Solid Earth Discuss., 6, C257–C258, 2014
www.solid-earth-discuss.net/6/C257/2014/

Solid Earth
Discussions
Open Access

Interactive comment on "Biochar increases plant available water in a sandy soil under an aerobic rice cropping system" *by* M. T. de Melo Carvalho et al.

F. Pan

feifei.pan@unt.edu

Received and published: 13 April 2014

I enjoy reading this manuscript. I think this paper is well written and will add new knowledge to the impact of biochar rate on plant available water in soils. The only concern I have with this manuscript is that several soil moisture states were defined in a different way compared with the commonly used definition. In the manuscript the residual soil moisture is defined as the soil water content as the matric potential is greater than -1500kPa (page 894). According to Donahue et al. (1983), residual soil moisture content usually is at -3100 kPa and -1500 kPa matric potential is associated with the permanent wilting point. Secondly, plant available water is often defined as

the difference between the field capacity and the permanent wilting point, and the field capacity is the soil moisture at the matric potential of -340kPa. However in the paper, the authors defined the plant available water as θ6-θ1500 (page 896). I recommend the authors to use the commonly used soil moisture states and redo their analysis.

Interactive comment on Solid Earth Discuss., 6, 887, 2014.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper