

**SCREENING THE ENDOPHYTIC BACTERIA FROM
MANDARIN ROOTS FOR SOLUBILIZATION OF
INSOLUBLE PHOSPHORUS COMPOUNDS
PRESENTING IN ACID SULFATE SOIL**

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Summary

It is necessary to partly exchange chemical fertilizers by biological methods for mandarin cultivation to obtain sustainable agriculture in acid sulfate soil. The objective of this research was to select the endophytic bacteria from mandarin root possessing solubilization capacity of insoluble phosphorus compounds. From 78 strains of endophytic bacteria were isolated from media LGI and NFB, strains LM-N-L-29, LM-N-N-09, LM-N-N-10 and LM-N-N-16 were selected for solubilization of Al-P compound, strains LM-N-L-19 and LM-N-N-04 for solubilization of Fe-P compound and LM-N-L-30 and LM-N-N-22 for solubilization of Ca-P compound. The ability for solubilization of Fe-P of bacteria isolated from medium NFB was better than that of from medium LGI. The phosphorus concentration from selected strains were solubilized from Al-P, Fe-P and Ca-P compounds as follows 54.1-57.5, 41.6-115.6, 23.6-23.8 mg/L, respectively.

Keywords: *Acid sulfate soil, endophytic bacteria, mandarin, phosphorus solubilization.*