

# Exploitation of Native Bio-inoculants in Wasteland Management

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**Key Words:** - Bio-inoculants, AMF, Vermicompost.

## Abstract

An extensive survey of Samleshwari Open Cast Project (OCP) of Mahanadi Coalfields Limited (MCL), Odisha was conducted throughout the year to record the impact of mining on native vegetation. Though it is not at all advisable to suggest the ban on mining but due to apparent loss of native plants it may be recommended for the application of native bio-inoculants i.e. Mycorrhizae along with vermicompost for the revegetation of overburden dumps.

Vermicompost (VC) along with propagules of Arbuscular Mycorrhizal Fungi (AMF) i.e Endomycorrhizae when applied with coal mine overburden dump (OBD) soil in 1:1&2:1 (w/w) ratios improved morphometric growth in terms of Shoot height, number of branches and number of leaves of *Jatropha curcas* plant significantly. However, the former combination was found superior than latter. The same dose of VC+ OBD soil + AMF was also noticed to influence the spore population and root colonization of mycorrhizal fungi in soil.