

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.

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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

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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 $\theta_6-\theta_{1500}$ (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.

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