see” trial was carried out to compare surface damage caused by the two machines.

METHODS

A turf wear test comparing an E-Z-GO Golf cart and a Segway-GT was carried out at the STRI on 23 August 2005. To do this two parallel and largely circular (short straights between bends) routes were set out on a uniform area of fairway-type turf. The Segway and the cart were then driven over their designated routes for equal numbers of passes. In doing this care was taken to ensure that the wheels were driven over the same area of turf on each pass. This was done to concentrate any wear effects. In total 280 passes were made with each form of transport, with the direction being reversed after every 20. Prior to initiating the wear tests a measurement of live grass cover was made using an optical point quadrat. This was repeated after 180 and 280 passes of each machine.

RESULTS SUMMARY

This investigation demonstrated marked differences in turf damage between the Segway GT and a golf cart. The golf cart caused substantially more damage per unit area than the Segway. Further to this the area affected was larger, in the order of two to three times greater, with the golf cart. The damage caused per unit area is summarised graphically in Figure 1. This shows that after 180 passes the golf cart had caused significant damage. At this point in the test there had been no reduction in grass cover in the Segway test area. After 280 passes some reduction in grass cover was noted. However, this was relatively small in comparison with the golf cart. Overall the grass wear recorded on the Segway route after 280 passes was less than that measured after 180 passes with the golf cart. Pictures taken during wear testing are presented in Plates 1 to 3.

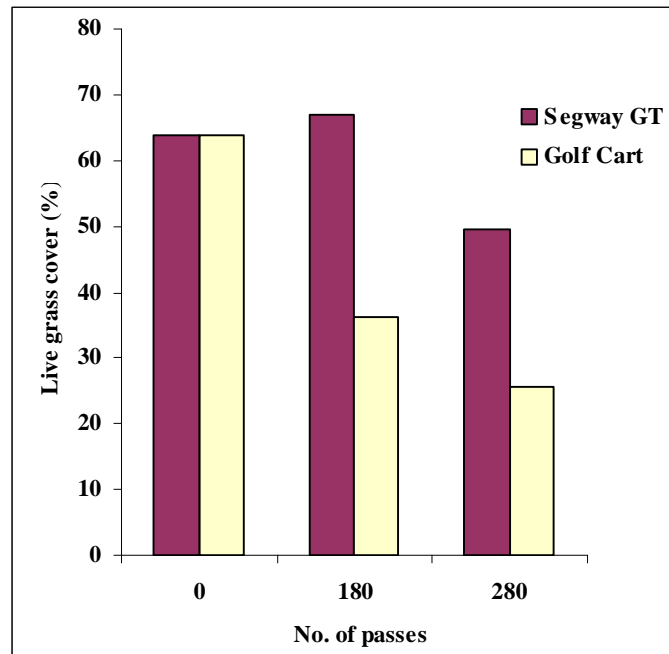


Figure 1

Live grass cover prior to wear and after 180 and 280 passes of both the Segway GT and the Golf Cart

CONCLUSION

The Segway-GT could help to reduce wear on golf courses where golf carts are commonly used. In the comparative test conducted more surface damage, spread over a larger area, was caused by a standard golf cart. Further to this the Segway-GT would appear to have some other advantages. Once the operator was proficient in its use the Segway was more manoeuvrable than a golf cart and able to fit between much smaller gaps. The risk of damaging chemicals leaking on the course would also be reduced where this form of transport was used as an alternative to petrol engine golf carts. Another noticeable difference between the cart and the Segway was the noise levels, which were lower from the Segway. Given that the Segway is a single person vehicle there may also be benefits in terms of speeding play in comparison with a two man cart. For the Segway each player would go directly their own balls and not to both.



Plate 1

Wear in progress using the Segway GT. Note: wear caused by the golf cart is visible to the right hand side



Plate 2

Comparison of turf condition following 180 passes of wear. The Segway GT and the golf cart are parked on their respective tracks



Plate 3

Comparison of turf condition following 280 passes of wear (two views from different areas of the test routes). The Segway GT and the golf cart are parked on their respective tracks

QUALITY STATEMENT

I confirm that this report is a true representation of the original data collected and that the Standard Operating Procedures referred to in the STRI Manual of Standard Operating Procedures, and those relevant to data collection, data preparation, archiving of data and preparation of reports have been implemented in full.

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