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EFFECT OF RHIZOBIUM INOCULATION AND DIFFERENT LEVELS OF PHOSPHORUS ON THE YIELD, NUTRIENTS UPTAKE OF GREEN GRAM (*VIGNA RADIATA* L.) CV. K-851 AND ON CHEMICAL PROPERTIES OF SOIL

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ABSTRACT : A field experiment was carried out in kharif season, 2002 in the crop Research Farm Department of Agronomy, Allahabad Institute-Deemed University. The study was conducted on "Effect of Rhizobium inoculation and different levels of Phosphorus on the yield, nutrients uptake of green gram (*Vigna radiata* L.), Cv. K-851 and on chemical properties of soil". The design was 2x4 factorial (RBD) with two levels of Rhizobium (R_0 and R_1) and four levels of Phosphorus (P_0, P_{30}, P_{60} and P_{90}) on seed inoculation with Rhizobium and different levels of Phosphorus of green gram (seed inoculated with Rhizobium and 90 kg P_2O_5/ha) showed significantly increase in number of nodules, grain yield, nutrient uptake and concentration of N, P and K in plant over untreated control, there was significant increase in available nitrogen and organic carbon (%) in soil after crop harvest.

Key Words: Rhizobium, phosphorus, green gram, yield attributes, soil chemical properties.