Field Criteria for Rating Soil Water Repellency. (S07-taskey202608-Poster)

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Abstract:

Standard criteria for evaluating soil water repellency are lacking for many applications, including burned area assessments and soil survey. Usually, soils are considered hydrophobic if the wetting angle is steep and the water drop penetration time (WDPT) exceeds 5 sec. Observations suggest that coarse textured soils should be judged water repellent if the WDPT exceeds 0.5 sec. because a longer delay can cause overland flow sufficient to detach and transport unprotected particles. This paper proposes functional criteria, field evaluation procedures, and interpretive consequences for five water repellency classes that are based on soil behavioral characteristics.

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