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Biogeosciences Discussions

Interactive comment on "Nitrogen storage and variability in paddy soils of China" *by* J. S. Lin et al.

J. S. Lin et al.

linjs18@gmail.com

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Anonymous Referee #3 Overall this is an interesting and well-written manuscript. In my opinion it should be acceptable for publication after minor revision.

Question:

I would suggest the authors clarify and expand upon two points. First, there is no explanation of how the nitrogen fertilization data were collected. These data must be based on some kind of survey rather than analyses of soil samples (as is the case for N concentration, pH, etc.). What were the characteristics of that survey?

Answer:

Yes, you are right. We added the explanation of how N fertilization data were collected in our revised paper.

Question 1:

Second, if the results of this work agreed with those of Tian 2006 for soil N density but differed significantly for total N stocks, aren't the only ways to account for that either (1) differences in land area assessed or (2) differences in the distributions of different N densities? The authors suggest this in the conclusion section, but I would think this warrants more discussion.

Answer:

Yes, you are right. We added a sentence in conclusion section to specific land area, resolution of map and soil profile number were the main reason lead to diversity result of N stocks.

Question 2:

Specific comments: pg 858, line 6: insert "and" after "China,"

Answer:

Agree. We added "and" after "China".

Question 3:

pg 858, line 7: insert "on" before "N"

Answer:

Agree. We have revised it.

Question 4:

pg 863, line 1: insert "is" after "It"

Answer:

Agree. We have inserted “it” after “is”.

Question 5:

pg 875, figure 2: I would suggest using a color gradient instead of distinctly different colors. This would facilitate easier interpretation.

Answer:

This is a good suggestion. We used color gradient before. However, there are too much polygons in our map, so the effect of image is not as good as the figure we use right now. Therefore, it is better to use distinctly different colors in figure 2.

Interactive comment on Biogeosciences Discuss., 7, 855, 2010.