

Interactive comment on “Using an inverse modelling approach to evaluate the water retention in a simple water harvesting technique” by K. Verbist et al.

Anonymous Referee #2

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This paper is interesting to be discussed, since field measurements and simulation of such water harvesting technique are rare. I also realized that the modeling part of rainfall-runoff to ponding in Hydrus is limited to reflect the reality. Nevertheless, some remarks below need to be considered as well.

The age of the infiltration trench should be explained. If the measurements were conducted directly after the construction, it would be different to the trenches which are already developed after 1 and more rainfall events due sedimentation at the bottom of the trench. This condition will then affect the long term run.

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Page 4274, line 20-21: This explains the water level is assigned as variable head. However, how were the direct rainfall into the trench and the runoff that already infiltrated before the filling up assigned in the model?

Page 4282, line 21-26: The calculation seems not clear. 56% turns into runoff, but 0.09 m³ captured by the trench?

Page 4284, line 21: I would prefer to consider this statement since the water levels in the infiltration trenches should still be used as a calibration parameter, due to the fact that the response of the water levels determine the dominant input to the subsurface.

Page 4305, figure 10: The most fluctuated data are seen on point 11-17, but the missing points are 12 and 14. Could these points be included in this graph since both are quite affected by the infiltration? And from fig. 2, the depth of point 1 and 7 should more or less the same. However, please explain why the peak of the simulated line are slightly different.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 4265, 2009.

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