

The PGA Tour sponsored green speed programs study
Thomas A. Nikolai, Trevor Thorp, Colin Johnson, and Joe DeVitto

In an effort to find the safest methods to meet golfers request for fast green speeds, yet maintain healthy turfgrass, the PGA Tour is sponsoring the following study. An objective is to begin to define areas of “diminishing returns” in regard to green speed. Webster’s defines Diminishing Returns as, “the proportionately smaller increase in productivity observed after a certain point in the increase of capital, labor, etc.” Thus, in regards to green speed diminishing returns would be any decrease in nitrogen or mowing height that does not result in a noticeable increase in green speed (i.e. 6-inches or less) but does have a negative impact on turfgrass health.

This study is designed to address the law of diminishing returns in regards to mowing height and frequency while assessing agronomic health. Treatments included in the study are:

- 1) Mowed daily at 0.156-inch
- 2) Mowed daily at 0.125-inch
- 3) Mowed daily at 0.094-inch
- 4) Mowed daily at 0.063-inch
- 5) Double-cut daily at 0.156-inch
- 6) Double-cut daily at 0.125-inch
- 7) Double-cut daily at 0.094-inch
- 8) Double-cut daily at 0.063-inch
- 9) Alternate rolling and mowing 0.125
- 10) Roll daily on plots maintained at 0.156 HOC
- 11) Roll every other day and Spike once per week 0.125
- 12) Roll every other day at 0.125-cutting height

Data collection from the plots include:

- Green speed measurements
- Color and quality ratings
- Pest (disease, insect, weed, moss, etc.) counts (when applicable)
- Surface hardness measurements
- Root weights (collected in August) from 0-3 and 3-6 inch depths
- In situ water infiltration measurements (August or September)

Additionally, for a one-month period traffic has been applied to an area on each plot utilizing a methodology that takes into account the fact that superintendents move the cup daily. Traffic is applied by an individual wearing golf shoes.

You are cordially invited to come and see the plots for yourself and feel good that some of these research greens are deadier than any other greens in the country.