

***Interactive comment on “Differential long-term effects of climate change and management on stocks and distribution of soil organic carbon in productive grasslands” by A. M. G. De Bruijn et al.***

**Anonymous Referee #2**

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The present manuscript describes a model, developed for cut grasslands in Switzerland in order to follow soil organic carbon (SOC) dynamics under future climate change scenarios by taking soil depth and organic fertiliser into account. The model comprises 4 compartments and was initialised, calibrated and evaluated with data of 9yrs measurements of an extensively and intensively cut and fertilised temporary grassland. I have the pleasure to read again through the manuscript after revisions. With satisfaction I can see that all comments have been taken into account, which much improved readability and clarity of the manuscript. The paper shows nicely the impact of climate change on SOC dynamics in different soil depths, as well as the importance of previous land use and biomass senescence rates on C sequestration potentials. The paper is

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interesting and well written and I recommend to accept for publication.

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