

## **Impact of Climate on Productivity of Major Cereal Crops in Sokoto State, Nigeria**

**Authors :** M. B. Sokoto, L. Tanko, Y. M. Abdullahi

**Abstract :** The study aimed at examining the impact of climatic factors (rainfall, minimum and maximum temperature) on the productivity of major cereals in Sokoto state, Nigeria. Secondary data from 1997-2008 were used in respect of annual yield of Major cereals crops (maize, millet, rice, and sorghum (t ha<sup>-1</sup>). Data in respect of climate was collected from Sokoto Energy Research Centre (SERC) for the period under review. Data collected was analyzed using descriptive statistics, correlation and regression analysis. The result of the research reveals that there is variation in the trend of the climatic factors and also variation in cereals output. The effect of average temperature on yields has a negative effect on crop yields. Similarly, rainfall is not significant in explaining the effect of climate on cereal crops production. The study has revealed to some extent the effect of climatic variables, such as rainfall, relative humidity, maximum and minimum temperature on major cereals production in Sokoto State. This will assist in planning ahead in cereals production in the area. Other factors such as soil fertility, correct timing of planting and good cultural practices (such as spacing of strands), protection of crops from weeds, pests and diseases and planting of high yielding varieties should also be taken into consideration for increase yield of cereals.

**Keywords :** cereals, climate, impact, major, productivity

**Conference Title :** ICEAE 2015 : International Conference on Environmental and Agricultural Engineering

**Conference Location :** Montreal, Canada

**Conference Dates :** May 11-12, 2015