

## ***Interactive comment on “Effects of land use changes and conservation measures on land degradation under a Mediterranean climate” by Y. Mohawesh et al.***

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Review of Mohawesh et al: Effects of land use changes and conservation measures on land degradation under a Mediterranean climate D. Prinz (Referee) prof.prinz@t-online.de The paper represents a very valuable contribution to the impact of land use changes and stone wall constructions on soil conditions under Mediterranean climatic conditions. I agree fully to the comments of my colleagues T. Brewer and S.D. Keesstra and I don't want to repeat their recommendations and amending notes. I just want to add some notes, which might be considered for a revision of the manuscript to make it even more valuable: 1. The chosen title is on my opinion attractive, but not to the

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point. The paper does not deal with conservation measures (plural), but with one single measure only, the construction of stone walls. Other conservation measures are mentioned, but are not part of the research work. Further-on, the study presents interesting results regarding the external impact on soil properties, but not on 'land degradation' in general. The latter term is definitely broader than just covering the two parameters 'SOC' and 'AH' and these parameters indicate more positive than negative changes of soil properties, i.e. more 'improvement' than 'degradation'. 2. In spite of the fact that the selected watershed shows more than 1275 m difference in elevation, figures on inclination for the various land use categories are missing, but would have been helpful in interpreting the results obtained. The same applies to the total soil depth. 3. I missed also some information on the soil sampling technique, particularly the sampling depths and the distance from the stone walls, where soil samples were taken. 4. Finally, what can we learn from this apparently well planned study? A higher OM value is normally associated to a higher water holding capacity, but plowing between rows of orchard trees (i.e. deepening AH) often reduces the yield as the trees' root system is damaged. Are there any indications, that the mentioned land use changes affect the yield of annual or tree crops? Further-on, Jordan is already (and will be even more in future) affected by climate change. Any lesson to learn from this study in this respect?

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