

## ***Interactive comment on “Effects of extreme drought on agriculture soil and sustainability of different drought soil” by S. M. Geng et al.***

**S. M. Geng et al.**

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Dear Editor and Reviewers,

Thanks very much for your useful comments and suggestions on our manuscript. We have discussed and modified the manuscript accordingly, and detailed corrections are listed below.

Anonymous Referee #2

1. First, the quality of the language needs a major improvement. This manuscript needs to be edited by a native English speaker or by any of the commercial companies that offer this service.

C178

√Answer: We have revised the whole manuscript carefully and tried to avoid any grammar or syntax error.

2. Second, the manuscript ignores a large body of literature on this subject in which the conceptual basis for the observed patterns are lay out. I recommend the authors to read and cite the work of Skopp et al. (1990), Manzoni et al. (2011), Davidson et al. (2012), Moyano et al. (2012, 2013).

√Answer: We had added the work of Davidson et al. (2012), Moyano et al. (2012, 2013) and Manzoni et al. (2011).

References

Davidson, E. A., Samanta, S., Caramori, S. S. and Savage, K.: The dual Arrhenius and Michaelis-Menten kinetics model for decomposition of soil organic matter at hourly to seasonal timescales, *Global Change Biology*, 18, 371–384, 2012.

Manzoni, S., Schimel, J.P., and Porporato, A.: Responses of soil microbial communities to water stress: results from a meta-analysis, *Ecology*, 93, 930–938, 2011.

Moyano, F.E., Vasilyeva, N., Bouckaert, L., Cook, J., Craine, J., Curiel-Yuste, J., Don, A., Epron, D., Formanek, P., Franzluebbers, A., Illstedt, U., Kätterer, T., Orchard, V., Reichstein, M., Rey, A., Ruamps, L., Subke, J.A., Thomsen, I. K. and Chenu, C., The moisture response of soil heterotrophic respiration: interaction with soil properties, *Biogeosciences*, 9, 1173–1182, 2012.

Moyano, F.E., Manzoni, S., and Chenu, C., Responses of soil heterotrophic respiration to moisture availability: An exploration of processes and models, *Soil Biology and Biochemistry*, 59, 72 – 85, 2013.

3. Third, the authors must give additional details about the experimental design and the level of replication in their experiment.

√Answer: We had three replications throughout the experiment. We just drew the

C179

mean of the three replications. This time, we added error bar (standard deviations of three replicates) in the figs 1, 3 and 4. We also added some details in the experimental design.

Please also note the supplement to this comment:

<http://www.hydrol-earth-syst-sci-discuss.net/11/C178/2014/hessd-11-C178-2014-supplement.pdf>

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