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## ***Interactive comment on “Dynamics of microbial communities during decomposition of litter from pioneering plants in initial soil ecosystems” by J. Esperschütz et al.***

**C. Hinz (Editor)**

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Both reviews clearly indicate that the study is original with interesting results and use of appropriate methodologies. Referee 1 requires the authors' to explain variable decomposition rates of Calamagrostis and Lotus. Furthermore, the author should demonstrate if leaching of FA from litter may occur that could explain high levels of FA 18:3 and 18.2w6,2. Referee 2 confirms the soundness of methodology and results. The English needs improvement. I suggest that the author consult a native speaker to fix the English.

Furthermore, there are very few references on litter decomposition and biogeochemical

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cycles drawn from restoration ecology. The issue of how microbial activity commences in an “abiotic substrate” is a central question to restoration ecology and could aid in formulating a more precise hypothesis.

Some methods need further information to ensure reproducibility by either adding references with accurate and detailed description or by adding supplemental materials/appendices.

The author should be able to easily address the issues raised by the referees. Overall, the paper is publishable after minor revision.

Detailed comments:

Page 14986

Lines 10-12: Statement of expectation in the introduction is ambiguous: for example “. . .the amount of N derived from plant litter highly influences the performance of the litter degrading microbial biomass . . .” Can you be more specific how the influence will be and what you mean by performance?

Lines 18-19: Texture information of the substrate used would be very useful to make the experiment reproducible. Also, indication of what type of clay would help.

Lines 22-25: Refer to a publication in which technical details of the tent method are outlined.

Page 14988

Lines 7-9: Add reference concerning light fraction analysis.

Pages 14990-14991

Shouldn't you add a reference concerning the calculations – this is not the first time that for example delta 13 C is being defined.

Page 14998

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Lines 10-15: The presentation of the conclusion is not compelling. It starts with a statement confirming what other studies have already shown followed by indicating that further research is needed. I suggest you go through the points you make and start with a positive message of what you have achieved and ending with a suggestion of what should be studied (and how) next.

I have attached a pdf file with an annotated introduction, in which I tried to improve the presentation. Improving the English to that extent is not the role of the editors and reviewers. So please have your paper thoroughly checked by a native English speaker.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/9/C9428/2013/bgd-9-C9428-2013-supplement.pdf>

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Interactive comment on Biogeosciences Discuss., 9, 14981, 2012.

**BGD**

9, C9428–C9430, 2013

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