

With all my heart I review the paper entitled "Alterations in aggregate characteristics of thermally heated water-repellent soil aggregates under laboratory conditions" by

Basically, this research is meaningful in soil physics to see the effect of forest fires on soil aggregates where soil aggregates affect soil erosion. The language is pretty good. However, this paper still lacks data and soil samples that need improvement.

Main comments see below:

## 1. INTRODUCTION

1. It is important to convey the fact that forest fires have caused damage to soil aggregates which have increased soil erodibility and thus affected soil erosion.

2. Forest fires in the field have an impact on soil erosion which according to the USLE model of soil erosion the formula  $A = RKLSCP$ . Soil Aggregate generally affects K Factor (Soil erodibility). It is urgent to explain the role of this SWR soil aggregate on K-Factor

3. It is very important to convey the hypothesis about the factors that affect SWR and WSA on soil aggregates in the form of granular, blocky and prismatic soil structures.

## MATERIAL AND METHOD

4. It is very important to describe the research location on a map. Soil sampling at a depth of 0-5 cm, 5-10 cm, 10-15 cm, 15-20 cm and 20-25 cm is good because the soil aggregates are equally granular and the organic matter content is still high. However, with soil BD = 1 g/cm<sup>3</sup> then the dry weight of 1 ha = 2500 tons/ha. It means that in field conditions, if the forest is burned, the forest soil is that heavy, the rain will disappear within a year. associated with very high erosion will occur after forest fires. It is very important to take soil samples at a depth of 25-50 cm, 50-75 cm, 75-100 cm.

5. It is important to take soil samples at different locations with different vegetation. In order to find soil aggregates with granular soil structure, sub angular blocky or blocky and prismatic.

6. It is very important to display photos of soil aggregates before burning and after burning at different temperatures. You can also use a microscope magnification

## RESULT AND DISCUSSION

7. It would be better if the data contained soil characteristics to a depth of 1 meter with soil aggregates of granular, blocky and prismatic. It is very important to test under different vegetation conditions.

8. Calculation of soil erodibility value (K-Factor) after burning soil aggregates on a laboratory scale if possible is very important.

9. With the addition of new data, the conclusions are very important to be revised

### **Alterations in aggregate characteristics of thermally heated water-repellent soil aggregates under laboratory conditions**

Original Submission  
AflizarAflizar

**Recommendation: Major Revisions**

**Overall Manuscript Rating (1 - 100): 45**

#### **Transfer Authorization**

#### **Response**

My reviewer report is complete.

Yes

I am ready to transfer my reviewer report to the Editors.

Yes

If this submission is transferred to another publication with "Open Peer Review", do we have your consent to publish your review in a pre-publication history?

No

#### **Reviewer Comments to Author**

With all my heart I review the paper entitled "Alterations in aggregate characteristics of thermally heated water-repellent soil aggregates under laboratory conditions" by HTM Perera, DAL Leelamanie, Morihiko Maeda, Yasushi Mori

Basically, this research is meaningful in soil physics to see the effect of forest fires on soil aggregates where soil aggregates affect soil erosion. The language is pretty good. However, this paper still lacks data. and soil samples that need improvement.

Main comments see below:

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#### **Reviewer Confidential Comments to Editor:**

Question 1: The subject addressed in this article is worthy of investigation

- 1) Strongly disagree
  - 2) Disagree
  - 3) Neutral
  - 4) Agree
  - 5) Strongly agree
- Ans: 3) Neutral

Question 2: The information presented is new

- 1) Strongly disagree

2) Disagree  
 3) Neutral  
 4) Agree  
 5) Strongly agree  
 Ans: 3) Neutral

Question 3: The conclusions are supported by the data  
 1) Strongly disagree  
 2) Disagree  
 3) Neutral  
 4) Agree  
 5) Strongly agree  
 Ans: 3) Neutral

Question 4: The manuscript is appropriate for the journal  
 1) Strongly disagree  
 2) Disagree  
 3) Neutral  
 4) Agree  
 5) Strongly agree  
 Ans: 3) Neutral

Question 5: Organization of the manuscript is appropriate  
 1) Strongly disagree  
 2) Disagree  
 3) Neutral  
 4) Agree  
 5) Strongly agree  
 Ans: 2) Disagree

Question 6: Figures, tables and supplementary data are appropriate  
 1) Strongly disagree  
 2) Disagree  
 3) Neutral  
 4) Agree  
 5) Strongly agree  
 Ans: 2) Disagree

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