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RESEARCH PAPER

Seed yield of cowpea as influenced by nitrogen and phosphorus levels under enceptisol conditions

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Abstract : An experiment was carried out during *Kharif* season of 2010-2011 at plot no. 11, Main Garden, Department of Horticulture, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola, entitled seed yield of cowpea as influenced by nitrogen and phosphorus level under enceptisol conditions. An experiment was laid out in Factorial Randomized Block Design (FRBD) with sixteen treatment combinations and two factors with four levels of nitrogen *viz.*, 0, 12.5, 25, 37.5 kg ha^{-1} and that of the phosphorus 0, 25, 50, and 75 kg ha^{-1} and replicated thrice. The results revealed that, plant height showed significant influence towards application of nitrogen 37.5 kg ha^{-1} in addition to phosphorus 25 kg ha^{-1}. Main branches plant^{-1} were found maximum with an application of 25 kg nitrogen ha^{-1} and 75 kg phosphorus ha^{-1}. The reproductive characters like days to 50 per cent flowering and days to first picking was recorded minimum with the application of 25 kg nitrogen ha^{-1} and 50 kg phosphorus ha^{-1}. Seed yield and yield contributing characters like pod plant^{-1}, and seed yield ha^{-1}(q) were found significantly maximum, wherein application of 25 kg nitrogen ha^{-1} in addition to 75 kg phosphorus ha^{-1} was undertaken. As regards to the interaction effect, N_2P_2 treatment combination *i.e.* application of 25 kg nitrogen along with 50 kg phosphorus ha^{-1} reflected in the production of maximum seed yield of cowpea.

Key Words : Enceptisol, Cowpea, Nitrogen, Phosphorus

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