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## **RESEARCH PAPER**

## Productivity, quality, nutrient content and soil fertility of summer greengram (*Vigna radiata*) as influenced by different levels of vermicompost and phosphorus with and without PSB

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**Abstract :** A field experiment was conducted at the Agronomy Instructional Farm, C. P. College of Agriculture, S. D. Agricultural University, Sardarkrushinagar during 2010 on loamy sand soil to investigate the effect of different levels of vermicompost and phosphorus with and without PSB on yield, quality, nutrient content of summer greengram and soil fertility status after harvest of the crop. Among the different levels of vermicompost, application of vermicompost @ 1t ha<sup>-1</sup> sowed its superiority, producing highest seed (1105 kg ha<sup>-1</sup>) and stover yield (2379 kg ha<sup>-1</sup>). The same treatment exhibited significant improvement in recording maximum values for the protein content, nutrients content and uptake of summer greengram. Among the levels of phosphorus @ 40 kg  $P_2O_5$  ha<sup>-1</sup> + PSB standing statistically at par with 40 kg  $P_2O_5$  ha<sup>-1</sup> recorded significantly higher seed (1099 kg ha<sup>-1</sup>) and stover yield (2301kg ha<sup>-1</sup>) over PSB only and 20 kg  $P_2O_5$  with and without PSB. Phosphorus application @ 40 kg ha<sup>-1</sup> + PSB performed equally as that of  $P_2O_5$  40 kg ha<sup>-1</sup> without PSB, significantly improved the protein content, nutrients content and uptake as well as soil fertility status after harvest the crop.

Key Words : Vermicompost, Phosphorus, PSB, Summer greengram

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