



## ***Interactive comment on “Nitrous oxide fluxes and nitrogen cycling along a pasture chronosequence in Central Amazonia, Brazil” by B. Wick et al.***

### **Anonymous Referee #2**

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I found this a well-written, clear paper on N<sub>2</sub>O fluxes and N cycling in a chronosequence from forest to pastures in central Amazonia. A first comment is that the paper also presents data on CH<sub>4</sub> fluxes, but the title suggests that the discussion will be limited to N<sub>2</sub>O.

The results presented in figures 7 and 8a-f show regression lines with rather low R<sup>2</sup> values (the direction of the regression line is in some cases completely determined by 1 point, and R<sup>2</sup> values of 0.2 or 0.3 indicate a complete lack of correlation), even though the N<sub>2</sub>O flux data were log-transformed.

Although the paper describes an analysis of the soil and flux data collected at the different sites I have a feeling that the authors could have done more with their data. They note that soil differences (soil texture, soil fertility, soil physical characteristics) can be very important determinants of N cycling and trace gas fluxes. Perhaps a multiple

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regression analysis could give more insight of the combined effect of some of these factors, and the authors could also show the significance of the influence of factors and measured fluxes. Such an analysis could perhaps explain the variability in the observations.

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Interactive comment on Biogeosciences Discussions, 2, 499, 2005.

**BGD**

2, S237–S238, 2005

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