PDF - PERCEPTION OF FARMERS ON THE EFFECT OF CLIMATE CHANGE ON FARM PRODUCE - researchcub.infoABSTRACT

The research was carried out based on the perception offarmers of the effect of climate change on farm produce.

The aim of the study was to identify various climaticfactors that can affect farming systemwhich include sunrise (hot temperature), winter, equinox, rainfall, summer,coldness, wind etc and also places where lakes, rivers ocean / sea, stream,rocks/ hills forest etc are available .

Critically, the study revealed that rainfall and dry seasonare the common features in Nigerian climate which are the natural determinantfor farm produce.

The study assessed the problems associated with climatechange and how farmers can cope with such effects.

It was deduced fromthe study that high temperature can be harmful to crop produce and excessiverainfall can result to flooding and washing off nutrients in soiland making it unfit for planting.

The study revealed facts that farmers are aware of numerous factors that can be responsible for climate change such aschanges in rainfall, excessive wind,high temperature and shortage of rainfall.

The research was carried out in Lagos State AgriculturalSupply Input Authority, Ojo Lagos State.

Sixty (60) respondents were selected as the sample size forthe study. The three (3) null (Ho) hypothesis formulated for the study were allrejected and the alternate forms were accepted.

The instrument for the study was the questionnaires and itcontained (30) thirty research questions.

Discussions and findings were based on the outcome of theresponses.

The researcher holds confidence that if the finding anddiscussions made in this study are given due consideration and implemented, it will go a long way to enable our farmers to cope with climate change toenhance farm produce.

CHAPTER ONE

1.0 INTRODUCTION

The theme of this research is based on the perception offarmers of the effect of climate change on farm produce. It has been logicallyargued that climate change may positively and negatively affect the growth of crop in agricultural system.

In some broken down analysis, climate is a sole determinantfor the success of farm produce and itsharvest as well. Emphasis are hereby made below under some given headings.

1.1BACKGROUND TO THE STUDY

According to Kolbert., (2006) climate encompasses the temperatures, humidity, atmospheric pressure,winds, rainfall, atmospheric particle count and numerous other meteorologicalelements in a given region over long periods of time, as opposed to the term weather, which refers to currentactivity of these same elements.

The climate of a location is affected by its latitude,terrain, altitude, persistent ice or snow cover, as well as nearby oceans andtheir currents.

Climates can be classified using parameters such temperatureand rainfall to define specific climate types. (Seiz, 2007)

According to Haeberli, (2008) from Montana State University,climate change is any long term significant change in the expected patterns ofaverage weather of a specific region (or, more relevantly to

contemporarysocio-political concerns, of the earth as a whole) over an appropriatelysignificant period of time.

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Susanne, and Veizer (2008) revealed that climate changereflects abnormal variations to the expected climate within the earth's atmosphere and subsequenteffects on other parts of the earth, such as in the ice caps over durations ranging from decades to million ofyears.

Reports revealed by the inter-governmental panel on climatechange (IPCC 2007) stated that climatechange in the research of a great manyfactors including the dynamic processes of the earth itself, external forcesincluding variation in sunlight intensity, and more recently by humanactivities, which might in future be deliberate geo-engineering. External factors that can shape climate are oftencalled climate forcing and include such processes as variations in solarradiation, deviations in the Earths orbit and the level of greenhouse gasconcentrations.

There have been so many variations on carbondioxide(Co2)during the last 50 million years. The increased carbondioxide level are thoughtto exacerbate the heating effects of the greenhouse effect by reading there-radiation of heat from the sun and, therefore, increasing the temperaturecontained in the atmosphere.

As the ability of the atmosphere to capture and recycle energyemitted by the Earth's surface is essential to a stable climate, thisheightened temperature may introduce a de-stabilizing influence and potentiallyaffect global weather patterns and eventually, long-term climate change.

(Source: Buckley, and Wallace, 2008)

Framers efforts on yielding mass harvest and encouraginglarge plantation may be seriously terminated and hampered from the perceptionof climate change. Where alternative instruments are not introduced tocounteract the factors militating against favourable climate on farm producethis may lay a set back on agricultural input and output by our farmers.

It obvioused that climate change had contributed towardsinitiating basic subsistence farming system order than the mechanized farmingproduct for large market of farm produce.

For example, a region where climate change had hampered thepossibility of regular actual rainfall variably, water system irrigation can beapplied to artificially supply wet contents on crop growth and improvingregular harvest.

Farmers in Nigeria today are faced with variable challengeson climate change making the agricultural sector prone to difficulties inenhancing crop production as a result of weak alternative facilities,equipments and scientific instruments to improve the range of farming.

Dr Daniel (2008) from the University of Maiduguri revealedfindings that climate change plays a significant role in agriculture by settingup limits for crop production. The main climatic elements in agriculture aretemperature, moisture, sunlight, wind and evaporation. Most crops are sensitive to episodes of hightemperature. High temperatures between 45oc and 55oc that occur for at least 30minutes directly, damage crop leaves in most environments, and lowertemperatures between 35-40oc can be damaging if they persist longer.

