

Research Article

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Effect of organic manures and rock phosphate on growth and yield of Bengal gram (*Cicer arietinum* L.)

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Summary

A field experiment was conducted on vertisols at Natural Resources Protection and Development Society Research Station, Namakkal during *Rabi* season of 2012-13 and 2013-14 to study the effect of organic manure and rock phosphate on growth and yield of Bengal gram (*Cicer arietinum* L.) in vertisols of Tamil Nadu. Significantly higher grain yield was recorded with rock phosphate application @ 200 kg/ha (2140 kg/ha) over 50 kg and 100 kg of rock phosphate per hectare except rock phosphate @ 150 kg/ha (2069 kg/ha). Interaction effect of compost 5 t along with rock phosphate 200 kg/ha recorded significantly higher grain yield 2130 kg/ha and haulm yield (3300 kg/ha) over other treatment combinations except either for organic manures FYM 5 t or compost 5 t along with 150 to 200 kg rock phosphate per ha. Significantly higher B:C ratio (3.32) was recorded with rock phosphate @ 200 kg/ha over other lower levels. Similarly, combination of compost @ 5 t/ha with 150 kg rock phosphate resulted in higher B:C ratio (3.37).

Key words : Rock phosphate, Organic manures, Phosphate solubilising bacteria

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