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ANALYSIS OF CASHEW FARMERS ADAPTATION TO CLIMATE CHANGE IN SOUTH-WESTERN NIGERIA

ABSTRACT

Aims: The study employed cross-sectional data obtained from Oyo and Osun state, south-western Nigeria, to explore cashew farmers' awareness of climate change, examine their perception of climate change, and to ascertain the adaptation strategies they adopt to cope with the effects of climate change. **Methodology**: Qualitative approaches were taken in order to obtain information needed to address each of the specific objectives. The obtained responses were analysed descriptively and presented in the form of tables, bar and pie chart. In addition, chi-square test of independence was employed to test hypotheses.
Results: Survey results indicated that almost all the respondents were aware of climate change prior to the time this survey was conducted. Moreover, a large proportion of them claimed to have noticed that temperatures are warming, while precipitation is declining. They react to these changes in climate by adopting various climate-response strategies, prominent among which are introduction of new cashew varieties and intercropping of cashew alongside other crops. The study results further revealed that there is a significant relationship between farmers experience and adoption of adaptation strategy. **Conclusion**: the survey results demonstrate that cashew farmers in the study area were aware of climate change, and they put in place measures to help them avert its negative effects.

Keywords: Adaptation, Awareness, Cashew Farmers, Climate Change, Perception

INTRODUCTION

It is no longer news that the climate is changing on a global scale, and to deny this glaring reality will be nothing short of wishing our problems away. If anything, such denials only helps to accelerate the "race to the precipice." Climate change is one of the major challenges of the 21st century [1], affecting many sectors in the world. It is considered to be one of the most serious threats to sustainable development, its effect is being felt in virtually every facet of human life, ranging from environment, human health, food security, economic activities, natural resources, education, regional and inter-regional conflict, to physical infrastructure [2; 3].

The Agricultural sector being one of the most weather-dependent of all human activities is inherently climate-sensitive, thus, making the sector precariously vulnerable to climate change. [4] predicts that climate change will lead to decreasing crop yields in most tropical and sub-tropical

regions, especially in West Africa, due to deviations in temperature and precipitation patterns. According to [5], such changing temperatures and rainfall are likely to shift populations of insect pests and other vectors and change the incidence of existing vector-borne diseases in both humans and crops. These, in effect, will have significant impact on the agricultural sector, with a probable resultant increase in the prevalence of famine in developing countries [6], of which most African countries are not an exemption.

Changes in climate has been described as a new security threat for Africa. For instance, it has been projected that by 2020, about 250 million people in Africa could be exposed to greater risk of water stress [4] attributed to changes in climatic variables. This is likely to result in disruption of food and water resources that are critical for livelihoods, considering that much of the population, especially the rural poor, rely on local supply systems that are sensitive to climate variation. This will have devastating implications for development and livelihoods and are expected to add to the challenges climate change already pose to poverty eradication [7].

In a sense, agricultural production and food security in many African regions and countries have the highest propensity to be severely compromised by climate change and variability [8], making the African continent likely to be hard hit by the ravages of climate change. However, given that the agricultural sector is a source of livelihood for many people in African rural communities, especially the poor [9], it becomes necessary to protect the livelihoods of farmers in a bid to guarantee food security.

Like every other country, Nigeria is not insulated from the happenstance of climate change. According to [10], Nigeria is already experiencing a range of climate changes, in the form of more frequent heavy rainfall events, erratic and unpredictable onset/retreat of rain, frequent floods, drought and increasing air temperature. The impacts from these changes include increased infestation of crop by pests and diseases, depletion of household assets, increased rural urban migration, increased biodiversity loss, depletion of wildlife and other natural resource base, changes

in the vegetation type, decline in forest resources, decline in soil moisture and nutrients, increased health risks and the spread of infectious diseases [10].

Consequently, there arise a need for supportive policies and framework to enhance climate change adaptation processes among farmers. This is very germane, considering that the agriculture sector is the main stay of the Nigerian economy, which contributes over 40% to the gross domestic product (GDP), accounts for 5 percent of total export, provides 88 percent of non-oil earnings [11] and serves as the employer of labour for the bulk (70- 80 %) of the labour force [12].

The discourse on impacts of climate change and variability on agriculture is often associated with adaptation and coping mechanisms. Given that efforts to mitigate the sources of climate change and/or enhance the sinks of greenhouse gases seems farfetched- at least in the foreseeable future- adaptation is critical and of key concern in developing countries, particularly in Africa where vulnerability is high because ability to adapt is low [13]. Although even if efforts to reduce greenhouse gas emissions are successful, some degree of global warming and climate change is inevitable [14]. This makes adaptation one of the essential ways in ameliorating the long term influences of climate change and variability.

Although adaptation might not be the holy grail of climate change solution, in the interim, it helps farmers achieve their food, income and livelihood security objectives [15]. Moreover, international efforts at finding solutions to climate change have recognized the role of adaptation as a policy option [16]. [17] evinced that adaptation occurs in different forms, these include anticipatory and reactive; private and public; autonomous or spontaneous and planned adaptations. It also varies spatially, among individuals and groups, and also over time depending on the available resources [18].

