



Research Article

Effect of phosphorus and bio-fertilizers on growth yield and economics of summer green gram [*Vigna radiata* (L.) Wilczek]

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SUMMARY : A field experiment was conducted during summer 2010 at Instructional farm, Junagadh Agricultural University, Junagadh (Gujarat) on clayey soil to study the effect of phosphorus and bio-fertilizers on growth, yield and economics of green gram. Twelve treatments comprising all possible combinations of four levels of phosphorus viz., 0, 20, 40 and 60 and three levels of bio-fertilizers viz., control, with liquid PSB (Phosphate solubilizing bacteria) inoculation and with liquid *Rhizobium* inoculation were tried in factorial Randomized Block Design with three replications. The result of the experiment indicated that application of 60 kg P₂O₅/ha and seeds inoculated with *Rhizobium* significantly increased the growth parameters viz., plant height, branches per plant, dry weight of nodules, leaf area index and dry matter accumulation as well as yield attributes like number of pods per plant, grain yield per plant, stover yield and test weight. The significantly highest seed (1140 kg/ha) and stover (5890 kg/ha) yields recorded by application of 60 kg P₂O₅/ha which was at par with 40 kg P₂O₅/ha level. The highest seed yield (1100 kg/ha) was recorded by application of *Rhizobium* inoculation over liquid PSB inoculation and control.

KEY WORDS :

Bio-fertilizer,
Phosphorus,
Level green gram

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