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Perceived effect of Climate Change on Cassava Farmers in South-South Nigeria

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ABSTRACT

The study assessed the perceived effect of climate change on cassava crop farmers in Akwa Ibom State, Nigeria. A multi-stage sampling procedure was used to obtain the necessary data. Descriptive statistics of mean, frequency, tables and percentages as well as the use of Likert Scale were the analytical technique used for the study. The result should that 72.5% of the respondents were in their youthful ages. The result shows that majority of the cassava farmers were female with an outcome of 57.5%. A household size of 1-3 persons was predominant with an outcome of 60%. The result shows that farming experience of cassava farmers between 0-2 years had the highest outcome of 53.3%. in an attempt to evaluate the awareness of climate change information in the study that, they were aware of climate change information in the study area shows that a meanscore of 2.0 had a perceived knowledge of climate change information. Some of the perceived climate change information in the study area are; Late rainfall (2.40), Inadequate rainfall (2.01), increased flooding (2.26), incidence of weed (2.02), decline in soil fertility (2.20). Many constraints limiting the perception and awareness of climate change information with a meanscore of 2.0 and above are; Lack of access to weather forecast technology (2.08), poor transportation (2.03), Inadequate supply of farm input (2.29). The recommendation from the study will be a pool for further research in the area of climate change information in the study area.

Keywords: **Perceived , effect , Climate Change, Fertility, Constraints**

INTRODUCTION:The issue of climate change is crucial for the agricultural industry, particularly in poor nations where farming largely depends on climatic factors like rainfall and temperature. International Panel for Climate Change, (2014) describes climate change as a major change in climate over a long period of time that is brought on by either natural variability or human activity. Agriculture places heavy burden on the environment in the process of providing humanity with food and fiber, while climate is the primary determinant of agricultural productivity in many developing countries. Given the fundamental role of agriculture in human welfare, concern has been expressed by federal ministry of agriculture and others regarding the potential effects of climate change on agricultural productivity. Interest in this issue has motivated a substantial body of research on climate change and agriculture over the past decade (Lobell et al., 2008; Wolfe et al., 2005; Fischer et al., 2002). One of the most important crops grown in Nigeria that is severely impacted by climate change and climate variability is cassava cultivation (IPCC, 2013; Owoeye, 2010). Cassava tuber is crucial to the development of Nigeria's food economy because 84% of it is consumed locally and 16% is used as a raw material in the industries. (Agwu et al, 2007; Ikuemonisan et al, 2020). Kormawa and Akoroda, (2003) and Nwokoro et al. 2002) noted that where other food crops fail, the drought-tolerant cassava crop thrives on marginal soils with a moderate climate. However, Nigeria's recent extreme weather

events, including flooding, a protracted drought, higher temperatures, and variable rainfall, have exposed cassava production to the negative effects of climate change. In Nigeria, climate change adaptation is belatedly emerging as an important frontier for action, with the potential to improve livelihoods and health and build resilient communities. The Federal Government's adaptation policies, laws, frameworks, and strategies include Nigeria's updated Nationally Determined Contributions 2021 (NDCs), the 2021 Climate Change Act, the National Climate Change Policy, the National Adaptation Plan (NAP), the Long-Term Vision (LTV), the Medium-Term National Development Plan (MTNDP), the Biennial Update Report (BUR) and other national and sub-national plans. The NAP Framework, (2020) is a precursor to the government's main adaptation agenda and outlines its goals to align the country's adaptation activities with the Cancun Adaptation Framework,Nyong, E. E and Abiodun, T. G. (2012) .

Several programmes, policies, schemes and project has been established to address the challenges posed by climate change by providing climate-resilient agricultural practices: Climate-smart agriculture (CSA): is an integrated approach to managing landscapes—cropland, livestock, forests and fisheries--that address the interlinked challenges of food security and climate change (World bank, 2021). CSA aims to simultaneously achieve three outcomes: increased productivity, enhanced resilience and reduced emissions.While built on existing knowledge, technologies, and principles of sustainable agriculture, CSA is distinct in several ways. First, it has an explicit focus on addressing climate change. Second, CSA systematically considers the synergies and tradeoffs that exist between productivity, adaptation and mitigation. Finally, CSA aims to capture new funding opportunities to close the deficit in investment. Through climate smart agriculture, the Nigerian government has been working with the Food and Agriculture Organization (FAO) and International Crop Research Institute for the Semi-Ari Tropics (ICRISAT) to increase smallholders' ability to respond to climate change (Tenge and Hella, 2004). Thus, without considering the relative contributions to crop productivity,, the use of improved crop varieties, crop diversification, irrigation, multiple cropping, multiple planting dates, and soil conservation practices, among others, has gained traction in practice (Nwaiwu et al, 2014; Owoeye, 2020). This is mainly because these practices are "adaptively" accurate, relatively accessible and compatible with the already-existing local adaptation knowledge.

