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CLIMATE CHANGE, SOIL TEMPERATURE AND CASSAVA YIELD IN ABIA STATE, SOUTHEASTERN NIGERIA

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ABSTRACT

The climate of the world is changing and consequently affecting other components of the earth-atmosphere system. The extent to which it is affecting soil temperature in relation to cassava yield has not received the deserved attention especially in Abia State where it is a major staple crop. This paper therefore examined the effect of climate change on soil temperature and cassava yield in Abia State. Climatic data ofrainfall, atmospheric temperature and soil temperature(20cm depth)covering a period of 34 years and those of cassava yield for 31 years in Abia State were collected. Regression and Correlation statistics were the major techniques used to model trends and establish relationships in the data. Results obtain indicated that rainfall of Abia State is getting wetter at a rate of 1.619mm per annum, mean annual atmospheric temperature is increasing by 0.025℃ annually, soil is warming at a rate of 0.023℃ per annum, while cassava yield is increasing by 16.05 thousand metric tonnes per annum. There is also a high correlation between soil temperature and cassava yield. These results obtained therefore suggest that following climate change, soil temperature is correspondingly increasing, and so also is cassava yield.

KEYWORDS: Climate Change, Atmospheric Temperature, Soil Temperature, CassavaYield