

Interactive comment on “Distribution of phosphorus fractions of different plant availability in German forest soils and their relationship to common soil properties and foliar P concentrations” by Jörg Niederberger et al.

Anonymous Referee #2

Received and published: 9 January 2019

The paper of Niederberger et al. is a valuable contribution to a differentiated understanding of the connections between soil P pools, soil properties and tree nutrition. Also none of the fractions was strongly correlated with the P nutrition the influence of the different soil properties onto the P content gives valuable insights. I recommend publication of the paper after some minor revisions.

Like in the comment 3 of Referee #1, I would also encourage the authors to try splitting the collective into non-calcareous and calcareous soils.

C1

Some specific comments:

P4 L3: Total C or SOC?

P4 L10: Is it the most recent whorl? According to the BZE II manual by picea abies the 7th (to the 15th) whorl is recommended for needle analysis.

P4 L10: Needle and leaves were collected at the same time span (2006-2008 for GFSI II) not “at the same time”? For example sampling of beech leaves is not recommended in the autumn.

P12 L16: Or is it an effect of the soil texture since most of the *P. sylvestris* plots have sandy soils? Than there would be soil type-specific instead of species-specific differences.

P12 L16: *P. abies*, not *Pi. abies*

Table 1: Values for SOC should be included.

Table S6: Better SOC (under predictor variables) instead of Carbon (total?). In Table 3 it is called SOC.

In some pages are unnecessary hyphens in the text (for example: P1 L11, P1 L15, P10 L18&20, P11 L 12)

Interactive comment on SOIL Discuss., <https://doi.org/10.5194/soil-2018-40>, 2018.

C2