Organic Matter Content and Water Repellency of Amended Sand Mixtures from Field Grown Bentgrass Putting Greens. (C05-waltz073218-Poster)

Authors:

- F.C.Waltz, Jr.* - *University of Georgia*
- L.B.McCarty - *Clemson University*
- V.L.Quisenberry - *Clemson University*

Abstract:

Many golf course putting greens and athletic fields have been constructed on high sand rootzone media. For moisture and nutrient retention, the sand is usually amended with small amounts of various materials. A field study evaluated the efficacy of sand amended with peat and two inorganic products. Water repellency of field samples was determined with water drop penetration time (WDPT) test for each rootzone mixture along three depths (soil surface to 10 cm, 10 to 20 cm, and 20 to 30 cm) and four sampling dates. Some degree of water repellency was measured in all rootzone mixtures at all depths and sampling dates. In the upper depth where the greatest amount of turfgrass growth occurred, all soils were strongly water repellent (> 600 s). At the lower depths, both of the inorganic soil amended mixtures were wettable (WDPT < 5 s). Initial water content was shown to influence WDPT. The trend was for the WDPT to increase as water content decreased, while WDPT decreased as organic matter decreased with depth. Research involving water repellency issues and inorganic soil amendments is limited, but these data demonstrate an affect of the materials on rootzone mixtures.

Corresponding Author Information:

Freddie C. Waltz, Jr.
University of Georgia
CSS - Redding Bld., 1109 Experiment St.
Griffin, GA 30223-1797

phone: (770) 228-7300
fax: (770) 412-4774
e-mail: CWaltz@UGA.edu

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