

Interactive comment on “The detectability of nitrous oxide mitigation efficacy in intensively grazed pastures using a multiple plot micrometeorological technique” by A. M. S. McMillan et al.

Anonymous Referee #1

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This is a very comprehensive study and well written paper and makes a solid contribution to methods for the measurement of nitrous oxide from agricultural systems.

The only minor criticism is the authors have not stuck to the structure of methods, results and discussion. While the paper has these sections, new methods are introduced in both the results and especially the discussion sections, and many results first introduced in the discussion. In spite of this, the logic and flow in the paper still makes sense and reads well. Specific examples of this mixed structure include:

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Page 8980 is essentially still presenting results up to line 11 on page 8981.

Figures 9 and 10 and Table 3 should have been presented before the discussion section.

Page 8982, line 14: again new method introduced and results presented.

Page 8984, line 4: new methods introduced here mixed into the discussion.

General comments to improve the paper:

Page 8965, line 14: I am sure there is a more formal reference that could be used here, even using the reference in the Di and Cameron paper (Hewitt AE (1998) New Zealand soil classification, 2nd edn. Manaaki Whenua, Lincoln, Canterbury, NZ.)

Page 8966, line 20: Not really important by perhaps it should be (minus) -5KPa.

Page 8968, line 15 to 20: This paragraph is probably not needed to make the case in this paper.

Page 8970, line 11: The term 'excellent' is probably a bit subjective for a paper. Would it not be better to say the correspondence was highly significant, then add a significance term to the correlation coefficient?

Page 8972, line 10: Should there be a section at the end of the Methods describing the statistical methods used?

Page 8973, line 25: 'many degrees of freedom' - Rather specify the degrees of freedom?

Page 8975, line 16: Perhaps include reference to Fig 6B in the parenthesis?

Figures:

Fig 3 – Capital letters appearing on new lines.

Fig 8 - The legend is quite difficult to see.

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C3288