Awosika, and Ajayi, (2002) opined that vulnerability ofcrops to damage by high temperaturesvaries with developmental stage thus, high temperatures during reproductivedevelopment are particularly injurious. For example, to maize at tussling, to soybean at flowering and to wheatat grain filling.`

Soybean in one of crops that seems to have the ability torecover from heat stress, perhaps, because it is in

determinate.
Whereas as stated by Adefolau (2000) food crops like yam,cocoyam, potatoes, cassava can get damage (burnt) due to excessive heattemperature.
Precipitation, being the primary source of soil moisture isprobably the most important factor determining the productivity of corps. Whileglobal climate models predict an overall increase in mean global precipitation, their resultsalso show the potential for changed hydrological regimes in most places.
Ojo (2000) a change in climate can cause changes in total precipitation, within seasonpattern, and between season variability for crop productivity, a change in thepattern of precipitation events may be even more important than a change in theannual precipitation. The water regime of crops is also vulnerable to apotential rise in the daily rate and alerted seasonal pattern of precipitationevents may be even more important than a change in the annual precipitation.The water regime of crops is also vulnerable to a potential rise in the dailyrate and altered seasonal pattern of evapotranspiration, brought on by warmtemperature, drier air, or windier conditions. Drought conditions may be brought about by lower amounts ofprecipitation falling.
Oni (2001) opines that farm produce and yield quantity arelikely to suffer if dry periods occur during critical developmental stages. Inmost grain crops, flowering, pollination and grain filling are especiallysensitive to water stress, heat stress and drought stresses often occursimultaneously one contributing to the other. High solar radiance and high winds often accompany these conditions.When crops are subjected to drought stress, their stomata close, such closurereduces transportation and consequently, raises plant temperatures. Excessivelywet years, on the other hand, may cause farm produce declines due to water logging and increased pestinfestation (Dr. Daniel, 2008).
Intense burst of rainfall may damage younger plants andpromote water logging of standing crops with repining grain, as well as soilerosion. The extent of crop damage depends on the duration of precipitation andflooding, crop developmental stage, air and soil temperatures.

1.2STATEMENT OF THE PROBLEM

The research tends to examine the perception of farmers ofthe effect of climate change on farm produce. Climate change may serve as a factor that can hinder cropyield and as such bring to an end the agricultural activities of farmers.
It is a problem that if farmers have no means to face andtackle the global climate models affecting yield processes farm produce canmaximally decline due to acute change in climate. But it is believed that thiscan be controlled through some adaptation options as proposed and laid down byDr. Adejuwon (2004) from Obafemi Awolowo University (OAU). It has been revealedin his findings and discussions and likewise other related scholars.
Climate change will be a bone of contention on farmersposing barriers to actual farm produce until proper adjustment and technicaladaptation models are absorbed and utilized by our farmers.

1.3PURPOSE OF THE STUDY

The objectives of the research are stated below as follows.

i. Toexamine the various climate change and how they affect farm produce in Nigeria.
ii. Toappraise possible adaptation options that can be utilized by farmers forresponding to climate change.
iii. Tocreate an awareness on climate change and how it can be controlled on farmproduce by farmers

to assess the factors militating climate change and theproblems faced by farmers.

iv. To assessthe factors militating climate change and the problems faced by farmers on farmproduce.

1.4RESEARCH QUESTIONS

The following research questions had been formulated for theresearch as follows:

i. Doesclimate change affect farm produce in Nigeria?

ii. Canfarmers respond to climate change through possible adaptation options on farmproduce?

iii. Canclimate change be controlled in farm produce by farmers through a criticalawareness?

iv. What arethe factors militating climate change and the problems faced by farmers on farmproduce?

1.5RESEARCH HYPOTHESES

The null hypotheses were formulated for the research asfollows:

Ho: Climate changehas no significant effect on farm produce in agricultural system in Nigeria.

Ho: There is no significant responses to farmers to climatechange through possible adaptation models.

Ho: There is no significant relationship between the factorsresponsible for climate change and problems encountered by farmers on farmproduce.

1.6SIGNIFICANCE OF THE STUDY

The study reversals the factors responsible for climatechange and the effects they have on farm produce.

The research relates the basic problems encountered byfarmers on farm produce through climate change.

The research reveals alternative models as adaptationoptions that can be utilized and experimented by farmers in counteractingclimate change on farm produce. The study shows the interrelationship ofclimate change and the problems of farmers on agricultural produce.

The study will reveal how climate change affect the variouscrops in farming system and the means that can be adopted to prevent anyfurther damage on such crops.

The study will relate variably that climate change can posestorage on farm produce thereby affecting the marketing system of agriculturalout put and lead to high cost per unit of produce.

Farmers, agricultural scientists, food technologists,scientists and teachers will device possible solution from this study as areference materials in tackling and counteracting climate change on farmproduce.

The research serves as a resource knowledge to government intaking necessary steps towards responding to climate change and maintaintechnology standard in agricultural sector in Nigeria.

1.7SCOPE ANDLIMITATION OF THE STUDY

The study is limited to Lagos State Agricultural SupplyInput Authority of Ojo Local District Area of Lagos State. A selection of sixty(60) respondents will be made randomly by the researcher. These respondents includemale and female alike. They shall be used for collecting respondence as datafro the study.

The researcher was confronted by major constraints to carryout this research and they include:

Financial problems, stress, energy wasted by the researcher.And the long distance to be covered and also the pains in selecting and meetingthe respondence to gather useful information for the study.

1.8DEFINITION OF TERMS

Farmer: A person who grows field crops and or managesorchards or vineyards or raises livestock or poultry.

Agriculture: refers to the production of food and goodsthrough farming and forestry and poultry keeping.

Farm: A field, for planting crops and harvesting them andalso a place meant for raising livestock.

Forestry: the science or practice of planting and takingcare of tress and forest.

Climate: The regular pattern of weather conditions of aparticular place.

Weather: A set of all the phenomena occurring in a givenatmosphere at a given time.

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