Dear Dr. Jia,

We greatly appreciate your comments and suggestions on our submitted manuscript. We have revised the manuscript by addressing your comments. The major changes are highlighted in blue in the revised manuscript.

The detailed point-to-point to your comments/suggestions are given below;

"(1) The title. It seems that the title is a little bit over-interpreted. It is convincing that the changes in soil chemical processes are associated with nitrogen-deposition-induced species loss. However, it is a mere correlation, and the causal relationship between soil chemical processes and species loss remains elusive."

We agree with your comment, and revised the title to "Disruption of metal ion homeostasis in soils is associated with nitrogen deposition-induced species loss in an Inner Mongolia steppe".

"(2) The composition of Nitrogen deposition. Urea is not the main form of nitrogen species for wet/dry deposition. Therefore, this point might be mentioned in discussion as it may never possibly happen in reality? However, I side with the authors that soil chemical processes likely played an important role in forb species loss. It appears that urea addition stimulation nitrification leading to soil acidification. Soil pH decline thus alters the ion availability which may in turn lead to reduction of species diversity."

We discussed the relevance of the use of urea to the N deposition in our study as suggested by the editor in the revised manuscript (lines 379-386).

"(3) There are many typo errors for corrections. For example, Aaboveground (in figure 1c)"

We carefully revised the manuscript by fixing the typos.

We hope the quality of the revised manuscript is acceptable for publication in Biogeosciences.

Regards,

Wen-Hao Zhang