

Interactive comment on "Qualitative soil moisture assessment in semi-arid Africa: the role of experience and training on inter-rater reliability" by M. Rinderer et al.

Anonymous Referee #1

Received and published: 14 April 2015

General Comments This is an interesting paper that examines the ability of farmers/students/experts in carrying out a qualitative test for soil moisture. Although the sample is small, the results are encouraging particularly when training is provided. The potential of this approach for soil moisture assessments is clearly acknowledged at the end of the paper, i.e. upscaling and data transmission via SMS. Overall the paper makes a good contribution to the literature.

Specific Comments 1. Some reference to the literature on citizen science and more recent attempts at involving students in collecting soil related information should be added, e.g. the OPAL initiative, GLOBE, etc. 2. What is the source of soil information

C1015

in the pilot area? Existing soil maps? A survey undertaken by the authors? 3. What is the soil classification system used, e.g. WRB 2006, WRB 2014 as the combination of Haplic Andosol, loamic, fluvic does not conform to any combination of Reference Soil Group or Qualifiers in these systems. Please explain. 4. Soil moisture and volumetric content of water in the soil are closely related to soil texture. What is the range of soil textures in the plots? 5. Please clarify how you mapped the measured volumetric content of water to your soil moisture classes, e.g. did you use the median of the estimate soil moisture classes to do the assignment? 6. More detail should be added to the description of your wetness classification scheme. Although you refer to a previous paper, you also refer to a modification and this should be explained here in more detail. 7. The soil moisture of the uppermost layer is not representative of the whole soil profile. How do you know these samples were at equilibrium? Think about replacing the outdated reference of 1927 to something more recent. 8. Add a reference to the Mann-Whitney test and Bonferroni significance. 9. Although the test appears to be visual, it also involves removing some of the top soil. If this is being done multiple times by the farmers/experts/students, does this not affect the result due to disturbance?

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 12, 3029, 2015.