RESPONSE OF PHOSPHORUS AND WEED CONTROL MEASURES ON YIELD AND YIELD CONTRIBUTING CHARACTERS OF CHICKPEA (*CICER ARIETINUM* L.*)*

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Abstract: The field experiment was conducted during the rabi season of 2005-06 at Agronomy Research Farm at Narendra Deva University of Agriculture and Technology, Narendra Nagar (Kumarganj) Faizabad, U.P. to, study the "Effect of phosphorus and weed control measures on growth and yield of chickpea (*Cicer arietinum* L.)" variety udai (KPG-59). Sixteen-treatment combinations comprised of four levels of phosphorus (control, 20, 40 and 60 kg P2 O5 ha-1) and four treatment of weed control measures (weedy check, Hand weeding at 30 DAS, pendimethline at 1 kg ha^{-1} and rice straw mulch) were tested in Randomized Block design with three replications . Growth and yield attributes as well as root length, number of take were affected significantly due to increase the phosphorus levels. However, weed density and weed dry weight were decreased significantly with increasing levels of root nodules and nodules dry weight, nitrogenase activity and nitrogen and phosphorus up phosphorus. Among the weed control measures, hand weeding at 30 DAS found promising to reduce the weed density as well as weed dry weight. Hand weeding at 30 DAS proved its superiority over other methods of weed control in respect of all the growth characters and yield attributes as well as grain and straw yield of chickpea crop followed by pendimethline at 1.0 kg ha-1. On the basis of economics the highest net return was recorded under the effect of Hand weeding at 30 DAS alone has been found most remunerative which was recorded the highest net income rupee invested of Rs 3.52

Keyword: Chickpea, phosphorus levels, weeds control measures

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