

Interactive comment on “Modeling microbial exchanges between forms of soil nitrogen in contrasting ecosystems” by M. Pansu et al.

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Answer to anonymous referee #3

Thank you for your work and constructive remarks on our manuscript. Concerning statistical comparison of models we are adepts of the book of Burnham and Anderson, *Model Selection and Multimodel Inference*, Springer 2002, in this paper we selected F test on residues as sufficiently concise and informative. But according to your remark, we propose to develop statistic tests simultaneously for the whole data set as we had done previously for 14C (Pansu et al., GBC 2010). This should bring more strength at our demonstration, concerning the robustness of N predictions considering constant microbial quality, and improvements brought by taking variable microbial quality. OK to increase figure readability. We propose to delete MB-14C evolution (already published

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in Pansu et al., GBC 2009) and present only two graphs by figure: (a) evolution of organic 15N forms (microbial forms on right scale, other organic compartments on left scale), (b) evolution of inorganic forms. OK to reduce the number of figures by selecting on plain, on Middle Mountain and one high mountain situation, we propose to add a new figure showing simultaneous predictions of the whole data set. OK to complete figure captions and to choose clearer line types if possible.

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