



EGUsphere, community comment CC3
<https://doi.org/10.5194/egusphere-2022-488-CC3>, 2022
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Comment on egusphere-2022-488

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Community comment on "Quality assessment of meta-analyses on soil organic carbon" by Julia Fohrafellner et al., EGU sphere, <https://doi.org/10.5194/egusphere-2022-488-CC3>, 2022

In my opinion the manuscript "Quality Assessment of Meta-Analyses on Soil Organic Carbon" is a high valuable work and can improve the quality of future meta-analytic works. The manuscript clearly highlights what are the main criteria that could be used to obtain a reliable meta-analysis in a group of disciplines (soil and agricultural sciences. So, the idea to create a framework of criteria to be met to obtain a substantially correct meta-analysis, also in consideration that in soil and agricultural science (as reported by the Authors of this manuscript), the introduction of the meta-analysis is relatively new. In consequence, frequently the principles and the methodology to apply this kind of analysis there are not well known, and this work could be very useful not only for the scientific community.

Moreover, the manuscript gives a clear definition of meta-analysis from operational point of view, starting from search of primary studies up to the definition of correct statistical method and what - really important- need to be made available to the scientific community

So, I hope that this work can contribute to produce more reliable meta-analysis in soil science and agricultural field, more and more interesting and useful for policy makers and also for public opinion.

May be interesting to introduce some short consideration about the minimum number of primary studies needed for a meta-analysis and an additional remark about the fact that frequently meta-analysis with a large number of "points" (I use the term "point" because in this case they are not independent studies) often don't meet the independence requirement.

Also a consideration about the use of sample size as weight could be interesting, even if I agree with the authors that it is not a good choice (and it is acceptable only for fixed model)

In fig. 3B seem that a black dot is missing for the year 2014, there is only the number "19" and not the related dot.

As a final evaluation for sure I recommend the publication of this manuscript, with minor

revision.