Nyong, E. E and Abiodun, T. G. (2012), the most comprehensive adaptation projects in Nigeria in recent years include: The World Bank assisted Nigeria Erosion and Watershed Management Project (NEWMAP), which was designed in collaboration with the Federal Ministry of Environment to tackle the menace of gully erosion in south-east Nigeria and other forms of land degradation in northern Nigeria. The project was approved in 2012 and the World Bank committed approximately USD500 million (EUR500 million) to it. It comprised of three main facets: (a) Gully Rapid Action and Slope Stabilization (GRASS) (b) Integrated watershed management and (c) Adaptive livelihoods and was implemented in nineteen (19) states of Nigeria. (Federal Government of Nigeria, 2011)

The Building Nigeria's Response to Climate Change (BNRCC) project, which was a five-year project that started in 2007 and undertook research on vulnerability (current and future), and awareness and pilot projects, mainstreaming gender throughout the project lifecycle. The BNRCC cost USD 4.9 million (EUR4.9 million), was funded by the Canadian International Development Agency (CIDA) and resulted in the development of the National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN) in collaboration with the Federal Ministry of Environment. The pilot projects were developed with the following goals: utilizing improved varieties to improve food security, providing fuel efficient wood stoves, proposing aquaculture as an alternative source of income and weaning communities off forest products, improving access to water sources and rehabilitating ecosystems by planting trees. (Woodley, 2011)

Nyong, E. E and Abiodun, T. G. (2012), the Great Green Wall, which is currently being implemented across twenty-two countries with facets of forestry, water management and energy. The overarching goal is to grow 8,000km of forest across 100 million hectares of degraded land by 2030 to tackle persistent droughts, food insecurity, migration, and conflict. Launched by the African Union (AU), it is currently implemented by a partnership of the United Nations Convention to Combat Desertification (UNCCD), the Food and Agriculture Organisation (FAO), the World Bank, the Global Environment Facility (GEF), the International Union for Conservation of Nature (IUCN), the Green Climate Fund (GCF) and several other organisations. The project is estimated to have achieved 15% of its goals and, after its completion, will have led to the largest living

system on earth. (Great Green Wall, 2011). Cassava is a major staple food in virtually all parts of Nigeria. It is a key food security and income generating crop and Nigeria is the world's largest producer of the crop (F.A.O., 2002). In fact, the crop has continually played a very important role, which includes; food for man, feed for animals, raw materials for industries, income for farmers, low cost food source for both the rural and urban dwellers as well as household food security (Nweke, 1996).

Cassava is a major source of income in Akwa Ibom State and Nigeria at large Africa. The cash income from cassava is substantial compared to other major staples like yam and potatoes because of cassava's low cash input cost (Nweke, 2004). Apart from income generation, cassava when compared to other crops owing to its ability to perform well across a wide spectrum of ecological zones, cassava is resistant to pest and adverse conditions (Nweke, 2004). These, thus explains the reasons for the wide adoption of cassava production by farmers in Nigeria as posited by the Food and Agricultural Organization of the United Nation (F.A.O., 2019) which estimated cassava production in the country to be 64 million tonnes in 2019. Climate, which is the primary determinant of agricultural production, has often changed throughout earth's history. There is no doubt that the effect will continue even in the future (Ezeano, 2016). Recent climate change has influenced agricultural productivity negatively in Sub-Saharan Africa, including Nigeria, leading to decline in food production.

Nigeria has been having her share of the impacts of climate change. These impacts are felts by the farmers of Nigeria. It is evident that climate is changing and at the same time exerting effect on man and his activities. In Nigeria, on climate change as reported by the Nigerian Environmental Study and Action Team (NEST, 2011) include issues such as low agricultural yields, poor nutrition, poverty, proliferation of disease vectors and pests, malaria, dengue fever, sleeping sickness and schistosomiasis as the effects of climate change in Nigeria. Agricultural production relies mainly on rainfall for irrigation and will be severely compromised in many African Countries, particularly for subsistent farmers. Under climate change, much agricultural land will be lost, with shorter growing seasons and lower yields. Therefore, for farmers to excel in agriculture which is predominantly their source of livelihoods; there is need to understand the effect of climate change, the role it plays in the agricultural sector both positively and negatively since poor weather conditions such as inadequate rainfall leads to droughts and wilting of crops, and excessive rains result to loss of crops or farmlands to flooding and subsequently erosion (Araya, 2001)..

