

Interactive comment on “Local soil quality assessment of north-central Namibia: integrating farmers’ and technical knowledge” by Brice Prudat et al.

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The paper presents interesting work, that is potentially valuable and fitting the scope and quality of SOIL. It combines local farmers knowledge and soil scientific practices in a toolbox for soil quality evaluation and is thereby applicable in many parts of the world where resources are scarce (but even in Europe this approach holds its value). There are however a few points that can be improved. Including soil descriptions using WRB soil classification increases the relevance to the broader public. The presented toolbox seems useful, but detecting very slight colour differences in the field will not be easy.

As in many tropical agricultural soils, fertility in terms of N and P availability will be a

C1

severe limiting factor in this area (besides water limitation). It is however not taken into account in the soil quality evaluation. I realize that it may not be a property that can readily be measured by farmers, but it should at least be discussed as an important limiting factor.

A few specific comments:

Table 1:

- depth of topsoil can better be changed to soil depth or rooting depth, as depth of topsoil is defined by the user, not so much a soil property.

- Infiltration rate, or capacity?

P3L7: Soil diversity: misleading term, soil variability is more apt.

P3L14: How do you define the process of agricultural evolution?

P6L8: unclear why some farmers are visited more than once, while others are not.

P7L21: Further on only pHCaCl is shown/mentioned, so why also include pHH₂O here? Better remove it if you don't show further results.

P10L2: chemical fertility is still low compared to many other soils. Differences are relative between local soils, which should be emphasized. Also the term chemical fertility may be a bit misleading; soil fertility may be better in this context.

Figure 2 doesn't seem to be very relevant for the story, not very comparable to the other data shown (more detailed). So I would suggest to remove it. Also values on x-axes of first and third pane are hard to understand (not in line with table above).

P14L17-26: sentences are hard to understand. Wording can be improved/clarified. Maybe replace evolution by transition? Improvement in this context is are to follow, it seems to imply that improvement has taken place over time, but without reference in the past? What were the conditions before the improvement?

C2

Technical/textual points:

P3L20: have been developed and discussed, and yielded ...

P4L1: farmers and technical assessments,

P6L2: remove space after Sandveld

P6L15: insert second closing bracket after 2005.

P7L26: replace that by when

P10L32: various entities ...

P13L5: meaning

P13L11: play an important role in fixing

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