

A Review on Climate Change and Sustainable Agriculture in Southeast Nigeria

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Abstract : Climate change has both negative and positive effects in agricultural production. For agriculture to be sustainable in adverse climate change condition, some natural measures are needed. The issue is to produce more food with available natural resources and reduce the contribution of agriculture to climate change. The study reviewed climate change and sustainable agriculture in southeast Nigeria. Data from the study were from secondary sources. Ten scientific papers were consulted and data for the review were collected from three. The objectives of the paper were as follows: to review the effect of climate change on one major arable crop in southeast Nigeria (yam; *Dioscorea rotundata*); evident of climate change impact and methods for sustainable agricultural production in adverse weather condition. Some climatic parameter as sunshine, relative humidity and rainfall have negative relationship with yam production and significant at 10% probability. Crop production was predicted to decline by 25% per hectare by 2060 while livestock production has increased the incidence of diseases and pathogens as the major effect to agriculture. Methods for sustainable agriculture and damage of natural resources by climate change were highlighted. Agriculture needs to be transformed as climate changes to enable the sector to be sustainable. There should be a policy in place to facilitate the integration of sustainability in Nigeria agriculture.

Keywords : agriculture, climate change, sustainability, yam

Conference Title : ICACC 2017 : International Conference on Agriculture and Climate Change

Conference Location : London, United Kingdom

Conference Dates : June 28-29, 2017