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Discussions

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

Anonymous Referee #2

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This study investigates the effect of adding coffee husk on runoff and soil erosion, in addition to the effect of soil crusts. It is within the scope of the journal and the results obtained are interesting. It combines, in one process, the solution to two environmental problems (soil erosion and coffee husk management). However, to be considered for publication, the manuscript needs a deep review.

Main comments:

1. The only conclusion is that mulch reduces erosion and runoff. I think that more can be obtained from the results showed here. Clear objectives in the introduction, and conclusions linked to them, should be provided, trying to emphasise the more relevant outputs.

2. The discussion is not really a discussion. At the end of each section, the authors give some values found in the literature to prove that their measurements are in the same range, but they rarely give explanations to their findings. A clear example of what I mean can be found in the section 3.4: "Sediment concentration". From P1136 L25 to P1137 L1 the authors say that "the presence or absence of the crust did not signiïňAcantly aïňÃect the sediment concentration". I think that this would deserve some discussion. Instead, they only give some values of sediment concentration at the end of the section. This example is applicable to the full manuscript.

3. The quality of the redaction is poor, with abundant mistakes in the construction of the sentences that difficult the reading and thus the understanding of the paper. I really encourage to the authors the edition of the manuscript by an English speaker. I will not give a list of missing words or sentences that should be rewritten because I think that the authors should go through the whole manuscript.

Specific comments:

P1128 L16 - P1130 L22: Introduction. The number of references seems rather excessive to me. For example, I do not think that the statement "Soil losses by water erosion occur by the detachment and transport of soil particles during the rainfall and runoïňÃ processes" (P1128 L23) needs four references. In addition, the order of the information provided and the separation in paragraphs should be checked.

P1130 L20: Clear objectives should be established at the end of the introduction.

P1131 L6: Please specify the units of measurements of the variables.

P1131 L14: More precise information of the soil preparation should be given. I miss some information about the sampling process: soil management, sampling depth, degree of soil mixing. . .

P1131 L13 – L28: Methodology for each soil property is explained and then the results are given in the same section. A decision must be taken. If the values of the soil

properties contribute significantly to the discussion, they should be given in the Result and Discussion section. On the contrary, if they are considered only as supporting information, they can remain in the Material and Method section, but it is not necessary to explain the methodology. In addition, it is not necessary to repeat in the text what is given in a table. Only the most important values should be highlighted.

P1132 L6 – L23: The Material and Methods section should be clear enough to allow reproducibility. How the buried coffee husk is incorporated to soil? I guess that is done before the crust creation. Could this time gap in mulch incorporation between the B and S treatment in crusted soils influence the results?

P1133 L12 – L18: This paragraph should be rewritten to provide a clearer explanation.

P1133 L20: Check the position of the brackets.

P1134 L27: To implement an ANOVA, homoscedasticity has to be checked. If data do not meet this condition, transformation or non-parametric test should be applied.

P1134 L7- L8: The repetition of results given in a table should be avoided. Only the most important ones need to be highlighted. This can be applied to the whole Result and Discussion section.

P1134 L9: 1.2 should be changed to 3.5 (2.20 / 0.62).

P1135 L6 – L11: Please avoid redundancies. This paragraph could be summarised in one sentence.

P1135 L17 – L20: Again I miss some discussion here. This is the kind of sentences that should be supported with reference and in-deep discussed.

P1136 L17: "Superïňǎcial treatments exhibited the same trend as Buried". This is not true according to Table 2.

P1136 L25 – L27: This sentence is not clear. Does it mean that B mitigates the effect of WC?

P1138 L4 – L5: According to Table 3, Soil Class did not affect sediment concentration.

Figures 2 and 4: I am not sure about the need of representing the "soil class" factor. It can be checked in Table 3 that neither the factor itself nor its interactions significantly affected any variable. Removing this factor from the figures would make the paper more understandable, removing some noise around, in my opinion, the most important outputs of the study: the effect of mulch and crusts.

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