

Interactive
Comment

Interactive comment on “Coffee husk mulch on soil erosion and runoff: experiences under rainfall simulation experiment” by H. Moreno-Ramón et al.

Anonymous Referee #5

Received and published: 8 June 2014

The study investigates the efficiency of coffee husk mulch as soil protector against soil erosion. It provides important findings and is within the scope of the journal. In my opinion the paper should be published. Nevertheless, it has some inaccuracies: especially, the methods as well as the results and discussion are not always clearly and thoroughly described. Nearly all inaccuracies are already described by the anonymous reviewers I-IV. I fully shared their statements and suggested improvements. I therefore suggest resubmitting the paper after major revisions.

In addition to Reviewers I-IV I have some further comments and questions:

-The title is incomplete: Perhaps “Influence of” is missing before “coffee husk mulch. . .”

Material and methods:

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- Page 1130; Line 25: 4x3x2 in the brackets of the first sentence is superfluous and confuses the reader. It is also redundant to the explaining some sentences later.

The rainfall simulation procedure: - Authors use a very high intensity over an unusual duration (21 min.). Perhaps this is due to the design of the rainfall simulator: Does the capacity of the water tank (25L) allow a limited duration of 21 min only? Please explain that in the manuscript. - Did you have emptied the whole tank without refilling it continuously during the experiments? Did you take into account that a decreasing water level decreases the water pressure and consequently influences the rainfall characteristics (intensity, drop diameter and kinetic energy of drops decrease over time)? Have you calibrated the rainfall intensity before, during and/or after the experiments? Did you have measure the intensity on the plot area or on the entire (larger) area under the capillaries? Please explain in detail and check again if the rainfall intensity on the plot is presented correctly!

- Page 1133; Line 16: Did you dry the samples? Please describe the data collection more precisely.

Results and discussion Because they concern to each other, “infiltration rate” and “runoff” should be presented in one chapter. It is difficult to comprehend the results in presented form. Especially runoff and infiltration results should be presented in greater detail. Maybe all measured raw data could be provided in a table. At least runoff (in litre), infiltration (in litre) and runoff coefficient (in percent) are required as additional information in table 2.

Conclusion The conclusion should provide some statements about further research tasks (for example: long-term erosion experiments/studies with monitoring the influence of coffee husk on soil characteristics and soil quality, composting rate of coffee husk...)

Interactive comment on Solid Earth Discuss., 6, 1127, 2014.

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