



THE EFFECT OF INORGANIC AND ORGANIC FERTILIZERS ON THE GROWTH, YIELD AND QUALITY OF TOMATO FRUITS

OLANIYI J.O. and AJIBOLA A.T.

Department of Agronomy, Faculty of Agricultural Sciences, Ladoke Akintola University of Technology, P.M.B 4000, Ogbomoso, Oyo State, Nigeria.

Corresponding author email: olaniyikunle2005@yahoo.com

ABSTRACT

Objective: Experiments were conducted to determine the effect of inorganic and organic fertilizers application on the growth, yield and nutrient concentrations of tomato fruits (*Lycopersicon Lycopersicum*).

Methodology and results: The field experiments were conducted at the Teaching and Research Farm of the Faculty of Agricultural Science, Ladoke Akintola University of Technology, Ogbomoso (80 10' N and 40 10' E), Nigeria in the cropping seasons of 2004 and 2005. The treatments consisted of two levels of urea (0 and 60 kg N ha⁻¹) and five levels of poultry manure (Pm) (0, 30, 45, 60, 75 t. ha⁻¹). Treatments were laid out in a complete randomized block design and replicated three times. The growth parameters (plant height and number of leaves) showed increasing responses as the amount of urea or manure applied increased. The combined application of the two treatments resulted in the highest

<http://www.e-conference.elewa.org/agriculture>. 

marketable fruit yield. The concentrations of essential nutrient elements increased with various treatments rates, which were significant except K in all the treatments.

Conclusion and application of findings: The yield and nutritional quality of tomato fruits in the Guinea savanna agro ecological zone of the southwestern Nigeria could significantly be improved by the application of sole poultry manure and N fertilizer at 60 t. and 60 kg N ha⁻¹ respectively, or their combined application at 30 kg. N by 60 t Pm ha⁻¹.

Key words: *Lycopersicon lycopersicum*, yield, nutrient contents, poultry manure, mineral N fertilizer.