However, agriculture is still the main source of food and employer of labour employing about 60-70 per cent of the population. It is a significant sector of the economy and the source of raw materials used in the processing industries as well as a source of foreign exchange earnings for the country. Since agriculture in Nigeria is mostly rain-fed, it follows therefore that any variability in climate is bound to impact its productivity in particular and other socioeconomic activities in the country. The impact could, however, be measured in terms of effects on crop growth, availability of soil water, soil erosion, incident of pest and diseases, sea level rises and decrease in soil fertility.

Although notable researches have been conducted in the region on climate change which include environmental degradation, vulnerability and mitigation of climate change impacts (Akinro, Opeyemi, Ologunagba. 2008) and . Nyong, E. E and Abiodun, T. G. (2012) However, there is literature dearth on researches on the perceived effect of climate change on the production of cassava in the south-south region. South- South region of Nigeria being one of the cassava producing states in Nigeria is highly sensitive to variation in climatic factors most especially rainfall, temperature and sunshine duration. Several views have been expressed about the impact of irregularity of climate change on cassava production but none has researched on the perceived effect of climate change on cassava

production in South-South, Nigeria**.** The main objective of this research is to examine the perceive effect of climate change on cassava farmers in South-South, Nigeria**.** The specific objective are as indicated below. examine the socio-economic characteristic of cassava farmers in the study area; assess the level of awareness of farmers on climate change in the study area ; examine the perceived effect of climate change on cassava farmers in the study area and examine the constraint faced by cassava farmers on climate change in the study area.

RESEARCH METHODOLOGY: The Study Area: The study was carried out in Akwa lbom State, Nigeria. It has a total land mass of 7,246 square kilometers and estimated population of 3,920,208 million people (NPC, 2006). The area falls within the humid tropics with two distinctive seasons (dry and wet seasons), With temperature of about 30°C and lies between latitude 4°32' and 5°33' North and longitude 725' and 8°25' East. The State is agrarian and is well suited for the production of both permanent and cassava due to her favorable climatic conditions. Majority of inhabitants are predominantly peasant farmers cultivating food and cash crops. They also embark on small, medium and large scale livestock production as well as in marketing of their products.

Sampling Procedure: Stratified sampling technique was adopted.The first stage was the stratification of State into four Agricultural Zone. The second stage was the random selection of 10 cells per zone. A total of 40 cells. From each of the selected cell, 3 households was randomly selected. A total of 120 cassava farmers was the sampled.

RESULTS AND DISCUSSIONS: This chapter gives a review of the presentation of data for the study. The results are from the objectives of the study gotten from the questionnaire. The discussions are done under the following headings; socio-economic characteristics of respondents, level of awareness of farmers on climate change, perceived effects of climate change on cassava farmers, constraints faced by farmers on cassava production in the study area. This chapter will be discussed and the objectives will be clearly explained.

Socio-economic Characteristics of the Farmers: The major socio-economic characteristics of cassava farmers covered in this survey are Age, gender, marital status, years spent schooling (Educational Status) household size, farming experience, monthly income, member of cooperative society, farm size, access to extension services, access to credits, cassava crops grown. The results of table 4.1 shows that respondents above 61 years had an outcome of 5.8. Respondents below 30 years had an outcome of 12.5%. Also, the ages of 31-40 had an outcome of 21.5. Furthermore, the result shows that farmers between 41-50 years had a majority outcome of 35.0%. The implication of the study implies that majority of the farmers were in their youthful age range. Youths are active in agricultural enterprise since they are blessed with vigour.

The results shows that 42.5% of the cassava farmers are female while 57.5% of the farmers are male. This result corroborates and validates that male are the owners of land. The land use act of 1978 puts ownership of land under the control of man. Also, the male genders are stronger to undertake any agricultural tasks to the completion level. This results collaborates with the works of Nyong, E.E. and Okon, A. U.(2012) and Ebong *et al.*, (2008) that posited that majority of cassava farmers in Akwa Ibom State are Male. Also Nyong, E.E. and Okon, A. U.(2012) andAdofu *et al.*, (2007) in his study reveals that female are more in cassava production than the male. The results from table 4.1 reveals the marital status of respondents that are into cassava farming in the area. The result reveals that 5.8% of the respondents are single. Also 26.7% of the respondents shows that they were Divorced. Furthermore, married respondents in the area had an outcome of 67.5%. the result implies that married people venture more into agricultural business to increase income of the farmers. Nyong, E.E. and Okon, A. U.(2012) and Yusuf (2002) in their report collaborates with the findings of the work. The posited that married

people are more stabilized to engage in agricultural enterprises than single divorce respondents.

