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.

Are the objectives of the study clearly stated?

The manuscript presents hypotheses but does not state the hypotheses of the study.

Are the study methods (including theory/applicability/models) reported in sufficient detail to allow for their replicability and/or reproducibility?

The references on which some of the methodologies used in the study were based are not indicated in the manuscript.

Are statistical analyses, controls, sampling mechanisms, and statistical reporting (e.g., P-values, CIs, effect sizes) appropriate and well described?

Yes. Statistical methodologies are thoroughly elucidated.

Is the clarity and number of tables and figures in the manuscript appropriate?

Yes.

Are the interpretation of results and study conclusions supported by the data and the study design?

The wording of results should be improved.

In their discussion section, have the authors clearly emphasized the strengths of their study/theory/methods/argument?

The Discussion section should be improved.

Is the manuscript structure (e.g., sections and subheadings), text flow, and writing appropriate?

Yes. Revised to adhere to international standards.

Have the authors emphasized the novelty and/or originality of the study?

Authors should consider other factors to indicate the originality of their study.

Is the work presented in this article of interest to a broad audience of [the journal/topic, e.g., data science researchers]?

Yes.

Recommendation for publishing the article?

The quality of the study should be improved before it is accepted for publication.

Specific comments are presented below:

Abstract

Improve based on comments made in the other sections of the manuscript.

1. Introduction

Add the hypotheses of the study.

2. Method and materials

2.2. Soil sampling procedure – Indicate the reference on which the methodology used was based.

Fig. 2. – Indicate with letters the chronology of soil sampling.

2.3. Acquisition of soil amendments and determination of their characteristics

- Indicate the scientific name of the plant residues used.

2.4. Characteristics of the rainfall simulator – Indicate the reference on which the methodology used was based. Indicate the amount of water used in the whole experiment.

2.5. Preparation of treatments and assessment of soil and erosion characteristics - Indicate the reference on which the methodology used was based.

3. Results

To facilitate the reading of the results, I suggest presenting the results in a simple and concise way, indicating which treatments were statistically similar or different, and at the end of the sentence indicate in which table or figure the information is located.

3.2.3. Clay percentage and 3.3. Fluctuations in parameters associated with the soil erosion process – There is information that corresponds to the Discussion section. Consider the comments indicated in the previous paragraph.

4. Discussion

It is necessary to improve the Discussion. I suggest not using subtitles in this section; an alternative is to discuss different variables related to each other in the same paragraph. This section should explain to what the results obtained are attributed and should be justified with adequate references; the new knowledge generated should be highlighted and

indicate how useful this knowledge can be, preferably highlighting values considered important; the results obtained should be compared with other results where similar variables or treatments were evaluated and indicate to what the similarities or differences are attributed; new hypotheses that should be considered for future research should be proposed. For this research, different factors should be considered such as: physical, chemical, and biological characteristics of the soil; amount of water used (compare with regional precipitation); chemical characteristics of plant residues, mainly volume applied, particle size, and C/N ratio, since this directly influences the speed of degradation and mineralization; effect of organic residues on soil microbiology and their effect on the formation of aggregates; cost of acquisition, transport, and cost of application of the different organic residues used.

5. Conclusión

Much of the information in the Discussion is repeated in the conclusion, I suggest reducing the information to a maximum of 10 lines. Conclude according to the hypothesis of the study.