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# #617 Summary

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## **Submission**

Authors	Susila Herlambang, Purwono Budi Santoso, Heru Tri Sutiono, Susanti Rina Nugraheni
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#### **Authors**

Name	Susila Herlambang 🖺
Affiliation	Department of Soil Science, Universitas Pembangunan Nasional Veteran Yogyakarta
Country	Indonesia
Bio Statement	Lecturer
Name	Purwono Budi Santoso 🖺
Affiliation	Department of Soil Science, Universitas Pembangunan Nasional Veteran Yogyakarta
Country	Indonesia
Bio Statement	_
Name	Heru Tri Sutiono 🖺
Name Affiliation	Heru Tri Sutiono 🖺  Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta
Affiliation	Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta
Affiliation  Country	Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta Indonesia
Affiliation  Country	Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta Indonesia
Affiliation  Country  Bio Statement	Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta Indonesia —
Affiliation Country Bio Statement Name	Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta Indonesia  — Susanti Rina Nugraheni
Affiliation  Country  Bio Statement  Name  Affiliation	Department of Management, Universitas Pembangunan Nasional Veteran Yogyakarta  Indonesia  —  Susanti Rina Nugraheni  Department of Chemical Engineering, Universitas Pembangunan Nasional Veteran Yogyakarta

# **Title and Abstract**

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biochar; environment; marginal soil; organic waste; paddy soil

Title The application of biochar and organic matter for proper cultivation on paddy soil

Abstract

Top soil was rich in nutrients for plant growth. Upper soil loss due to mining is a serious problem. The remaining soil was subordinate land which has poor soil characteristics and low productivity. This study aimed to improve the characteristics of mined soils by providing soil amelioration. The study was conducted in a former brick mining area in the village of Potorono Banguntapan, Yogyakarta, Indonesia. The study consisted of two stages. The first stage was a pot experiment using soils from a former brick mining area. The soil was mixed with coconut shell biochar as an ameliorant material at doses of 0, 10, 15 and 20 t/ha and incubated for 1, 2 and 3 months. The second phase of research was a demo farm. The demo farm aimed to compare the best results of the use of biochar in the first stage of this study with organic matter application in the second phase of the study. The organic matters used were cow dung and bagasse. Each of the two types of organic matter was applied at a rate of 15 t/ha. The organic matters were incorporated into the soil in a demo farm plot of  $4x4 \text{ m}^2$  size in 1, 2 and 3 months. The results showed that application of coconut shell biochar ameliorant at a dose of 15 t/ha increased soil organic-C by 0.78% at two months of incubation, while soil cation exchange capacity increased at three months of incubation. The yield of plants obtained from the soil previously applied with coconut shell biochar was better than that applied with cow dung and bagasse as organic matters.

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# Supporting Agencies

Agencies

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#### References

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## Author

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#### Information

- For Readers
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#### Keywords

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