

Submission to Journal of Degraded and Mining Land Management

Akmad R. Saidy

From: Editorial Team <editor.jdmlm@ub.ac.id>
Sent: Kamis, 19 Oktober 2023 15.05
To: Akhmad Rizalli Saidy
Subject: [JDMLM] Submission Acknowledgement

Akhmad Rizalli Saidy:

Thank you for submitting the manuscript, "Improving Properties of Reclaimed-mine Soil with Application of Coal Fly Ash and Empty Fruit Bunches of Oil Palm" to Journal of Degraded and Mining Lands Management. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: <https://jdmlm.ub.ac.id/index.php/jdmlm/authorDashboard/submission/16391>

Username: akmadsaidy

If you have any questions, please contact us. Thank you for considering this journal as a venue for your work.

Editorial Team

<http://jdmlm.ub.ac.id>

Revision

Akmd R. Saidy

From: JDMLM Editorial Office <editor.jdmlm@ub.ac.id>
Sent: Senin, 27 November 2023 18.26
To: asaidy@ulm.ac.id
Cc: Bambang Joko priatmadi; mseptiana@ulm.ac.id; hifansyah@ulm.ac.id; ahayati@ulm.ac.id; mmahbub@ulm.ac.id; haris@ulm.ac.id
Subject: [JDMLM] Reviewer's comments

Dear Authors:

Akmd R. Saidy, Bambang J. Priatmadi, Meldia Septiana, Hairil Ifansyah, Afiah Hayati, Muhammad Mahbub, Abdul Haris

Your manuscript entitled "**Improving Properties of Reclaimed-mine Soil with Application of Coal Fly Ash and Empty Fruit Bunches of Oil Palm**" has been reviewed by the Journal of Degraded and Mining Lands Management reviewer. The comments of the reviewers are as follows:

Introduction:

- Instead of just presenting theories of RMS, the story about RMS in the area studied (Satui Sub-district, Tanah Bumbu Regency, Province of South Kalimantan) has to be presented. The story should include the existing problems of the RMS and efforts that have been made by others to cope with the problems.

Materials and Methods:

- The methods are trivial. The authors should expand the materials and methods as a simple incubation experiment (only 1 kg of soil) cannot convince the readers of the benefit of this coal fly ash application. For example, the authors should include the results of a simple plant growth experiment (in pots) to convince the readers of the benefit of CFA. Everyone knows that any materials added to the soil will eventually change the soil properties; however, the changes do not necessarily lead to improving plant growth performance.
- The content of heavy metals in the CFA used for this study has to be presented.
- Not all readers can figure out where the study area is, so please provide this manuscript with a map indicating the location of the study.

Results and Discussion:

- The characteristics of materials used for this study (CFA and EFBOP) should be placed in the Materials and Methods section, as they are not the results of this incubation study.
- How could you recommend the use of CFA for enhancing soil properties? Besides containing a negligible amount of essential plant nutrients, CFA also has heavy metals (As, Cd, Cr, Co, Pb, etc) that are highly toxic and can potentially threaten human health and the environment.
- It is stated in this section (and in conclusion) that the crucial role of microbial decomposition in controlling the efficacy of organic matter is to enhance the characteristics of RMS, but no data is shown to prove this statement.

Recommendation: revision and rewriting. The inclusion of data/information about the effect of soil properties improvement due to CFA and EFBOP application (from the incubation experiment) on crop performance is strongly recommended.

If you wish to revise your manuscript, please make sure you have followed and accommodated all the reviewer's comments before submitting the revised version.

All the best

Eko Handayanto

JDMLM Editor in Chief

<https://www.scopus.com/sourceid/21100979353>

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Dear JDMLM Editor in Chief,

We have submitted revised version of this manuscript in which all of the points raised by the reviewer and editor have been addressed. We thank you very much for the comments and suggestions. The comments and suggestions are valuable and very helpful for revising and improving our manuscript. Our responses to each individual comment are detailed below.

Yours sincerely,

Akhmad R. Saidy

Dear Authors:

Akhmad R. Saidy, Bambang J. Priatmadi, Meldia Septiana, Hairil Ifansyah, Afiah Hayati, Muhammad Mahbub, Abdul Haris

Your manuscript entitled "**Improving Properties of Reclaimed-mine Soil with Application of Coal Fly Ash and Empty Fruit Bunches of Oil Palm**" has been reviewed by the Journal of Degraded and Mining Lands Management reviewer. The comments of the reviewers are as follows:

Introduction:

- Instead of just presenting theories of RMS, the story about RMS in the area studied (Satui Sub-district, Tanah Bumbu Regency, Province of South Kalimantan) has to be presented. The story should include the existing problems of the RMS and efforts that have been made by others to cope with the problems.
- We have revised the second paragraph in the introduction section to indicate the details of the RMS used for this study. Land management actions was carried out by the company, i.e., land reorganization, the application of organic matter and lime, and characteristics of this soils have also been added to this paragraph (please see the second paragraph in the introduction section).

