



RESEARCH PAPER

Organic nitrogen sources' effects on cowpea [*Vigna unguiculata* (L.) walp] productivity

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Abstract : Pulses are an important source of protein for the poor as well as for the vegetarians which constitute major population of the country. Presently about 24 to 25 million hectares of land is under pulses producing about 19 million tons annually. Pulses production in India is characterized by diversity of crops and their regional specificity based on adaptation to prevailing agro climatic conditions. At the Sardarkrushinagar Dantiwada Agricultural University, SK Nagar Gujarat, a field experiment was done in the *Kharif* season of 2015. Cowpea, variety GC5 was used for the present experimentation. The experiment was laid out in Randomized Block Design with four replications during *Kharif* 2015. Application of T₉ (PSB+ 50%N (Castor cake) + 50% N (Vermicompost) and T₁₀ (RDF: 20+40+00 kg ha⁻¹ through fertilizer) increased plant height at 30 DAS, while treatment T₉ PSB+ 50%N (Castor cake)+ 50% N vermicompost recorded higher plant height at 60 DAS and at harvest. Under treatment T₉ (PSB+ 50%N (Castor cake) + 50% N (Vermicompost), there was a noticeable improvement in the number of leaves per plant, leaf area per plant, dry matter per plant, branches per plant, and dry weight of root nodules per plant and seed yield. Significant improvement in stover yield were noted with application of 50% N through FYM + 50% N through vermicompost + PSB (T₈).

Key Words : Castor cake, FYM, PSB, Quality, RDF, *Rhizobium*, Vermicompost

View Point Article : Birla, Jinendra and Patel, B.M. (2023). Organic nitrogen sources' effects on cowpea [*Vigna unguiculata* (L.) walp] productivity. *Internat. J. agric. Sci.*, 19 (2) : 398-401, DOI:10.15740/HAS/IJAS/19.2/398-401. Copyright@2023: Hind Agri-Horticultural Society.

Article History : Received : 02.02.2023; Accepted : 03.03.2023

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