ROLE OF PLANT GROWTH PROMOTING RHIZOBACTERIA (PGPR), SULPHUR AND MICRONUTRIENTS ON THE COST PRODUCTION OF LENTIL (*LENS CULINARIS).*

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Abstract: Bacteria that colonize roots effectively are termed "Rhizobacteria". PGPR are free-living bacteria and some of them invade the tissues of living plants and cause unapparent and symptomatic infections when applied to seeds or crops, enhance the growth of the plant or reduce the damage from soil-borne plant pathogens. An experiment was conducted at the farm of J. V. College, Baraut, during Rabi seasons of 2008-09 on nodulation of Lentil (*Lens culinaris*). Inoculated with PGPR, S and micronutrients viz. Mn, Zn and Mo. Application of PGPR along with S @ 60 kg/ha, Zn @ 4 kg/ha, Mn @0.5 kg/ha and Mo @ 0.1 kg/ha significantly increases protein content, The use of PGPR along with S and Mn (7,498 Rs. in 2008 & 7,768 Rs. in 2009) was the most economical treatment with higher net return followed by PGPR + S +Mo + Mn (7.323 Rs. in 2008 & 7,533 Rs. in 2009)> PGPR + S(7,113 Rs. in 2008 & 7,233 Rs. in 2009). It is concluded that use of PGPR, S and micronutrients would be an effective approach in term of cost production of lentil under natural conditions.

Keywords: PGPR (Plant growth-promoting rhizobacteria), S (Sulphur), Micronutrient (Mn, Zn & Mo), *Lens culinaris,* L-4076 and PL-406

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