

Interactive comment on “Scale effect on runoff and soil loss control using rice straw mulch under laboratory conditions” by S. H. R. Sadeghi et al.

Anonymous Referee #1

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Introduction The authors give a moderate vision of the state of the art, there are many studies about this topic that are not reflected in this apart, in fact there are many references about it in the bibliography, that are not cited in text. Material and Methods Please explain better this apart, some questions are not very clear. How many plots do you have per treatment? Do you use the same plots for control and after the first rains, replace with new soil and put the treatment? Please explain the reason to choose the size of plots. Are these sizes representatives of a model? Field conditions? Why do you chose 0.25 m² it is really small? Could you provide the kinetic energy of rain? 90 mm h⁻¹ is really strong rain. Could you give some climatic characteristics of the area of soil study? Could you provide some characteristic of the soil: complete texture, OM, EC, pH, Aggregate Stability? The statistics are not enough, in my opinion other test as Tukey or ANOVA should be done to compare the differences between treatments, also

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SD must be given with the data.

Results In my opinion this apart should be merge with discussion because the authors do not describe the results just indicate how to find it, so please, merge both apart and comment and discuss the data. The following references are not cited in text: Cerdà, A., Giménez-Morera, A., and Bodí, M. B.: Soil and water losses from new citrus orchards growing on sloped soils in the western Mediterranean basin, *Earth Surf. Proc. Land.*, 34, 20 1822–1830, 2009. Cerdà, A., Hooke, J., Romero-Diaz, A., Montanarella, L., and Lavee, H.: Soil erosion on Mediterranean type-ecosystems, *Land Degrad. Dev.*, 21, 71–74, doi:10.1002/ldr.968, 2010. García-Moreno, J., Gordillo-Rivero, A., Zavala, L. M., Jordán, A., and Pereira, P.: Mulch application in fruit orchards increases the persistence of soil water repellency during a 15-years 15 period, *Soil Till. Res.*, 130, 62–68, 2013. García-Orenes, F., Cerdà, A., Mataix-Solera, J., Guerrero, C., Bodí, M. B., Arcenegui, V., Zornoza, R., and Sempere, J. G.: Effects of agricultural management on surface soil properties and soil-water losses in eastern Spain, *Soil Till. Res.*, 106, 117–123, 2009. García-Orenes, F., Guerrero, C., Roldán, A., Mataix-Solera, J., Cerdà, A., Campoy, M., 20 Zornoza, R., Bárcenas, G., and Caravaca, F.: Soil microbial biomass and activity under different agricultural management systems in a semiarid Mediterranean agroecosystem, *Soil Till. Res.*, 109, 110–115, 2010. García-Orenes, F., Roldán, A., Mataix-Solera, J., Cerdà, A., Campoy, M., Arcenegui, V., and Caravaca, F.: Soil structural stability and erosion rates influenced by agricultural management 25 practices in a semi-arid Mediterranean agro-ecosystem, *Soil Use Manage.*, 28, 571–579, 2012. Gholami, L., Sadeghi, S. H. R., and Homaei, M.: Straw mulching effect on splash erosion, runoff and sediment yield from eroded plots, *Soil Sci. Soc. Am. J.*, 77, 268–278, 2013. Giménez Morera, A., Ruiz Sinoga, J. D., Cerdà, A.: The impact of cotton geotextiles on soil and 30 water losses in Mediterranean rainfed agricultural land, *Land Degrad. Dev.*, 210–217, 2010. The English must be deeply revised.

Interactive comment on Solid Earth Discuss., 6, 2915, 2014.

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