

PSEUDOMONAS: UNIQUE PLANT GROWTH PROMOTING RHIZOBACTERIA

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Abstract : Plant growth promoting rhizobacteria promote plant growth and productivity has internationally been accepted. Fluorescent pseudomonas have been extensively studied as a plant growth promoting rhizobacteria (PGPR). Pseudomonads are known to interact with host plant via chemical mediators that develop a symbiotic relationship. During their close association, they influence the growth of host plant by delivering beneficial effects in rhizosphere. Pseudomonads promote the growth of plants either by direct supply of nutrients, synthesis of phytohormones, solubilization of minerals, or indirectly as a biocontrol agent suppressing the pathogens. Cumulative effect of combination of above properties projects it as bacteria of great economic importance. This is usually achieved by either one or blend of several factors released in rhizosphere by symbiont. These include secretive secondary metabolites e.g. Antibiotics, toxins, enzymes, HCN etc. which inhibits the pathogen or chelators like siderophores which generate the microenvironment, a competitive one for pathogen. These bioformulations also enhanced soil fertility and the PGPR activity also increased grain yield.

Keywords : Growth promoting, Pseudomonas, Rhizobacteria

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