



RESEARCH ARTICLE :

Response of fertilizer levels on growth and yield of *Kharif* greengram (*Phaseolus radiatus* L.)

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SUMMARY : A field experiment entitled “Response of fertilizer levels on growth and yield of *Kharif* greengram (*Phaseolus radiates* L.)” was conducted at Agriculture Research Farm, Saikrupa College of Agriculture, Ghargaon during season 2015. The trial was laid out in Randomized Block Design with eight treatment due to four fertilizer levels (0% No fertilizer, 75% 18.75 + 37.50, 100% 25.00 + 50.00 and 125% 31.25 + 62.50 of recommended dose ha⁻¹) replicated thrice. The soil of the experimental plot was well drained and grouped under inceptisol having depth of 35 cm. The soil was medium in available nitrogen, medium high in phosphorus, very high in available potash, medium in organic matter content and was slightly alkaline in reaction. The experimental crop was sown on 15th June 2015 by dibbling as per plant densities treatments. Fertilizer levels were applied as per treatments at the time of sowing. Amongst the growth attributes *viz.*, plant height, number of branches, number of leaves, leaf area and dry matter plant⁻¹ were significantly influenced by fertilizer level of 125% RDF ha⁻¹ over 0% RDF and 75% RDFha⁻¹. It was at par with 100% RDF ha⁻¹. The yield attributes *viz.*, number of pods plant⁻¹, length of pod, weight of pods, number of grains pod⁻¹, test weight of grains were increased significantly with 125% RDF ha⁻¹ over 0% RDF and 75% RDF ha⁻¹. It was at par with 100% RDFha⁻¹. The grain and straw yield, protein content, nutrients uptake by plant and available NPK in soil at harvest of crop, gross and net monetary returns along with B:C ratio were increased significantly with increase in fertilizer levels upto 125% RDFha⁻¹ over 0% RDF and 75% RDF ha⁻¹. It was at par with 100% RDF ha⁻¹. Amongst the growth attributes plant height increased significantly as the plant population increased and row spacing decreased.

KEY WORDS :

Kharif greengram,
Fertilizer level, RDF,
Growth, Yield,
Economics

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