

ASA, CSSA, and SSSA 2010 International Annual Meetings

Oct. 31-Nov. 3 | Long Beach, CA

Green Revolution 2.0: Food+Energy and Environmental Security

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Success!

- The 2010 Annual Meetings, "Green Revolution 2.0: Food + Energy and Environmental Security," was a success. Thank you to all of the attendees, exhibitors, sponsors, donors, vendors, and volunteers.
- Save the date for next year: Oct. 16-19, 2011, San Antonio, TX.

News

- 2011 [ASA program enhancement request form](#)
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American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America will host 3,000 scientists, professionals, educators, and students to the 2010 International Annual Meetings, Oct. 31-Nov. 3 in Long Beach, CA.

[Dates & Deadlines](#)

Nov 2 [ASA Awards Program & Plenary Address](#)

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ASA, CSSA, and SSSA 2010 International Annual Meetings

Oct. 31-Nov. 4 | Long Beach, CA



Green Revolution 2.0: Food+Energy and Environmental Security

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301-3 Modeling the Influence of Water Content and Bulk Density on Soil Penetration Resistance.

See more from this Division: S01 Soil Physics

See more from this Session: Innovation: Novel Measurement Methods: II

Wednesday, November 3, 2010

Long Beach Convention Center, Exhibit Hall BC, Lower Level

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A cone penetrometer is a simple and inexpensive device for rapid assessment of soil strength based on penetration resistance or cone index. The soil penetration resistance (PR) is an important soil property. It correlates with crop growth and yield potential and is a useful tool to evaluate the impact of tillage operations. The soil PR is directly correlated to bulk density (BD) and exhibits an inverse relationship to soil water content (WC) or matric potential. In addition, soil parameters such as texture, organic matter content and mineralogy affect soil PR readings. The objective of the presented study is to provide a better understanding of the effects of WC and BD of differently textured soils on PR readings in the field. To capture a wide range of conditions, PR, WC and BD were measured for 5 field soils during dry and wet seasons. Obtained data were evaluated with standard empirical models and a new general relationship was proposed with PR expressed as a power function of the degree of saturation and normalized bulk density.

See more from this Division: S01 Soil Physics

See more from this Session: Innovation: Novel Measurement Methods: II

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