

RESEARCH ARTICLE :

Effect of different levels of NPK and vermicompost on physico-chemical properties of soil in greengram [*Vigna radiata* L.] cv. samrat

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SUMMARY : In order to investigate the influence of different levels of NPK and vermicompost on physico-chemical properties of soil, growth and yield parameters of greengram, an experiment based on randomized blocks design with 9 treatments, 3 replications and 27 plots was carried out at research farm department of Soil Science, Sam Higginbottom Institute of Agriculture, Technology and Sciences (Deemed-to-be-University), Allahabad. Treatments were included witness (control), 2 and 4 t/ha vermicompost and NPK fertilizers. Results showed that all agronomic traits were significantly affected by combination of vermicompost and chemical fertilizers compared to the control. The maximum physical and chemical properties were recorded in the treatment T₈ (N, P and K @ 100 % + vermicompost @ 100 %). Bulk density (1.28 Mg m⁻³), Particle density (2.74 Mg m⁻³), %Pore space (51.07 %), pH of soil (7.53), Electrical conductivity (0.25 dS m⁻¹), Organic carbon (0.77 %), Available nitrogen (334.0 Kg ha⁻¹), Available phosphorus (34.71 Kg ha⁻¹), Available potassium (206.35 Kg ha⁻¹), Where as minimum Physico-chemical properties of soil characters was recorded with the treatment T₀ (control).

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