

**STATISTICAL ANALYSIS OF THE EFFECT OF FERTILIZER
ON THE YIELD OF DIFFERENT VARIETIES OF CASSAVA USING
RANDOMIZED COMPLETE BLOCK DESIGN**

BY

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ABSTRACT

In this research work; a statistical analysis of the effect of different fertilizers on the yield of different varieties of cassava (odongbo, TMS50395, NR8082) using randomized complete block design. Cassava (*Manihot esculentum*) has assumed an industrial crop status; it is now being grown on large scale, repeatedly season after season on the same piece of land. Under this condition, the fertility of the soil and crop yield decline over time. The application of supplementary nutrient is therefore a sure means by which the fertility of the soil could be sustained to ensure continuous cropping and effective yield on the same piece of land.

The methodology used in this research work is experimental design; the particular design technique applied is the randomized complete block design (RCBD). The randomized complete block design was considered as a result of the two factors (fertilizer and variety) involved in the experiment. The parameters for the model were estimated using the least square approach. The efficiency of the experiment was tested using the coefficient of variation. Appropriate means which were found to be significant were compared using the least significant difference and the corresponding conclusions were made from the analysis of variance (ANOVA) table based on the p-value.

Most times when fertilizers are applied to crops, we expect to get a better yield than when there is no fertilizer. The result obtained showed that fertilizers had significant effect on the number of tuber per plant of cassava, tuber weight per plant of cassava, length of tuber, and on the single root weight per cassava tuber. But it had no effect on tuber girth. The result was arrived at by using S-plus in the analysis of the data.

The conclusions were made based on the p-value obtained from the ANOVA table. It was concluded that out of the different fertilizers. Poultry/NPK, poultry/cattle, poultry/goat and 400kg/ha were the fertilizers that showed increase in the yield of the cassava tubers.