

Biological Mining of Soil Reserve Phosphorus in Lowland Rice (*Oryza sativa* L.)

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ABSTRACT

A field experiment entitled "Biological mining of soil reserve phosphorus in lowland rice (*Oryza sativa* L.)" during *kharif* 2009-10 was conducted on sandy clay loam soils of the Agricultural College Farm, Bapatla. Inoculation of PSB recorded the highest grain and straw yields at each level of P application, however, it was on a par with other biological treatments. The maximum P uptake was recorded with application of 60 kg P₂O₅ ha⁻¹ (P₃) and it was significantly superior to rest of the P levels. Soil inoculation of PSB recorded significantly the maximum P uptake over other biological treatments, but remained comparable with greenmanuring *in-situ* (T₃). The maximum Apparent Phosphorus Recovery (APR) and Phosphorus Use Efficiency (PUE) was recorded with inoculation of PSB along with 20 kg P₂O₅ ha⁻¹.

Key words : APR, Available P, Biological mining, Greenmanure, PSB, PUE, Rice, VAM.