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Spores Diversity of Arbuscular Mycorrhizal Fungi and Their Use for Land Reclamation in Coal Mining Used Land

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ABSTRACT

This research was to obtain spores of Arbuscular Mycorrhizal Fungi [AMF] from rizhosphere of corn, gaharu [Triangle wood] and cocoa plants which had been able to grow in coal mining used land that had been heavily destructed. Analysis of the soil in research location showed that the soil did not have good chemical character and fertility marked by low pH and low content of N, P, K and Ca. Observation on soil from the rhizospheres of corn, gaharu [Triangle wood], and cocoa growing in coal mining used land showed that there were nine species of AMF spores identified, namely *A. spinosa*, *A. scrobiculata*, *A. tuberculata*, *G. claroideum*, *G. etunicatum*, *G. fistulosum*, *G. luteum*, *G. versiforme*, and *G. Sp*. After being identified, the FMA spores were multiplied in greenhouse as a main source for manufacturing FMA natural fertilizer which would be applied in greenhouse and field.

KEYWORDS: *Arbuscular Mycorrhizal Fungi, Coal Mined Land, Rhizosphere*

INTRODUCTION

Most of land used as coal mining is let fallow after being exploited mainly in an opened mining land. If the land is not rehabilitated it would cause the land to be critical and the ecosystem is destructed. To improve the ecosystem quickly it needs a series of appropriate reclamations in the degraded land. This activity was aimed at improving the unstable land condition, reducing erosion, and in long term improving micro climate in revegetation areas. Using