

## RESPONSE OF THREE VARIETIES OF TOMATOES (*LYCOPERSICON ESCULENTUM*) TO LIQUID ORGANIC FERTILIZER (ALFA LIFE) AND INORGANIC FERTILIZER (NPK 20:10:10) AND FOR SOIL IMPROVEMENTS

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### ABSTRACT

The response of three varieties of tomatoes to liquid organic fertilizer (Alfa Life) and inorganic fertilizer (NPK 20:10:10) and for soil improvements was studied in the Teaching and Research Farm of the Faculty of Agriculture, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. The treatments comprised 1.4ml Alfa life (organic fertilizer) mixed with 81ml of water, 180gNPK 20:10:10 (mineral fertilizer) and control where no treatment was applied. These were laid out in Randomized Complete Block Design (RCBD) with 9 replications, while treatment means were separated using least significant difference (LSD 0.05). The results of the study indicated non-significant differences among the tomato varieties and rates of treatment applied in most of the parameters assessed. Higher fruit yield was recorded in local variety and NPK Fertilizer with value of 96.0gplant<sup>-1</sup> and 57.20gplant<sup>-1</sup> respectively. The interaction between fertilizers and tomato varieties significantly affected the plant height relative to other growth parameters and was effective as week after planting increased. The soil chemical parameters (pH, P, OC, OM, N, K) assessed were enhanced but not significantly different except for N. From the findings of the study local variety and NPK 20:10:10 performed competitively better than the other two tomato varieties and Alfa life respectively. Therefore, Alfa life though organic fertilizer cannot be used for effective tomato production and soil management in the studied area.

**Keywords:** Alfa Life, NPK (20:10:10), Tomatoes, Soil.