

Comments to REES et al

Page 5

Line 119: Maybe worth adding a note that the different experiments were not designed together and therefore methodologies were originally different. This is only indirectly clear now and could eventually be clarified more.

Line 129: Noting “logården” in brackets for the pump may require a bracket for glass vials noting that this was for all other sites.

Page 6

Line 138: Put “One off” in markers – otherwise the sentence sounds really weird. Or maybe even better write: “Measurements of soil carbon were made once at each site”

Line 140: Hogh-Jensen not in list. Please check the ref-list in general.

Page 7

Line 179 + 182 + 184 + 187: Is the high number of decimals necessary and justified.

Page 8

Line 196: Change “.. all 438 sites” To “ all 438 combinations of sites”

Page 9

line 223-224: Language could be improved – end of sentence sounds a bit strange

Line 225-227: Language could be clarified

Line 230: “The largest proportional changes” Do you mean changes *caused by treatments*? Unclear

Line 231: “ Inputs of N and irrigation at ...”. Do you mean N and irrigation combined?

Line 232: “26 fold change ...”. Looking at table 3, I do not see any change of a factor 26.

Line 232: “ ... across different phases of an”. Unclear what you mean by “phases”.

Line 232: Add the same detail about how much change was observed at Tulloch as you give for Encin above it is not clear to me.

Tables: Need serious consideration!!

Table 2

OK, but I think Table 2 is the essential site descriptive table -why is this coming as table 2 and not table 1??

Table 1a

Can be combined with Table 3. There is no real independent value in table 1a since almost all the info is repeated in Table 3 (or could be). The column with the treatment abbreviations have a "pre"-number for half of the sites but not for the other half – and this is not used elsewhere. Furthermore, the treatment abbreviations are not used anywhere except in figure 4. Therefore, skip table 1a, put the short treatment abbreviations into table 3 in brackets after the treatment name and add the reference into table 3 as well.

Table 3

Fluxes are summarized for each site as "site total". I think this is not total but average?

Put treatment shortnames in brackets after the treatment name.

Skip the "standard deviation" column and add in brackets after the emission.

Table 1b

Simply too spacious considering the information is 90% identical. See suggestion below trying to optimize the information significantly. In a synthesis paper like this I do not find it necessary to include the brand of the GC – this will be available in the basic references.

Analysis method	Flux calculation	Temporal integration	Site (Replicates; sampling frequency per year; samples per chamber; chamber time minutes)
GC	Linear regression	Average	Logården (6; >20; 3; 40)
		Linear Interpolation	Beano (3; >20; 3; 60) El Encin (3; >20; 3; 60) Foulum Paulineau Tulloch N N N n
Photoacoustic gas analyser			Maulde (6;>20;6; 90) Theix (5; >20; 5; 100)

Table 4

Remove the “summary line” for each site. It is already in table 3. Why do you want to show each year, since you only refer to the ranges in the paper. I suggest one of two:

- 1 - Either make 1 line per site providing the range in years and the range in fluxes
- 2 -make a more compressed table like below:

Site	2006	2007	2008	2009	2010
Beano		0.27±0.10 (9)	6.62±5.06 (9)	5.980±4.23 (9)	
El Encin	0.31±0.23 (18)	0.71±0.64 (30)	0.79±0.47 (12)	0.97±1.00 (6)	0.50±0.55 (6)
nn					

Number of sites put in brackets