

PLANT GROWTH PROMOTING *RHIZOBIUM* R7, R10, R14 ENHANCE PRODUCTIVITY IN RICE CROP

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Abstract: *Rhizobium* R7, R10 and R14 was selected for present study. These strains were already, characterized and produced HCN, Siderophore, IAA and P-solubilizing and enhanced the plant growth in *Mucuna pruriens* (Deshwal et al., 2011a). Field experiment was conducted and four sets of treatment were prepared i.e. treatment I – *Rhizobium* R7; treatment II – *Rhizobium* R10; treatment III – *Rhizobium* R14; treatment IV- Non-bacterized seed. Data showed that all *Rhizobium* strains improved plant growth and productivity. Maximum seed germination was observed in *Rhizobium* R7 which was 122.78% as compared to control. Maximum shoot length was observed in *Rhizobium* R7 but maximum root length was observed in *Rhizobium* R14. Bacterized *Rhizobium* R7, R10 and R14 increased by 193.61, 187.23, 159.57% respectively as compared to control plant.

Keywords: Plant growth promoting *Rhizobacteria*, *Rhizobium*, rice crop

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