

Author Responses to Associate Editor Review

Dear Dr. Eastman

Thank you for your patience and for addressing the second set of review comments. I have noticed four remaining technical points which I kindly ask you to resolve before I can accept your manuscript for publication. These are:

- Please add an explanation of the error bars, which you've added in your latest revisions, in the caption of Fig. 2.

BE et al: The explanation of the error bars is included in the full figure caption on lines 755-766

- Fig. 2, there is a cross symbol next to the 'Soil Respiration' label. Could you please add an explanation of its meaning or remove it?

BE et al: The explanation of the symbol is included in the full figure caption on lines 763-766

- The text in the 'Conclusions' section should be revised in two places. On l. 473, should 'led to' be added to complete the sentence? ("notably, a shift in plant C allocation [...], decreased soil respiration, and *led to* an accumulation of POM"). On l. 474, the following sentence doesn't seem to make sense: "Our results also suggest that while a microbially explicit model has potential to incorporate additional plant-microbe processes or better parameter existing processes, [...]". Please revise.

BE et al: Change made on line 473. The following sentences were revised to the following:

"Our results also suggest that a microbially explicit model has greater potential than a microbially implicit model to incorporate additional plant-microbe processes and better parameterize existing processes because of existing plant-microbial processes include in the model structure. However, testing model experiments at additional sites and additional data is required to improve model representation of the complex plant-microbial responses to N enrichment and model predictions of ecosystem recovery following N additions."

- Table A1: Avoid abbreviations or explain abbreviations and model variable names in the caption (e.g., 'xkNlimiting'). Provide units of C:N ratios (mass or molar units?)

BE et al: Changes made.

Please revise these points and resubmit a corrected version of your manuscript.

Thank you for for continued efforts and your contribution to our Special Issue.

BE et al: Thank you.

Best wishes,

Beni Stocker