

Interactive comment on “Straw incorporation increases crop yield and soil organic carbon sequestration but varies under different natural conditions and farming practices in China: a system analysis” by Xiao Han et al.

Anonymous Referee #2

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The authors conducted a meta-analysis to examine the impact of straw incorporation on SOC sequestration in China. Their analysis identified the best combination of straw incorporation strategy and quantified the impact of different approaches. They also provided a general timeline for the response of SOC and crop productivity respectively.

The collected dataset has many missing values and the authors have made multiple assumptions to fill in the blanks, including using empirical functions and coefficients, it would be better if the authors can provide some kind of uncertainty analysis to ensure their results still holds under these noisy extrapolations.

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The study focused on SOC changes in the top 20cm soil, does this include organic horizon or is mineral soil only? Please make the distinction. Also it would be curious to see data for SOC below this depth.

The language can be improved as well, and the text can be shortened and be more succinct if collapsing some of the results and discussions that are repetitive. Overall, the study explores an interesting topic and provided quantitative proof of the impact of straw incorporation on SOC sequestration of soils. The analysis approach is appropriate. Some implications of these findings are lacking in current version, it would be good to expand on.

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