

Interactive comment on “Nitrate and dissolved nitrous oxide in groundwater within cropped fields and riparian buffers” by D.-G. Kim et al.

Anonymous Referee #3

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This is a well-written paper tackling the relevant issue of the N₂O fate's. With regards of its improvement, I suggest the following:

1. Be cautious in your conclusions, since your new numbers are based on a single site. You need to provide a convincing reasoning on the practicality of the new numbers if they require additional effort for the potential application to the IPCC.
2. Clarify the procedures used. Describe the constraints of using 2 rows of wells for the appropriate description of the water flow path. The way you were calculating the cumulative annual flux of nitrate and nitrous oxide would require further description.
3. Check for the SA in the corn fields and soybean fields; by now is exactly the same.
4. Please provide a reference to justify why the age of the buffer could be essential for the N removal

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efficiency. 5. Though you did not measure the primary productivity and its relationship to NO_3 , do you have any indication on whether it was relevant for the NO_3 fate?

Interactive comment on Biogeosciences Discuss., 6, 651, 2009.

BGD

6, S449–S450, 2009

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