

# EVALUATION OF CASSAVA-BASED SYSTEMS FOR ADAPTATION TO CLIMATIC VARIATIONS IN EASTERN NIGERIA

<sup>1\*</sup>Asadu, C.L.A., A.G.O. Dixon<sup>2</sup> and S. C. Eze<sup>3</sup>

<sup>1</sup>Department of Soil Science, University of Nigeria, Nsukka, Nigeria

<sup>2</sup>International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria

<sup>3</sup>Department of Crop Science, University of Nigeria, Nsukka, Nigeria

\*E-mail: [charlesasadu@yahoo.com](mailto:charlesasadu@yahoo.com) (Corresponding author);

## ABSTRACT

*Three cassava-based systems viz: solely cassava (SC), cassava + pigeon pea (C + P) and Cassava + pigeon pea + maize were evaluated for five years using cassava root, shoot yields and their ratio as the index of adaptation to climatic variations. The study was carried out in two locations, one within the University of Nigeria, Nsukka (UNN) farm near the Meteorological station and the other about one km off the Campus and in a newly cleared forestland. The experimental design was a randomized complete block design (RCBD) replicated three times in each location. Three climatic elements (rainfall, temperature and relative humidity) were obtained from the Meteorological station each year. The yields were significantly ( $p \leq 0.05$ ) affected by location, year, and the cropping systems. Out of the three climatic variables the relative humidity accounted for about 60% variation in root yield and 56% in shoot yield. Their ratio was not significantly influenced. The highest average root yield ( $15 \text{ t ha}^{-1}$ ) came from C + P + M plots at forestland location and the least ( $2.2 \text{ t ha}^{-1}$ ) from C + P plots at the UNN location. Thus, C + P + M mixture was considered the most adapted to the area.*

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