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Characterization of *Azospirillium* and phospho-solubilizing bacterial isolate from salt-affected soil and their effect on rice (*Oryza sativa*) crop

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ABSTRACT : The study was designed to isolate and characterize nutrient mobilizing soil microbes from salt affected soil of north Bihar. Out of 43 total 17 isolates of *Azospirillium* (12) and PSB (5) were selected in which, all the isolates produced one or the other different characteristics involved in plant growth promotion. They produced phytohormones like indole acetic acid, phospho-solubilization, siderophore and N_2 fixation. The observations were made with 21 treatments. The experiments on rice were carried in Randomized Block Design with three replications. In the present investigation an attempt has been made to ascertain the effect of PGPR in different plant parameter such as tillers, effective tillers, plant height, panicle length, grain yield, straw yield and test weight.

KEY WORDS : *Azospirillium*, Phospho-solubilizing, Bacterial isolate, Rice

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