

## ***Interactive comment on “Multi-cooperation of soil biota in the plough layer is the key for conservation tillage to improve N availability and crop yield” by Shixiu Zhang et al.***

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Received and published: 26 May 2020

1. However, both reviewers raise concerns with how models from the literature were applied to this specific study. Applying models can offer insights and predictions, but it is important to understand and report the uncertainties that arise from inputting field and laboratory data from one study into a model developed in another. A way to address this would be to conduct a sensitivity test, as suggested by reviewer 1. Additionally, caveats need to be incorporated throughout the results and discussion, especially to the conclusions, which both reviewers felt were overstating the underlying data.

Thank you for your suggestion. We are very appreciative of the reviewers' suggestions

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to obtain the reliable results and discussion. We rebuilt the soil food web based on the trophic relationship among microbes, nematodes, collembolans and mites. And then these trophic groups were classified into six feeding guilds: bacteria, fungi, bacterivorous feeders, fungivorous feeders, herbivorous feeders and predators. The N mineralization of soil food web were also re-calculated according to Rüter et al. (1993). And according to the suggestion of reviewer1's suggestion, the sensitivity analysis was conducted to test the impact of uncertainty of the model on the result of N mineralization. In addition, as we reanalyzed, the results and the discussion were also rewritten. According to the reviewer's suggestion, all inappropriate views were deleted.

2. Both reviewers mention ways the text could be improved for clarity. In some cases, there is confusion around methods, which may require some extensive rewriting. It is important to consider where grammatical changes can improve the text and where additional information is truly required. A third reviewer found the writing too confusing to do a full review; however, the thorough review of the other two reviewers provides sufficient feedback to proceed with revision of the manuscript.

We reorganized the structure of this manuscript to make it clear and concise to readers. We also invited the native English speaking researcher to polish this manuscript. We believe that the revised manuscript will be satisfactory.

References 1. de Vries, F.T., Thébault, E., Liiri, M., Birkhofer, K., Tsiafouli, M.A., Bjørnlund, L., Jørgensen, H.B., Brady, M.V., Christensen, S., de Ruiter, P. C., d'Hertefeldt, T., Frouz, J., Hedlund, K., Hemerik, L., Gera Hol, W.H., Hotes, S., Mortimer, S.R., Setälä, H., Sgardelis, S.P., Uteseny, K., van der Putten, W.H., Wolters, V. and Bardgett, R.D.: Soil food web properties explain ecosystem services across European land use systems, *Proceedings of the National Academy of Sciences*, 110, 14296-14301, 2013.

Interactive comment on SOIL Discuss., <https://doi.org/10.5194/soil-2020-2>, 2020.

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