

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

Rotimi Ibitoye

Potential competing interests: No potential competing interests to declare.

Review

Abstract

- Describe the rainfall simulator in a sentence.
- The statistical tool used to compare the mean should be mentioned.

Introduction

- Kindly check the third paragraph – wood bark. This is not clear.
- In the fourth paragraph, please state other factors that affect SOM apart from those mentioned.
- In the sixth paragraph, your statement of uncertainties about the effect of soil amendment is confusing. You earlier mentioned their positive influence on soil properties, including on erosion, so where are the uncertainties? Kindly revisit the paragraph.

Materials and Methods

- State the exact months of the experiments.
- It would be good to know the climatic conditions of the sampling site.
- I am wondering whether it could be possible to get intact soil samples without knowing the conditions of the soil during sampling. Therefore, kindly provide information about the soil conditions such as soil moisture content, etc., during sampling.
- Critically looking at the sampling method in Fig. 2, I have doubts if undisturbed samples could be taken in that environment. So, kindly clear my doubts.

Section 2.3

- Were all the amendments sieved, including the vermicompost? Kindly provide more details on how this was done.
- Kindly note that bulk density is not part of chemical analysis. Also, the methods for determining these properties were not explicitly stated. It is important to state the method used to determine each parameter.
- Elemental analysis of what, kindly state the country & model of the instrument used.
- The use of “as per” in writing is not scientific. Please use appropriate scientific terms.

Section 2.4

- Please state the country and model of the stimulator. Also, provide information about the size and dimensions of the triangular appendage of the stimulator.
- Detailed information about how the runoff and sediment were collected should be clearly stated.
- How about information on rainfall intensity? I believe you agree that it is important for erosion studies. Also, the duration and characteristics of rainfall should be stated.

Section 2.5

- Is there any justification for applying amendment at a 5% level?
- How many kilograms of soil were used?
- Please state the rate (in t ha^{-1}) of applied amendments.
- What is the volume of water added to the soil to maintain field capacity?
- The methods used to measure the parameters in the study should be clearly stated to allow for reproducibility.
- Measurements were taken bi-monthly or at 60-day intervals? Kindly clarify.

Section 2.6

- The factorial experiment factors should be clearly stated. I believe it is a soil amendment and application method. If not, please state the experimental factors.
- Is the ANOVA one or two ways? For a factorial experiment with two factors, this should be explicitly stated.

Results

- The tables are not well presented. Kindly represent the tables to make them self-explanatory.
- In Table 1, the organic carbon for the amendments used was not presented. Therefore, how did you arrive at the C/N for the amendments?
- Table 3 should be well presented. It is difficult to understand.
- In Table 5, the units of the subheadings should be stated. The interacting letters should be defined.

Discussion

- More discussion on the results should be carried out. The discussion in the current manuscript is not detailed enough.