

Interactive comment on “Climate and soil factors influencing seedling recruitment of plant species used for dryland restoration” by M. Muñoz-Rojas et al.

Anonymous Referee #2

Received and published: 9 May 2016

This is an interesting and timely study into factors affecting seedling emergence during restoration of degraded sites in dryland conditions. Overall the experiment and write-up was well-done. I have a few minor comments and suggestions:

Line 61 – I suggest citing Thomas et al., 2015 in addition to the Audet and Muñoz-Rojas citations.

Line 70 – I suggest citing Thomas et al., 2015 in addition to the Machado and Muñoz-Rojas citations.

Line 85 – The 2014 IPCC report is now available, why cite the out of date report?

Lines 185-186 – What are Figs S1 and S2? These were not a part of the file sent to

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me. If they are figures meant to be part of a supplement, I suggest incorporating them into the manuscript instead if at all possible/reasonable.

Lines 226-228 – It states here that changes in temperature did not affect seedling emergence. Then it says these results are consistent with similar studies. Then Lewandrowsk (2016) is cited, and it is stated that seedling emergence decreased with increasing temperature in that study. This finding is not consistent with the finding of this study. This section should be reworded/reconsidered as needed.

Lines 246-248 – Here the idea that seedling emergence took slightly longer under higher temperatures is discussed. Then, in the lead-in to the Cochrane et al. (2015) study discussion, the authors begin with “However”. Leading with “however” tells the reader you are about to present something that is somehow different than what you have been saying to that point. The Cochrane et al. (2015) study is in agreement with this study. Therefore, the “however” in Line 247 should be removed.

Line 282 – “deeper soil layers” would be more appropriate than “deeper soil profiles”. The profile is the soil cross section from top to bottom, and it has layers. We don’t have shallow and deep profiles, at any given site we have the soil profile, but we do have shallow and deep layers within a profile.

Line 310 – In addition to the Cortina and Valdecantos references, I suggest citing Lozano-García et al., 2011, and Keesstra et al., 2016 (would become 2016b in this paper).

Line 313 – I think “plat” should be “plant”.

Figures 2 and 3 are not called for in the manuscript. A call needs to be added or they need to be deleted.

References Keesstra, S., Pereira, P., Novara, A., Brevik, E.C., Azorin-Molina, C., Parras-Alcántara, L., Jordán, A., Cerdà, A., 2016. Effects of soil management techniques on soil water erosion in apricot orchards. *Science of the Total Environment*

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551–552, 357–366.

Lozano-García, B., Parras-Alcántara, L., Del Toro, M., 2011. The effects of agricultural management with oil mill by-products on surface soil properties, runoff and soil losses in southern Spain. *Catena* 85, 187-193.

Thomas, C., Sexstone, A., Skousen, J., 2015. Soil biochemical properties in brown and gray mine soils with and without hydroseeding. *SOIL* 1, 621-629. doi:10.5194/soil-1-621-2015

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