

EVALUATION OF SOURCES OF ORGANIC MANURE ON THE GROWTH AND YIELD OF GARDEN EGG (*SOLANUM SPP.*) IN THE SUBHUMID GUINEA SAVANNA AND RAINFOREST BELTS OF NIGERIA

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ABSTRACT

Field experiments were conducted at the Teaching and Research Farms of the University of Agriculture, Makurdi and the Cross River University of Technology, Obubra campus during the 2009 cropping season to study the effect of sources of organic manures on the growth and yield of two cultivars of Garden egg in the subhumid Guinea Savanna and rainforest belts of Nigeria. A factorial combination of Garden egg varieties (*Solanum aethiopicum*-Gilo and *Solanum aethiopicum* kumba) and manure sources (0,5,10,20 t ha⁻¹ moringa leaf biomas, 5, 10,15, t ha⁻¹ poultry droppings, 1,2,3 t ha⁻¹ fertiplus) were laid out in a randomized complete block design (RCBD) in three replications. All organic manure resources significantly ($P < 0.05$) increased the growth and yield of the garden egg cultivars over control. Poultry droppings at 15 t ha⁻¹ produce tallest plants, highest number of fruits per plant and highest yield of 9.18 t ha⁻¹ and 8.65 t ha⁻¹ respectively for Makurdi and Obubra, this was followed by Moringa 20 t ha⁻¹ (7.22 and 6.68 t ha⁻¹) respectively for Makurdi and Obubra and Fertiplus 3 t ha⁻¹ with yield of 6.78 and 5.77 t ha⁻¹ respectively for Makurdi and Obubra. Moringa 20 t ha⁻¹ produce the highest dry matter of the plants. The least fruit number of fruits per plant than Kumba and fruit yield in t ha⁻¹ was higher in Gilo. There was no significant interaction between varieties and manure. Yield of both varieties was higher in Makurdi than Obubra Moringa Oleifera leaf biomas and poultry droppings are promising soil conditioners for optimum production of garden egg.

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