



Varietal response to different levels of fertility and bio-fertilizers on yield and quality of summer green gram (*Vigna radiata* L.)

A.V. SHELKE*, V.V. SONANI, V.P. GAIKWAD¹ AND S.S. RASKAR²

Pulses Research Station, Model Farm, Anand Agricultural University, VADODARA (GUJARAT) INDIA
(Email : vvsonani1@yahoo.com, vaibhavgaikwad22@gmail.com)

Abstract : The field experiment on varietal response to different levels of fertility and bio-fertilizers on yield and quality of summer green gram was conducted on sandy loam soil at Pulses Research Station, Model Farm, Anand Agricultural University, Vadodara, Gujarat during summer season of the year 2009-10. The variety V₂ (Meha) produced significantly higher seed and stover yield by 8.60 and 11.59 per cent, respectively as compared to the variety V₁ (GM-4). The yield and yield attributes as well as protein content in seed increased significantly with increase in fertility levels up to 75 % RDF (30-15-0 kg NPK ha⁻¹) except number of pods plant⁻¹ which was increased only up to 50 % RDF (20-10-0 kg NPK ha⁻¹). Seed treatment of *Rhizobium* + PSB significantly improved the seed and stover yields as well as protein content in seed as compared to control.

Key Words : Varieties, Green gram, Fertility levels, Bio-fertilizers, Yield, Quality

View Point Article : Shelke, A.V., Sonani, V.V., Gaikwad, V.P. and Raskar, S.S. (2013). Varietal response to different levels of fertility and bio-fertilizers on yield and quality of summer green gram (*Vigna radiata* L.). *Internat. J. agric. Sci.*, **9**(1): 264-266.

Article History : Received : 27.08.2012; Revised : 26.10.2012; Accepted : 10.12.2012

INTRODUCTION

Pulses contain a high percentage of quality protein nearly three times as much as cereals. Thus they are cheaper source to overcome protein malnutrition among human beings (Kachroo, 1970). It is the most important plant group which concerned in symbiotic nitrogen fixation (Gupta *et al.*, 2006). In spite of significant importance of this crop, the yield is very low in India as well as in Gujarat probably due to the fact that, its cultivation is mainly confined under rainfed conditions and in poor textured soils. To meet the increasing demand of pulses, a time has come to give a serious thought for increasing either area or yield per unit area of this crop. Among the factors affecting crop production, proper management of nutrients plays a vital role in increasing the green gram production. Optimum fertilizer application either in the

form of organic, inorganic or bio-fertilizers is one of the well established techniques for increasing the crop production. Among the pulses, green gram (*Vigna radiata* L.) is one of the most important crop which is commonly grown in summer and rainy seasons in India. 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.

MATERIALS AND METHODS

The field experiment was conducted at Pulses Research Station, Anand Agricultural University, Model Farm, Vadodara,

* **Author for correspondence and Present Address** Agricultural Research Station (A.A.U.) ARNEJ (GUJARAT) INDIA
(Email : ashokagreat85@gmail.com)

¹Anand Agricultural University, ANAND (GUJARAT) INDIA

²College of Agriculture, AMBI (M.S.) INDIA (Email : rsaskarsameer98@gmail.com)