

Dear Anonymous Reviewer #3:

Thanks so much for your detailed comments. Here, we have fixed these comments point by point. And reference to page and line numbers is for the revised manuscript with trace changes.

General comments: Authors must review the journal format (justify text and references).

Response: Thanks for the detailed comments. All the format issues have been addressed in our text.

Introduction

Comment: Review Han et al., 2014 in references; Elser, 2010, review Elser et al., 2010?

Response: We have added Han et al., 2014 in the reference list (Page 21, Line 15). And the other reference should be 'Elser et al., 2010' which has been corrected (Page 4, Line 5; Page 5, Line 10).

Comment: Amezketa, 1999 must be added. Soil Aggregate Stability: A Review.

Response: This reference has been cited in Page 6, Line 5.

Comment: Wu, 2012 or Wu et al., 2012? Wang et al., 2017 review in references.

Response: Thanks. It should be Wu et al., 2012; corrected in Page 6, Line 5. Wang et al., 2017 is actually a paper which is in press status. And this has been corrected accordingly (Page 7, Line 10; Page 28, Line 5).

Methods

Comment: Please reference Soil taxonomy Liu et al. 2009 correct.

Response: The ',' has been added (Page 8, Line 5).

Comment: Page 9, please review 'and the shaken'? or 'and then shaken'?

Response: It was 'and then shaken'. Corrected in Page 9, Line 20.

Comment: Page 10, rewrite in a better form the first paragraph; in fraction >2000, DOC:DIN was greater in Ck and not effect on N addition was detected 5, 10, 15... 250-2000, N10, N15 and <250 only N15 compare with control! Explain nitrogen

concentration please.

Response: This paragraph has been rewritten by explaining effects of nitrogen concentration (please see Page 11, Line 5).

Comment: Table 2 is needed? About interaction between factors are not explained. And you can use F-value in the text.

Response: We think the Table 2 is necessary as we can see the main effects of N addition and aggregate size as well as their interactions. Also, we explained the interaction effect at the end this paragraph in Page 11, Line 5.

Comment: When you say soil DOC:AP ratio significantly decreased with N addition? But with N15? Interaction must be explained better.

Response: We have rewritten as 'DOC:AP ratio significantly decreased under N₁₅ treatment in...' (Page 11, Line 15).

Comment: Page 11, it could confuse. You must explain that decreased compared with control but no differences were found between N concentrations. Only in small you found differences in concentration, why? Not in discussion.

Response: We have added the information 'comparing to CK' to avoid confusion (Page 11, Line 5, 20). Also, we mainly focused on the main effect of N addition on soil parameters instead of the effects from different N doses. By setting different N doses, we aimed to keep accidental N effects away. This is also the reason why we keep Table 2 in the manuscript.

Comment: Page 10, what happened in small aggregates? Review Du et al., 2014.

Response: Unchanged Ca:Mg ratio in microaggregates might be due to higher SOC and clay contents in this soil fraction. However, we did not include the discussion of Ca:Mg ratio among different soil fractions as we did not come up with related hypothesis in the Introduction. Du et al., 2015 has been corrected (Page 13, Line 15).

Comment: You must discuss about N concentration! What is the effect? What happens with pH?

Response: As we mentioned, we focused on the main effect of N addition on these parameters instead of N concentrations. The soil pH was actually decreased with

the increase of N does (please see Wang et al., 2015, doi: <http://dx.doi.org/10.1016/j.soilbio.2014.11.015>, SBB paper). This has also been mentioned in the text (Page 13, Line 5-10).

Comment: Review Treseder, 2008 in references. N concentration in nutrients? Review Kopittke and Menizes, 2007; Zhang and Norton, 2002; Somers and Shive, 1942; Tanaka and Navasero, 1966.

Response: All these references have been added in the reference list (Page 27, Line 10; Page 22, Line 20; Page 29, Line 5; Page 26, Line 20; Page 27, Line 5).

Comment: Conclusions must be rewritten carefully when you say N addition! What happens with does?

Response: We concluded based upon the main effect of N which was listed in Table 2. We hope that you might think this is reasonable to give conclusions depending on the averaged effect from all N gradients (as shown in Table 2).

References

Comment: Please review journal format—like two authors: and or not? With the last author, and??

Response: Thanks for the detailed comment. We have checked these. And it is the right format to use ‘and’ between two authors, and also ‘and’ with the last author.

Comment: Du, Z. Review the year also in the text.

Response: This has been corrected (Page 13, Line 15).

Figures

Comment: Please use grey instead of black because you can't see the error.

Response: As suggested by Reviewer #1, we have changed the black into green to get readability; at the same time, we can see the errors.

Comment: It is strange you didn't find differences in DIN:AP 250-2000 in CK and <250 N₁₀ and N₁₅.

Response: Thanks for the comments. The error bars of CK vs. N treatment seemed like not overlapped, because we used standard error (SE) instead of standard

deviation (SD) ($SE=SD/\sqrt{n}$). This means that SE is much smaller than SD. And we labeled the significance based upon multiple comparisons with a Duncan design within each faction (Page 10, Line 15).

Comment: You must explain better in the text of the figures Ck, N5, N10...

Response: This have been explained (Page 33 and 34).

Comment: Table 2? It is necessary? Why not draw all the correlations together in one figure?

Response: We think Table 2 is necessary as we could see the main N effect by averaging the effects of all N rates. We separate the correlation into two figures to avoid huge figure being created.

With above corrections, the manuscript is hereby resubmitted to the journal. We are thankful for the reviewers' work and glad to respond any further questions that you have. We look forward a positive response from you.

Thanking you,

Ruzhen Wang