



Research Note

Effect of different fertility and bio-fertilizer levels on yield and economics of summer green gram

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ABSTRACT : An investigation was carried out on sandy loam soil at Pulse Research Station, Model Farm, Anand Agricultural University, Vadodara, Gujarat during summer season of the year 2009-10. The variety V_2 (Meha) produced significantly higher seed and stover yield by 8.60 and 11.59 per cent, respectively as compared to the variety V_1 (GM-4). Application of F_3 (100 % RDF) recorded significantly higher seed and stover yield ha^{-1} over F_0 (control). The magnitude of increase in seed and stover yield with *Rhizobium* + PSB was to the tune of 8.12 and 7.69 per cent, respectively over no inoculation. Maximum net realization of Rs. 26327 ha^{-1} , Rs. 30262 ha^{-1} and Rs. 26181 ha^{-1} was also registered under Meha variety, application of 100 per cent RDF and treatment B_1 (*Rhizobium* + PSB), respectively.

KEY WORDS : Fertility levels, Bio-fertilizers, Yield, Economics, Green gram

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Green gram commonly known as “mung” or “mung bean” is the most important crop of the south-east Asia and particularly the Indian subcontinent. This popular and ancient crop is specially recognized as an excellent source of protein.

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The calorific value of green gram is 334 calories per 100g and its chemical composition is as follows: crude protein 24.0 per cent, fat 1.3 per cent, carbohydrate 56.6 per cent, minerals 3.5 per cent, lysine 0.43 per cent, methionine 0.10 per cent, calcium 124 mg, phosphorus 3.26 mg and iron 7.3 mg (Kachroo, 1970). It also plays an important role in maintaining and improving the fertility of soil through its ability to fix atmospheric nitrogen in the soil by root nodules. Nodules on the root of green gram having *Rhizobium* bacteria, fix about 35 kg ha^{-1} atmospheric nitrogen (Gupta *et al.*, 2006). Pulse as well as mung bean production has been steadily decreasing due to reduced acreage. Therefore, to meet the situation, it is necessary to boost up the production through varietal development and proper management practices. The present study was, therefore, undertaken to find out the effect of levels of fertility and bio-fertilizer on of green gram genotypes.

The field experiment was conducted at Pulse Research Station, Anand Agricultural University, Model Farm, Vadodara, Gujarat during the summer season of the year 2009-10. The soil of the experimental field was sandy loam in texture with pH of 7.6. The soil was medium in available N (270 kg ha^{-1}), available P (42.5 kg ha^{-1}) and high in available K (285 kg ha^{-1}) and the organic