

Interactive comment on “Tree species identity and functional traits but not species richness affect interrill erosion processes in young subtropical forests” by S. Seitz et al.

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Received and published: 2 October 2015

Dear reviewer, thank you very much for your comments and the positive valuation of our work. Please see our detailed comments below.

Introduction:

We agree on your comment. We will shorten the introduction and especially the general overview on soil erosion at the beginning, to focus more on the actual scientific problem.

P 706, lines 25ff: This paragraph should briefly summarize the underlying mechanisms
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of our hypotheses. We agree, that this is partly redundant and might be omitted in the revised version.

Methodology:

Thank you for this indication. Not only the runoff plots but also the 25 x 25 m study plots have been placed randomly in the study area during the installation of the experiment. The selection of Very Important study Plots (VIPs) and representative areas within them was necessary because of the large number of different experiments in the BEF China project. Nevertheless, the selected representative places still comprise an area of several 100 m² each. We will better explain this in the revised version.

A table with the statistical outcome is presented in the appendix (Table A2). Some further characteristics of the parameters (mean, sd ...) are presented in Table 3. This table could be complemented with further details in the revised version.

As runoff plots were distributed randomly in the selected study plot areas, a random term "plot:rop" was added to the lme model. We will try to clarify this in the revised version.

Results:

Thank you for this indication. We tried to answer our hypotheses "in line" (Chapter 3.1 and 4.1 are answering on hypothesis 1, 3.2 and 4.2 on hypothesis 2, etc.) and focussing on tree species effects. Nevertheless, we agree that presenting the interrill erosion data first and adding further information on plot data is reasonable and can be done for the revised version.

Tables can be transfered from appendix to chapter 3.

Discussion:

Thank you for this indication. We will expand the discussion on functional traits of the tree species. As we mentioned in the conclusions a larger number of functional traits

would be desirable and should be included in further studies. A comparison with other regions certainly is of great interest, but has not been in focus of this study. We believe that this study should at first point on the effects of tree species richness and functional traits. Therefore, we believe that a discussion of the interrill erosion rates themselves should not take a larger place than the discussion of tree effects. Restructuring the chapters can be done according to the "results" section (see above).

Conclusions:

We agree and we will shorten the conclusion according to your comment.

In behalf of all authors

Steffen Seitz

Interactive comment on SOIL Discuss., 2, 701, 2015.