

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

Anonymous Referee #3

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General Comment: The theme studied (efficacy of mulch on runoff and erosion) is not novel. The authors present data obtained from simulated rainfalls on trays with soil. The experimental design poses the following treatments: C treatment: soil without the addition of coffee husk (with and without crust), 2) S treatment: soil with coffee husk applied on surface (with or without crust) and 3) B treatment B: soil with coffee husks buried (with and without crust). With the experimental design presented by the authors only is possible compare treatments C with S, and C with B, for analyzing the effect of the presence or absence of crust. S and B treatments cannot be compared and attribute the results to the way that the residue was applied (surface or buried), since the dose of coffee husks used in the buried treatment is more than double that in the treatment with surface residue. The report would benefit from rewritten, but eliminating comparisons between treatments S and B. The manuscript contains valuable and interesting data

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that deserve to be published after making a mayor correction.

Specific comments: Below I have included several comments that might improve final version of this manuscript for publication: Page 1130, lines 12-13: “. . . in studies about water and erosion soil variables.” – English review Page 1131, lines 14-15: What physical and hydrological properties?. Do the authors refer to determinations of porosity and bulk density (e.g.) or other determinations? Page 1131, line 21: It is not clear methodology for determining the stability of the aggregates. What was the moisture content (pF = 1, for example)?. Page 1132, line 9: “by” → but Page 1132, line 11-12: Did you use different dose in S and B treatments?. The results are not comparable. The aim should not be get same ground cover in S and B treatments, but that the residue dose used is the same. Page 1132, line 13: Why this depth?. What kind of tillage attempts to simulate?. Page 1132, lines 18-20: Which is the organic matter content of the residue?. Authors do not give basic information on the waste that they apply. Page 1132, lines 19-20: The objective should be to provide equal dose of residue, not equal surface protection. Page 1135, lines 3-4: Why do you say that agricultural lands are less variable than forest lands? Page 1135, line 9: If the difference is not significant, authors can not claim that exists. Page 1135, line 12-13: Table 2 does not show these differences. Page 1135, lines 21-22: only there is differences if are statistically significant. Page 1136, lines 21-22: The B treatment had double doses waste that S treatment. Possibly, this has had a decisive influence on the results, rather than the situation of the residue (surface or buried). Page 1136, lines 26-27: Where are these values runoff?. Not listed on any table. Page 1137, lines 6-7: Where are the data to support this assertion?. Page 1137, lines 8-11: Where are the data to support this assertion?. Page 1138, lines 8-9: English review. Where are the data to support this assertion? Page 1138, line 17: The crust does not break with the rain. Page 1138, line 27: “straw wheat” → wheat straw. Page 1139, lines 5-6: these treatments are not comparable, since they have been used very different doses of residue in each. Page 1139, line 15: “other soil covers” → others soil covers Page 1139, line 15: “. . . aerial seeding” — Aerial seeding?. Sow what? Page 1139, lines

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15-16: “mulch cover and seeds” – What seeds? Page 1139, line 19: The difference is due not only to the presence of crust. Besides crusting, also influences the different doses applied of coffee husk. Page 1139, line 25: What wanted to say with soil lower quality?. Page 1140, lines 3-5: The clay fraction induces pore formation smaller than the silt fraction. However, is not more erodible. The reason is the low stability of the aggregates when the silt fraction is high.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/6/C503/2014/sed-6-C503-2014-supplement.pdf>

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