The table 4.1.4 reveals the educational status of respondents in the study area. It shows that respondent with no formal education has an outcome of 15.8%. Respondents with tertiary education in the study area had an outcome 13.3%. The study also reveals that respondents with secondary education had an outcome of 29.2%. Furthermore, it was revealed from the analysis that majority of the respondents in the study area had gotten primary education with an outcome of 41.7%. The implication of the results shows that respondents will easily adopt their ideas and techniques being brought to improve cassava farming. This research findings conforms to the works of Nyong, E.E. and Okon, A. U.(2012) Pannin and Brummer (2002) that posited that educated farmers processes information provided by different sources regarding new farming techniques.

From the results of analysis, reveals the distribution of household size engaged in cassava farming in the study area. From the result, it showed that farmers with a household size of 4-12 persons had an outcome of 5.0% been the least in the study area. Also, household size of 13 and above persons had an outcome of 7.5%. Furthermore, a household size of 4-7 persons and an outcome of 27.5%. Lastly, a household size of 1-3 persons had a majority outcome of 60.0%. The household size leads to form sustainability. A research by Nyong, E.E. and Okon, A. U.(2012) and Nkamelu (2005) Opined that children in Sub-saharan Africa tend to be of economic value especially to struggling parents. The implication of this result shows that most of the cassava farmers in the study area had a small household size depicting subsistence cassava farming was practiced in the study area.

The results reveals the farming experiences of cassava farmers in the study area. The result showed that farmers with an experience of 15 years and above had the least outcome of 1.7%, followed by farming experience of 10-15 years with an outcome of 8.3%. Also, cassava farmers with a farming experience of 6-10 years had an outcome of 10.8%. Furthermore, the result reveals that cassava farmers with an experience of 3-5 years had the second highest distribution of 25.8%. Farmers with an experience between 0-2 years had a majority outcome of 53.3%. The implication of the result shows that majority of the farmers are new in their enterprise probably through their awareness that cassava farming is profitable.

The study reveals respondents membership of cooperative society in the study area. According to the result, it showed that 39.2% had no membership of cooperative society in the study area. Also, it was revealing that 60.8% of the respondents belong to a cooperative society. Farmers who belong to a cooperative society. Farmers who belong to a given cooperative always derive positive effects. Cooperative societies enable the farmers to pool resources from either Government or Non-government Organizations (NGOs) to expand agricultural production. The result shows that majority of the cassava farmers in the study area have benefits from government incentives to expand their agricultural enterprise. The results from table 4.1 reveals the total size of respondent in the study area. According to the analysis, farmers with a farm size of 2.1-3.5 ha and that of above 5 ha had an outcome of 4.2% in the study area. Also, farmers with a farm size of 1-1.5 ha and 1.6-2.0 ha had an outcome of 12.5%. Furthermore, the result s showed that majority of the respondents with a farm size of 3.6 - 4.5 ha had the highest outcome of 66.7 %. The implication of the results shows that majority of the respondents are peasant farmers in the study area.

Based on the finding of the research, Extension services are a critical component of agricultural development. The result revealed that 49.2% of the respondents have no access to extension services, while 50.8% has access to extension services. Adoption of innovation by farmers

through extension services leads to agricultural productivity. The implications of the results show that majority of the respondents listens to climate change information by the extension agents in the study area.

