

Research Article

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Effect of integrated use of phosphorus, biofertilizers and organic manures on soil available nutrient status and yield of greengram (*Vigna radiata* L.)

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Summary

The effect of inorganic phosphorus, phosphate solubilising bacteria and vermicompost on yield of greengram and available nutrient status was studied during *Kharif* 2016 at Agricultural College, Polasa, Jagtial, Telangana state, India. The experiment was conducted with three levels of phosphorus (0, 75 and 100 % RDP), phosphate solubilising bacteria (0 and 2 kg ha⁻¹) and vermicompost (0 and 5 t ha⁻¹). The results revealed that grain and haulm yields were increased with increasing inorganic P levels and when the crop was supplemented with PSB and vermicompost. Significantly higher grain (1033.33 kg ha⁻¹) and haulm yield (1625.66 kg ha⁻¹) were recorded when the crop was integrated with 100 % RDP along with PSB and vermicompost. Results also indicated that there was a significant build-up in available N, P, K and S status with increasing inorganic P levels, seed inoculation with PSB and vermicompost application. Thus, it shows positive influence by the application of phosphatic fertilizers, organic manures and biofertilizers.

Key words : Integrated phosphorus management, Green gram, Yield, Phosphorus levels, PSB, Available nutrients

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