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Evaluating turfgrass performance after surfactant application in a wettable and a non-wettable soil.

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On golf courses, surfactants are commonly used to treat localized dry spots caused by soil water repellency. It has been proposed that surfactants on wettable soils may increase soil moisture content above acceptable ranges. The objective of this study was to evaluate the soil surfactant Revolution® (190 ml/100 m^2) on a non-wettable and wettable soils in 2003 and 2004, respectively. Treatment effects on turf color, quality, leaf chlorophyll, soil volumetric water content and water drop penetration times were measured. Data were analyzed for statistical significance (P less than 0.05) by ANOVA procedures. Surfactant application to a non-wettable sandy loam (2003) did not increase soil volumetric water content, nor negatively effect any other parameter evaluated. Surfactant application did significantly lower water drop penetration times at various depths and sample dates in the soil profile. Based on preliminary 2004 results, the surfactant treatment to a wettable clay did not increase volumetric water content nor have an effect on turf quality, color, and leaf chlorophyll. However, surfactant treatment did lower water repellency when compared to the control. Results suggest that the use of Revolution® soil surfactant on wettable and non-wettable soils does not increase volumetric water content outside acceptable ranges.