Review of: "Analyzing the Effects of Organic Amendments on Soil Erosion Dynamics: A Comprehensive Study on Application Methods and Timing"

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Potential competing interests: No potential competing interests to declare.

The article is very focused on a specific type of very local biochar. It should also study the behavior of the macro- and micronutrients in the soil after the test, as well as the effect on the soil biota.

There are too many references after each sentence in the introduction; the authors need to be more specific in their reference relationships.

2.3. Acquisition of soil amendments and determination of their characteristics

Before application, amendments were sieved through a 2 mm mesh. A subsample underwent chemical property analysis.

Before application or before analysis? Do all the amendments applied have the same granulometry (2 mm)?

This granulometry could have affected the results. Could the authors explain this?

3.2.3. Clay percentage

In this section, the text needs to be rewritten because it is not clear, and it needs to explain according to figures and table 3.

The tables are difficult to understand because they contain a lot of information, and the differences according to LSD were made in a general way and not between the different treatments.

4. Discussion

4.1. Soil erosion dynamics and amendment effects

The authors refer to results in other studies, but they don't give the studies (references). For example:

The increased sand content after the rainfall simulator application aligns with findings in arid and semi-arid regions where erosion is often exacerbated due to insufficient organic matter.

4.6.2. Temporal dynamics and long-term impact

The study is short-term for the dynamics of soil. The authors need to study 2 or 3 years and the interaction with the normal use of soil in agriculture or other uses.

The emphasis on barberry biochar as a locally sourced and effective organic amendment introduces a novel strategy for sustainable agriculture, particularly in barberry-producing regions.

Apart from the soil erosion dynamics, it would be interesting to know in a final analysis of the soils to see their variations with respect to their chemical composition, at least in nutrients such as C, N, P, and K.