

Research Article

Impact of nitrogen and phosphorus on growth and yield of chickpea (*Cicer arietinum* L.)

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Summary

Balanced fertilizer use is the key to get maximum crop yield. The aim of the study was to find out proper nutrient management in chickpea using the different sources of nutrients. A field experiment was carried out at Department of Soil Science, Sam Higginbottom Institute of Agriculture, Technology and Science; Allahabad, India during 2012-13. The experiment was laid out in Randomized Block Design (4x4 factorial) with 16 treatments in thrice replications on different levels of nitrogen and phosphorus. The treatments included 4 levels of nitrogen (0, 9, 18 and 27 kg ha⁻¹) and 4 levels of phosphorus (0, 30, 60 and 90 kg ha⁻¹). The results revealed that the higher plant height (76.23 cm), number of braches plant⁻¹ (15.67), number of nodules plant⁻¹ (19.68), total number of pod plant⁻¹ (79.67), grain yield (25 qha⁻¹), test weight (284.66g) were recorded in treatment T₁₅-N₃P₃-(N @ 27 kg ha⁻¹+ P @ 90 kg ha⁻¹) and lowest value was found in treatment T₀ (control). This increase in yield occurred due to an increase in growth and development of chickpea crop with nitrogen and phosphorus application.

Key words : Chickpea, Nitrogen, Phosphorus, Growth, Yield**How to cite this article :** Tripathi, L.K., Thomas, T. and Kumar, Sushil (2013). Impact of nitrogen and phosphorus on growth and yield of chickpea (*Cicer arietinum* L.). *Asian J. Soil Sci.*, **8**(2): 260-263.