

Reviewer's comments on "Soil Properties Dynamics at Varying Heating Temperatures during Agricultural Burning"

General comments:

The authors need to re-prepare this manuscript to suit publication in any reputable journals. There are many grammatical errors throughout the manuscript, and some portions appear too confusing and thus make it difficult to review the paper. I think the authors are confused of the basis for this research work since the justification stated was not in line with the topic of the work.

Specific comments:

1. Move line 34 to 33
2. Line 35 – 39, recast "In humid tropics....."
3. Line 51, "Most research assess....." is an incomplete statement.
4. Line 51 – 52, recast "So far, few efforts"
5. Line 58, Objective (ii), what are the attributes the authors are considering in this work?
6. Line 62 – 96, Materials and methods. The authors muddled up the section and hardly can anyone identify clearly the experimental set-up, the design and the entire soil properties that were assessed in this work.
7. Line 65, the authors should check the coordinates of the site. I suspect the coordinates are wrong if actually the experiment was carried out in Nigeria.
8. Line 69, what is the essence of [5]? I think the authors had in mind of citing a literature there or what?
9. Line 71, what is the dimension of fire proof tract that separate the plots from one another if any? Adding up the area (72 m²) of ten (10) sub-plots, it amounts to 720 m² - the size of the whole plot. Where are the fire proof tracts between plots?
10. Line 72 – 74, the statement will be best described if the authors can show a diagram showing the layout of the experiment.
11. Line 78, what is the basis of digging a 50 cm pit at the centre of each plot?
12. Line 91 – 92, recast "the data obtained were"
13. Line 98 – 319: Results and discussion: This section was not written properly. A comparison between burnt and unburnt soils creates confusion since the treatments were subjected to different burning intensity. This makes difficult to follow the aspect.

14. Line 103 – 105, “The result show” The authors create confusion here in that they stated that the difference between sands for burnt and unburnt soils were not significantly different but in Table 1, the values of sand recorded were significantly different between burnt and unburnt soils.
15. Line 105, the probability level expressed as $P > 0.05$ was wrong. Even then, the authors were not consistent with this, as there were other portions when the authors expressed it as $P < 0.05$. Which one is right?
16. Line 115,particles into stable “san-sized” do you mean sand-sized?
17. Line 120 – 122, recast “The observation agreed.....”
18. Line 126 – 129, recast “Reduction in total porosity.....”
19. Line 132, recast “A significant increase with.....”
20. Line 133 – 136, “This observation.....Ks values” appear too confusing
21. Line 222 – 293, thermal effects on soil physical and chemical properties need to be rewritten. Most of the results were stated but no discussion.
22. Table 2 - The authors should check the total sum of the sand, silt and clay particles of the control plots
23. Table 3 – The computation of the ECEC is not correct. The sum of the exchangeable bases (Ca, Mg, K and Na) and exchangeable acidity did not tally with the values of ECEC recorded in the table. Even then, the unit of exchangeable acidity should be the same with the bases. Also, the acronyms used in the table must be defined as footnotes under the table.
24. Table 4 – This table is not well prepared. I am actually expecting the authors to present this type of table in a matrix form. This will help to explain the relationships among the variables.

Note: Anonymous Reviewer