INDOLE ACETIC ACID PRODUCTION BY SALT TOLERANT FREE LIVING BACTERIA ASSOCIATED WITH WHEAT RHIZOSPHERE

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Abstract: Plant growth promoting rhizobacteria (PGPR) are known to influence plant growth by various direct or indirect mechanisms. In search of efficient PGPR strains with high activity of IAA , a total of 58 isolates belonging to *Pseudomonas, Azotobacter* and *Bacillus* were screened for plant growth promoting trait ie. indole acetic acid (IAA).The eighteen isolates (nine *Azotobacter*, six *Pseudomonas* and three *Bacillus*) were evaluated for quantitative IAA production. All the *Azotobacter* isolates shown to produce higher range (95.60-175.20 µg/ml) of IAA, while *Pseudomonas* produced (44.40- 95.00 µg/ml) IAA. More interestingly all *Bacillus* isolates also shown high potential of producing in the range of 95.60-170.20 µg/ml of IAA. The isolate Azt5, Bc1 and Bc3 tolerated 7% NaCl concentration.

Keywords: PGPR, Wheat Rhizosphere, Indole acetic acid, Salt tolerance

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