The results reveals that the access of credit is a critical component of agriculture. Credit is a erative membership.

repayable loan given to farmers to expand their agricultural enterprises. The result reveals that, 23.3% of the respondents have no access to credit while 76.7% of the respondent has access to credit. The implication of the results shows that credit facilities were made available to cassava farmers through their coop

Table 4. 1: Social-Economic Characteristics of Respondent

Variable	Frequency	Percentage
Age		
<30	15	12.5
31 - 40	26	21.7
40 - 50.	42.	35.0
51 - 60	30	25.0
>60	7	5.8
Total	120	100
Gender		
Female	69	57.5
Male	51	42.5
Total	120	100
Marital status		
Single	7	5.8
Married.	81	67.5
Divorced.	32.	26.7
Total.	120.	100
Education		
No. formal Education.	19.	15.8
Primary Education.	50.	41.7
Secondary Education.	35.	29.2
Tertiary Education.	16.	13.3
Total	120.	100
Household size		
<3.	73.	60.0
4 - 7.	33.	27.5
8 - 12.	6.	5.0
13>.	9.	7.5
Total.	120.	100
Farming Experience.		
<2.	64	53.3
3 - 5.	31.	25.5
6 - 10.	13.	10.5
10 - 15.	10.	8.3

15>.	2.	1.7
Total.	120.	100
Farm size (Ha)		
1 - 1.5.	15.	12.5
1.6 - 2.0.	15.	12.5
2.1 - 3.5.	5.	4.2
3.6 - 4.5.	80.	66.7
>5.	5.	4.2
Cooperative member		
No.	47.	39.2
Yes.	73.	60.8
Total.	120.	100
Extension services		
No.	59.	49.2
Yes.	61.	50.8
Total.	120.	100
Access to Credit		
No	28.	23.3
Yes.	92.	76.7
Total	120	100

Source: Field survey 2023

Table 4.2 Awareness Level of Climate Change on Cassava Farmers in the Study Area

CLIMATE CHANGE INFORMATION	AWARE	NOT AWARE	MEAN
High Temperature	61 (50.8)	59 (49.2)	1.49
Heavy Flooding	61 (57.5)	51 (42.5)	1.57
Changes in time	54 (45.0)	66 (55.0)	1.55
Rainfall prediction	51 (47.5)	51 (42.5)	1.57
Drought Prediction	71 (59.2)	49 (40.8)	1.59
Fertilizer Application	68 (56.7)	52 (43.3)	1,56
Pesticide Application	73 (60.3)	47 (39.2)	1.39
Bush Fellow	69 (57.5)	51 (42.5)	1.57
Soil Cultivation	69 (57.2)	51 (42.5)	1.57
Effect of Pest	93 (77.5)	27 (22.5)	1.22
Flooding	75 (62.5)	45 (37.5)	1.37
Crop Production	69 (53.3)	51 (42.5)	1.57
Soil Erosion	64 (53.3)	56 (46.7)	1.46

Source: Field Survey, 2023.

Table 4.2 shows the level of awareness of climate change information in the study area. A benchmark of a mean score of 1.2 was accepted to show the level of awareness of climate change information in the study area. Some of variables to measure the level of awareness of climates change are gotten from the mean score. Effect of pest has the lowest mean score of 1.22. some of the climate change information indicators are; flooding (1.37), pesticide application (1.39), soil

erosion (1.46), high temperature (1.44), changes in time (1.55), fertilizer application (1.56) heavy flooding, rainfall prediction, bush fallow, soil conservation (1.57) and drought prediction (1.59). The implication of the result shows that cassava farmers are aware of the various climate change information in the study area; this is also in line with Nyong, E. E; Nweze,N.J and Chuku, G.T (2017).

Table 4.3: Perceived Effect of Climate Change by Cassava Farmers in the Study Area

PERCEIVED EFFECT	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	MEAN	REMARK
Absence of frost	31 (25.8)	29 (24.2)	20 (16.7)	40 (46.7)	2.40	Perceived
Inadequate rainfall	13 (10.8)	19 (15.8)	43 (35.8)	45 (37.5)	2.01	Perceived
Flash flooding	0 (0.0)	21 (17.5)	65 (54.2)	34 (28.3)	1.63	Not Perceived
High sunshine intensity	7 (5.8)	9 (7.5)	36 (30.0)	68 (56.7)	2.62	Perceived
Increased erosion	7 (5.8)	6 (5.0)	38 (31.7)	69 (57.5)	1.59	Not Perceived
Decreased in crop yield	7 (5.8)	7 (5.8)	36 (30.0)	70 (58.3)	2.59	perceived
Erratic/Unusual rain	7 (5.8)	6 (5.0)	40 (55.8)	67 (55.8)	1.6	Not Perceived
Land slides	15 (12.5)	28 (23.3)	51 (42.5)	26 (21.7)	1.26	Not Perceived
Short-lived harmattan	9 (7.5)	9 (7.5)	65 (54.2)	37 (30.8)	1.68	Not Perceived
Delay in the onset of rainfall	18 (15.0)	21 (17.5)	33 (27.5)	48 (40.0)	2.02	Perceived
Declining of weed	18 (15.0)	21 (17.5)	33 (27.5)	48 (40.0)	2.02	Perceived
Declined Soil Fertility	13 (10.8)	19 (15.8)	46 (38.3)	42 (35.0)	2.20	Perceived

