

## **Reply to Comments**

**We thank both the reviewer and the topic editor for their positive reception of the revised manuscript, and detail our additional corrections below following reviewer #2's suggestions:**

### **Anonymous Referee #2**

I appreciate the effort the authors have put into editing the manuscript according to reviewer suggestions, and believe it to be significantly improved. I have only two minor comments:

Please provide a reference for the suggested realistic inputs in forests, lines 215-218.

**The following reference has been added (cited at line 217 and line 218): Mao, Z., Derrien, D., Didion, M., Liski, J., Eglin, T., Nicolas, M., Jonard, M., Saint-André, L. (2019). Modeling soil organic carbon dynamics in temperate forests with Yasso07. *Biogeosciences*, 16(9), 1955-1973. <https://doi.org/10.5194/bg-16-1955-2019>**

It remains unclear as to how the authors got from estimates of inputs to the values chosen for scenario 3 (line 212), especially for grasslands and croplands. Some of this is mentioned later on, but it would be helpful to clearly explain why these specific values were chosen in the methods section."

**We added the following sentence to clarify how the specific input values were chosen for scenario 3: "Within these ranges, the specific realistic values for the region of study were chosen by matrix inversion of the theoretical maximum SOC stocks, which provide the annual inputs necessary for the model to reach but to not exceed the maximum SOC stocks in the long term." (line 223-225)**