



Effect of organomineral and inorganic fertilizers on the growth, fruit yield and quality of pepper (*Capsicum frutescence*)

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ABSTRACT

Objective: To determine the effect of organomineral and inorganic fertilizers application on the yield and nutrient compositions of pepper (*Capsicum frutescence*) so as to form an objective basis for selection of fertilizer and growth improvement strategies.

Methodology and results: Pepper seedlings were treated with two levels of NPK (0 and 250 kg. ha⁻¹) and five levels of organomineral fertilizers (0, 2, 3, 4 and 5 t. ha⁻¹) and their various combinations. The treatments were assigned randomly and arranged in a randomized complete block design fitted into a factorial experiment, each with three replicates. Pepper growth, seed yield and quality attributes were assessed and subjected to analysis of variance. The growth parameters such as plant height and number of leaves showed increasing response to all the treatments as the rate increased. The yield components increased as the rate increased from 0 to 4 t. OMF ha⁻¹ and thereafter reduced at 5 t. OMF ha⁻¹. The optimum yield of pepper was obtained from sole application of



NPK at 250 kg.NPK ha⁻¹. The combined application of 4 t. OMF and 125 kg. NPK ha⁻¹ gave the highest fruit yield performance of pepper. The concentration of essential elements increased with treatment rates. These were significantly affected by the various treatments except for the effect of NPK on Ca and Mg.

Conclusion and application of findings: The study revealed that yield and nutritional quality of pepper fruit in the Guinea savannah of south western Nigeria could be significantly improved by the sole application of 4 t. OMF ha⁻¹ and 250 kg NPK ha⁻¹, and by their combination at 4 t. OMF and 125 kg NPK ha⁻¹.

Key words: *Capsicum frutescence*, NPK, organomineral, yield, quality.