Source: Field Survey, 2023

Table 4.3 shows the perceived effect of climate change by cassava farmers in the study area. Nyong, E. E; Nweze,N.J and Chuku, G.T (2017) and Madison (2007) in their research reveals that significant numbers of farmers believed Erratic/Unusual rain and absence of frost levels had decreased with change scholars shows that to understand the perception about climate change. Certain variable includes capital, policies and programmes and direct intervention.

In this way the resilience and adaptive capacities of the rural people can be enhanced. There is a negative relationship between level of education, income level on climate change perception in the study area. From the study, it shows that some of the perceived variables by the respondents include, absence of frost (2.40), inadequate rainfall (2.01), Decreased in crop yield (2.59), Declining of weed (2.02), High sunshine intensity (2.62), and Delay in the onset rainfall (2.02) and Declined soil fertility (2.20). The perception level of climate change information in the study area corroborates with research works by Idris et al (2012) Nyong, E. E; Nweze,N.J and Chuku, G.T (2017) that explain that increased temperate and unpredictable rainfall are some of the perceived variables measured to affect climate change information.

Table 4.4: Constraint faced by cassava farmers on climate change in the Study Area

CONSTRAINT	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	MEAN	REMARK
Lack of access to weather forecast technology	11(9.2)	26 (21.7)	45 (37.5)	38 (31.7)	2.08	Constraint
Poor translation of climate change information	13 (10.8)	28 (23.3)	29 (24.2)	30 (41.7)	2.03	Constraint
Inadequate supply of form input	11(9.2)	43 (35.0)	36 (30.0)	30 (25.0)	2.29	Constraint
Lack of storage facilities	11(9.2)	15 (12.5)	45 (37.5)	49 (40.0)	1.90	None Constraints
Poor access to disease resistance crops	4(3.3)	21(17.5)	37 (30.8)	58 (48.3)	1.75	None Constraint
Poor agricultural program and service delivery	11(9.2)	15(12.5)	29(24.2)	30(41.7)	2.03	Constraint
Lack of farm facilities and information/knowledge	4(3.3)	21(17.5)	37(30.5)	49(40.0)	1.90	Non constraint
Traditional belief and farm operation	11.(9.2)	26(21.7)	45 (37.5)	38 (31.7)	2.08	Constraint
Poor skill of extension personnel and health status of farmers	11(9.2)	15 (12.5)	45 (37.5)	49 (40.0)	1.90	None constraints

Source: Field Survey 2023

Table 4.4 reveals the constraint faced by cassava farmers on climate change in the study area. A benchmark score of 2.0 was employed to measure the constraint. Variables with a mean score less than 2.0 was measured to be a non constraint. Some of the constraints observed by the farmers are; lack of access to weather forecast technology (2.08), poor transportation (2.03), and inadequate supply of farm inputs (2.29). The non-constraints variables are; lack of storage facilities (1.90), poor access to disease resistance crops (1.75). Nyong, E. E; Nweze,N.J and Chuku, G.T (2017); Idome and Mamman (2016) in a similar research work reported limited access to radio, TV, internet and poor transportation of climate change technologies as constraints affecting the awareness and perception of climate change information. The implication of the result shows that government is not doing much as regards creating awareness on climate change information in the study area.

CONCLUSION: This research paper was on the perceived effect of climate change on cassava farmers in Akwa Ibom State. The study has shown that, extension services are a major contributor to the awareness and perceived effect of climate change information in the study area.

Extension agents are carriers of agricultural information to farmers to adopt.It was also deducing that majority of the farmers belonged to cooperative societies and had access to credit facilities to expand their agricultural enterprises. Lastly, the study measured the awareness level of farmers to ascertain their knowledge of climate change information. The perception rate of farmers on climate change information in the study area was very high. The constraints observed if worked on, will increase the productivity of cassava in study area.

RECOMMENDATIONS: Urgent and timely provision of climate change information should be provided to cassava farmers in the study area; Extension agencies should be encouraged to document climate change information in their directories.**;** There should routine sensitization by both Government and Non-government Organization (NGOs) on areas of climate change information.**;** Increased budgeting provision should be allocated to ministries of Agriculture to expand cassava production. Credit and subsidies be provided by the Government.

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