Materials and Methods:

- The methods are trivial. The authors should expand the materials and methods as a simple incubation experiment (only 1 kg of soil) cannot convince the readers of the benefit of this coal fly ash application. For example, the authors should include the results of a simple plant growth experiment (in pots) to convince the readers of the benefit of CFA. Everyone knows that any materials added to the soil will eventually change the soil properties; however, the changes do not necessarily lead to improving plant growth performance.
We have added a greenhouse experiment to show the benefits of CFA application in increasing plant growth and the CFA effect on the metal accumulation in plant tissue. This experiment involved using 10 kg of soil with four treatments (control, CFA, EFBOP, and CFA+EFBOP), and observing plant height and plant dried-weight, nitrogen and phosphorous contents in plant tissue as parameters for plant growth, and metal (Mn, Cr, Pb, and Co) accumulation in maize shoots to describe the effect of CFA and EFBOP application on metal uptake by plants.
- The content of heavy metals in the CFA used for this study has to be presented.
- We have added information on the contents of several heavy metals in CFA (please Table 1).

- Not all readers can figure out where the study area is, so please provide this manuscript with a map indicating the location of the study.
- We have added map of study site (Figure 1) to indicate the location of study site.

Results and Discussion:

- The characteristics of materials used for this study (CFA and EFBOP) should be placed in the Materials and Methods section, as they are not the results of this incubation study.
- We have amended the Materials and Methods Section by moving information on the characteristics of soil used for this study, CFA and EFBOP from the result section to the Materials and Methods Section.
- How could you recommend the use of CFA for enhancing soil properties? Besides containing a negligible amount of essential plant nutrients, CFA also has heavy metals (As, Cd, Cr, Co, Pb, etc) that are highly toxic and can potentially threaten human health and the environment.
- We agree that CFA contains a trace amount of essential nutrients for plant growth. However, the increase in nutrient availability after CFA application is not only related to the essential nutrients contained in CFA. As we stated in our manuscript (and also from other research citations), for example, increasing the pH of soils due to CFA application is having an influence on increasing the availability of other nutrients such as nitrogen and phosphorus. We have provided this description in our manuscript.
- Our study showed that CFA contains a number of heavy metals which, when applied to soil, can cause translocation of heavy metals from soils to plant tissue. In this study we have conducted a greenhouse experiment to determine the effect of CFA application on the contents of heavy metals in tissue plant. The results of our study showed that CFA application indeed increased the contents of heavy metals in plant tissue. However, the presence of organic matter (EFBOP) reduced the detrimental effect of CFA application. We also cited previous studies which show that CFA applications must be carried out in amounts that are not too high to obtain improvements in land quality and plant growth without causing the accumulation of heavy metals in plants.
- It is stated in this section (and in conclusion) that the crucial role of microbial decomposition in controlling the efficacy of organic matter is to enhance the characteristics of RMS, but no data is shown to prove this statement.
- We have omitted this statement in the manuscript.

Recommendation: revision and rewriting. The inclusion of data/information about the effect of soil properties improvement due to CFA and EFBOP application (from the incubation experiment) on crop performance is strongly recommended.

We have revised and rewritten the manuscript which includes revision of manuscript title by including the phrase ... plant growth and metal accumulation in plant tissue... This phrase was also added in the aim of the study. We have also added a greenhouse experiment to show the effect of CFA and EFBOP on the plant growth and metal contents in plant tissue

Accepted

Akmad R. Saidy

From: JDMLM Editorial Office <editor.jdmlm@ub.ac.id>
Sent: Minggu, 18 Februari 2024 08.28
To: Akmad R. Saidy
Subject: [JDMLM] Editor Decision: 16391-SM
Attachments: 16391-SAIDY et al-gp.pdf

Dear Authors:

[Akhdad R. Saidy, Bambang J. Priatmadi, Meldia Septiana, Ratna, Ismet Fachruzi, Hairil Ifansyah, Afiah Hayati, Muhammad Mahbub, Abdul Haris]

After correcting some typos and some other details, we are pleased to inform you that your revised manuscript entitled "**Changes in properties of reclaimed-mine soil, plant growth, and metal accumulation in plants with application of coal fly ash and empty fruit bunches of oil palm**" can be ACCEPTED for publication in the Journal of Degraded and Mining Lands Management (JDMLM).

We are attaching the Galley Proof of your ready-to-publish article for proofreading. You can make corrections by marking yellow on the attached file (to enable us to track the changes) and sending the corrections back to us soon through this email address **before 24 February 2024**.

Your article will likely come in Vol. 11, No. 3 (1 April 2024). However, the article pages have not been set up yet; we await your confirmation.

With regards

Eko Handayanto
Editor in Chief

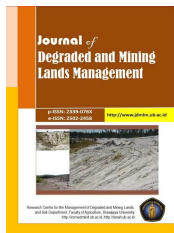
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Date: 19 February 2024

LETTER OF ACCEPTANCE

Paper No: 16391-SM

To,

Akhmad R. Saidy^{1,2,3}, Bambang J. Priatmadi^{1,3}, Meldia Septiana¹, Ratna¹, Ismet Fachruzi¹, Hairil Ifansyah¹, Afiah Hayati¹, Muhammad Mahbub¹, Abdul Haris^{1,3}

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Dear Authors,

We are pleased to inform you that your article entitled **"Changes in properties of reclaimed-mine soil, plant growth, and metal accumulation in plants with application of coal fly ash and empty fruit bunches of oil palm"** has been **accepted** for publication in the Journal of Degraded and Mining Lands Management (p-ISSN: 2339-076X, e-ISSN: 2502-2458). The article will likely come in Vol. 11. No. 3 (1 April 2024).

Sincerely yours



Prof Eko Handayanto PhD

Editor in Chief



SJR 2022
0.22

Scopus coverage years: from 2019 to Present, Scopus CiteScore 2022 = 1.3,
SNIP 2022 = 0.468, SJR 2022 = 0.222, H-index = 7