Response of Bentgrass Roots to an Organic Plant Growth Stimulant. (C05-skipper205148-Poster)

Authors:

- A.J.LaBranche - *Clemson University*
- H.D.Skipper - *Clemson University*
- C.E.Wells - *Clemson University*
- L.B.McCarty - *Clemson University*
- J.E.Toler - *Clemson University*

Abstract:

Our objective was to determine if an organic plant growth stimulant (OPGS) comprised of humate and seaweed positively impacts the root biomass of bentgrass (Agrostis palustris) in a golf course nursery. The two treatment factors, fertilizer and OPGS, were evaluated in a split-plot design with whole plots arranged in three randomized complete blocks. The three fertilizer levels were applied to whole plots. Granular and four foliar OPGS levels were randomly assigned to subplots. Two golf courses were utilized in this research; one had a history of OPGS applications. Root samples were taken monthly and analyzed with WinRhizo computer software to determine root length and surface area. Preliminary data indicated no statistical differences in root length or surface area at the 5% level among treatments at the golf course with history applications. Differences were detected in the non-history course. For the non-history course, the half strength fertilizer rates across OPGS resulted in 83% longer roots and 81% more surface area than the full strength. Results are promising for fertilizer rates to be lowered when used with OPGS, potentially reducing environmental impacts while maintaining turf health and appearance.

Corresponding Author Information:

Horace Skipper
Clemson University
Box 340359
Clemson, SC 29634-0359

phone: 864-656-3525
fax: 864-656-3443
e-mail: Skipper@Clemson.Edu

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