

Interactive comment on “Modelling field scale water partitioning using on-site observations in sub-Saharan rainfed agriculture” by H. Makurira et al.

D. Hughes (Referee)

d.hughes@ru.ac.za

Received and published: 25 August 2009

The paper is well written and addresses an important issue that is both scientific and practical.

From a scientific point of view there are clearly a number of uncertainties associated with the components of the water balance equation and these have not been addressed directly by the authors. While the paper provides information on how the components were quantified, it is not always clear how some of the values for parameters and coefficients were derived for the different experimental sites. For example, the estimate

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



of deep percolation is quite important and yet seems to be difficult to obtain. How is KR estimated. I suppose my real question is therefore how the uncertainties in these estimates would affect the results? Perhaps the authors can consider how they might address this issue in the final version of the paper. I suspect that the results would not change, but it may be interesting to have more information about the uncertainty in relation to the future application of the approach under different circumstances (slopes, climate, soil types, etc.).

From a presentation point of view, I found very few errors that need to be corrected: Page 5539, line 28: '..use of drought resistant seed varieties and adoption of..' Page 5540, line 28: '..water partitioning at the field scale..' Page 5543, line 5: '..within the same field, but upstream..' Page 5549, line 3: I assume this is supposed to refer to Fig. 4 and not Fig. 3.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 5537, 2009.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

