

**Comparative Effect of *Rhizobium* and Vesicular Arbuscular
Mycorrhiza Inoculation on Cowpea in Mine Waste Soils of
Orissa**

T.K. Routray, R. Patnaik, G.S. Padhi and A.K. Mishra

*Laboratory of Microbiology, P.G. Department of Botany, Utkal University,
Bhubaneswar 751 004, Orissa, India*

KEYWORDS Heavy Metal Toxicity. Legume. Minesoil. Rhizobium. VAM

ABSTRACT Due to heavy mining activities the yield of cowpea is decreasing drastically at the valleys of Sukinda and Kalipani, in Orissa. To improve plant growth and yield and mine soil status, biofertilisers like *Rhizobium* and VAM fungi (*Glomus mosseae*) were selected and tested in nursery conditions. Dual inoculation of *Rhizobium* and VAM, showed much better plant growth than single strain inoculation. Dilution of mine soil with sand (25%) further improves growth and nodulation of Cowpea.