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Interactive comment on "Grazing elevates litter decomposition but slows nitrogen release in an alpine meadow" *by* Yi Sun et al.

Yi Sun et al.

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Interactive comment on "Grazing increases litter decomposition rate but decreases nitrogen release rate in an alpine meadow" by Yi Sun et al.

Dear Dr. Subke,

Thank you very much for your letter on 03 May 2018 with two anonymous referees' reports and for your providing an opportunity for us to revise the paper. We have considered all your and referees' comments very carefully and made revisions accordingly.

These constructive comments are greatly appreciated and now acknowledged in the Acknowledgment section. We have highlighted (yellow) our revisions in the manuscript for your convenience.

We follow these comments in order and explain what we have done point by point. We response to the two anonymous referees' comments in separated files (i.e., Response to bg-2018-66-RC1 and Response to bg-2018-66-RC2).

Response to Dr. Subke's comments

Dr. Subke: This manuscript is generally well written, but I agree with referee 1 that a native or otherwise proficient English speaker should proofread it as part of your revision. Both referees raise a number of detailed queries, which you should address in detail. I would like to add here some additional points to ensure that the objective and approach of your study are presented as clearly as possible. This concerns mainly how you introduce the aims of your study. These should be much more clearly identified and presented in form of hypotheses. Please see my specific comments below on this, and I am happy to elaborate in case you are unsure about how to implement these.

Our response: We appreciate all of your and referees' constructive and thoughtful comments. We have accepted all suggestions and revised the paper accordingly. We also explain how we have revised the manuscript. The manuscript has been revised and proofread by a native English speaker, Professor Corry Matthew (a pasture agronomist).

Dr. Subke: 36-39: Delete sentence starting "We carried out. . .". The introduction should present the broad background and significance underlying this research. Focus on your experiment only at the end of the introduction when presenting your hypotheses.

Our response: Thanks. We have deleted this sentence. We have also strengthened the importance and highlighted the novelty of our work before presenting the hypotheses.

Dr. Subke: 77-81: Also here, rather than outlining the detail of the experimental design, focus on the hypotheses you want to test, The subsequent sentences give your aims, but they should be more focused (see comments by referee 1). For example, you refer to "improved soil properties" in line 84. It is not clear what this actually means. Be specific which properties you hypothesise to be affected by grazing. Rather than using words such as "improve", make clear which characteristics you test in your approach, and whether you hypothesise an increase or decrease.

Our response: We completely agree with your comments. We only provided the necessary information relevant to the experimental design and gave clear descriptions of hypotheses.

Dr. Subke: 571-585: All of the figure captions should have treatments and parameters explained. So avoid referring to GP, GEP, TN, LSD etc. without explaining it here. Figures 3 and 4: These results are already presented in form of k-values in Table 2. If you think that presenting these data in graph form is at all valuable, I suggest you reduce this to one panel per figure, with all treatments shown as separate lines in the same graph.

Our response: Thanks. We have detailed the treatments and parameters in captions of all figures and tables. We prefer to keep the results of Figures 3 and 4 in this paper, as the referee #1 suggested to compare the litter decomposition and N release between the first and second year. According to your and referee #1's suggestions, we have replaced the columns with a joined-point line for each treatment and placed those lines in one panel for litter decomposition or N release. We then merged Figures 3 and 4 into one figure (Fig. 3a, b).

We hope our responses and revisions made in the revised MS are appropriate. Please let us know if further revisions are required.

Thank you for considering our paper. Sincerely yours,

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Please also note the supplement to this comment:
https://www.biogeosciences-discuss.net/bg-2018-66/bg-2018-66-AC3-supplement.pdf