

Isolation and Characterization of Stress Tolerant Plant Growth Promoting Rhizobacteria and their Plant Growth Promoting Activities

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ABSTRACT

Rhizobacteria that benefit plant growth and development are called Plant Growth Promoting Rhizobacteria (PGPR). PGPR is the rhizosphere bacteria that can enhance plant growth by a wide variety of mechanisms. A lab experiment was conducted in the year of 2016-17 at the Dept. of Agricultural Microbiology. In the present study eight soil samples were collected from black gram rhizospheric soils of Ananthapur district. From those soil samples sixteen bacterial strains were isolated and identified as eight isolates were *Rhizobium* and eight isolates was *pseudomonas*. PGP characterization of these isolates was done. Out of sixteen isolates eleven isolates exhibited maximum plant growth promoting activities. Out of 11 isolates five isolates exhibited higher phosphate solubilization efficiency.

Key words: *PGPR, Rhizobium, Pseudomonas, Plant Growth Promoting Activities*