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Research Article

Effect of phosphorus and sulphur on growth, yield and quality of blackgram (*Phaseolus mungo* L.)

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Summary

The experiment was conducted at the instructional farm of Narendra Deva University of Agriculture and Technology, Narendra Nagar, Kumarganj, Faizabad (U.P.) during *Kharif* season, 2007. Sixteen treatments were replicated thrice in Randomized Block Design. Black gram variety Pant Urd-35 was taken as test crop. The data revealed that 45 kg ha^{-1} P and 30 kg ha^{-1} S significantly increased growth parameters such as plant height, number of branches and dry matter accumulation. The same treatment combination proved most effective in improving the yield and yield attributing characters *viz.*, number of pods, number of grains per pod, grains wt. per plant, test weight, grain and straw yield. Application of 60 kg P and 45 kg S ha^{-1} produced highest grain and straw yield along with nutrients content and uptake of nitrogen, phosphorus, potassium and sulphur over rest of the treatments .However, this treatment was at par with the application of 45 kg P and 30 kg S ha^{-1}. A considerable buildup of soil fertility was also noted in this treatment. However, benefit: cost ratio was maximum with $P_{45}S_{30}$ treatments combination. Thus, recommendation of 40 kg sulphur and 10 kg zinc ha^{-1} can be made to the farmer's of eastern Uttar Pradesh for obtaining good yield, net rerun and fertility build up of soil.

Key words : Phosphorus, Sulphur, Growth, Yield, Blackgram

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