

ISOLATION AND SELECTION OF ENDOPHYTIC BACTERIA FROM MANDARIN ROOTS IN ACID SULFATE SOIL FOR ABILITY OF NITROGEN FIXATION

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Summary

One of the most sustainable methods for mandarin cultivation was to use microorganisms to partially reduce chemical fertilizers. The objective of this research was to select the endophytic bacteria from mandarin root possessing the capacity of nitrogen fixing and IAA production. The results showed that 78 strains of endophytic bacteria were isolated from media LGI and NFB. The selected strains of nitrogen fixing were included LM-N-L-29, LM-N-N-36 and LM-N-N-10 and potential strains of IAA synthesis were included LM-N-L-26 and LM-N-N-14. Nitrogen concentration of selected endophytic bacteria was determined 8.55-181.9 mg/L while IAA production was detected approximately 33.1-50.9 mg/L. Five selected strains that were isolated were recommended to identify by 16S rRNA to use as biofertilizers for mandarin field.

Keywords: *Acid sulfate soil, endophytic bacteria, mandarin, nitrogen-fixing, IAA.*