

DETERMINATION OF CHARACTERIZATION OF ANTAGONISTIC ACTINOMYCETES ISOLATES IN PREVENTION OF SHEATH BLIGHT DISEASE ON RICE

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Summary

The objectives of this research were to study the characterization of Actinomycetes isolates such as the activity of reduction of sclerotia germination and the growth promoting of antagonistic actinomyces isolates in prevention of sheath blight disease on rice. There are 7/12 isolates could reduce the sclerotia germination of *R. solani* on PDA medium at 5 days after testing. Evaluation of the solubilization insoluble phosphate of 12 Actinomycetes isolates, the results indicated that 10 isolates can solubilize insoluble phosphate and 2 actinomycetes isolates (*Actinomyces* spp. CT-ST1b and *Actinomyces* spp. KS-ST8b) showed radiuses of clear halo zones higher than other treatments. In addition, the results also showed that all most 12 *Actinomycetes* isolates could produce indoleacetic acid and the *Actinomyces* spp. TO-VL11b isolate was the highest IAA production (2.25 µg/ml). When seedlings of Jasmine 85 variety were soaked in 12 Actinomycetes isolates and the *Actinomyces* spp. TO-VL11b isolate showed plant growth-promoting ability, ratio of germination, shoot length, root length and dry weight root higher than the other treatments.

Key words: *Actinomycetes*, *growth-promoting*, *IAA*, *phosphate solubilization*, *sheath blight disease*.