[19] defined adaptation as the process by which farmers alleviate the adverse impacts of climate on their livelihoods. This is based mainly on indigenous knowledge which embodies a wide variety of skills developed outside the formal education system. It arises out of continuous experimentation, innovation and adaptation, blending many knowledge systems to solve local

problems. It may also involve modifications in lifestyle and economic structure in order to reduce the vulnerability of a system to climate change and variability [20], by increasing the capacity of a system to survive external shocks or change [21].

Leveraging on the aforementioned definition, adaptation is viewed in the context of this study as an activity or assortment of activities practiced by cashew farmers in the study area (south-western Nigeria), with the sole aim of utilising such activity(s) as a means of ameliorating the impacts of climate change and by so doing reduce the resultant production risk confronting them (cashew farmers); at the same time, capitalising on new opportunities (if any) brought about by changed climate.

A plethora of empirical studies on the impacts of climate change on agriculture in Africa [13; 22; 12; 23; 24) has shown that such impacts can be significantly reduced through adaptation and attenuation. However, it is noteworthy that up until now, most of the aforementioned studies lumps all crops into one category and all livestock together into another. Evidentially, empirical literature (13; 24) has revealed that different crop types and different animal species are affected differently by climate change. As such, disaggregated analyses is very germane, considering that farm-level adaptation is a factor of local circumstances (knowledge, attitudes, practices and belief systems of farmers) and the specifics of the agricultural options practiced (in this case cashew).

Analysing adaptation is therefore important in gaining better understanding of how cashew farmers in Osun and Oyo state have been able to adapt to the debilitating effects of climate change. This is essential in bolstering the coping strategies of local cashew farmers through better targeting of appropriate public policy and future developmental projects which can help increase the adoption of adaptation measures as a tool for managing the negative consequences associated with changes in climate. Moreover, formulating policies that can help guarantee food security requires adequate insight into farmers' perception of climate change and the resultant adaptation strategies adopted [9]. On the other hand, such perception is fundamentally shaped by experiential and or indigenous

knowledge of the climate as well as the impacts of climate change observed over a period of time [24].

In addition, it is hoped that this study will further enrich the wealth of existing research on climate change undertaken in Nigeria and the African continent at large. It is also our honest-to-goodness believe that researchers would find this piece of work handy for future research.

The broad objective of this study is to contribute to the discourse on climate change by providing current data-based evidence on cashew farmers perception of climate change, as well as the strategies (if any) that they have adopted to cope with the effects of changing climate. Specifically this study seeks to:

i. explore cashew farmers' awareness of climate change and sources of awareness,

ii. examine cashew farmers' perception of climate change,

iii. ascertain the coping strategies adopted by cashew farmers in the study area.

METHODOLOGY

Sampling Technique and Sample Size

Data for this study was obtained from two south-western States (Osun and Oyo State) in Nigeria, from which Ejigbo local government and Ogo-oluwa local government were selected respectively. Furthermore, three villages (Ife-Odan, Ola-luwa & Ikonifin) were purposively selected from Ejigbo local government, while two villages (Lagbedu-Orile & Ajaawa) were selected from Ogo-oluwa local government.

A multi-stage sampling technique was undertaken in this study, to ultimately arrive at the individual respondents. The first stage involves the purposive selection of Ife-Odan, Ola-luwa & Ikonifin villages from Ejigbo LGA. As well as purposive selection of Lagbedu-Orile and Ajaawa villages from Ogo-Oluwa LGA. The study local governments and by extension the five villages were purposively selected because there abound a vast expanse of cashew plantations in these

villages. Thereby providing an ample number of respondents for the survey. However, the study was limited to two local government areas owing to resource and time constraints.

Due to lack of a suitable sampling frame which will enable the use of simple random sampling, systematic sampling technique (skip No=3) was employed in the second stage to select the individual cashew farmers from the respective villages. Semi structured interview was undertaken with a total of 120 cashew farmers through the months of September 2016 to February 2017. The sample size was limited to 120 cashew farmers as a result of resource constraint.

Interview was used as the research instrument of choice, because a direct face-to-face interview provides an avenue for one-on-one interaction with the cashew farmers. Thereby leveraging an opportunity to explain questions to respondents with low literacy level. However, 16 interview schedules were dropped due to vague and inconsistent responses, cutting down the number of interview schedule used for analysis to 104.

Methods of Data Analysis

This section provides the tools for achieving each specific objective of the study. To explore cashew farmers' awareness of climate change and sources of awareness, a qualitative approach was taken. From discussions engaged in with the cashew farmers it was established whether they have prior awareness of climate change or not. If they answered to the affirmative, a follow up question is asked to ascertain how they got to know about climate change. Responses obtained are then presented in the form of a bar chart and pie chart.

To examine cashew farmers' perception of climate change, a two-way question format comprising Agree/Disagree was adopted. This objective was achieved by reviewing empirical literature to identify climate variables. The identified variables (decrease in annual rainfall, increase in annual rainfall, early onset of rainy season, late onset of rainy season, early termination of rainy season, late termination of rainy season, unpredictable rainfall, high temperature, low

temperature, long and sharp harmattan, short and less vigorous harmattan) were pre-tested before being presented to the respondents to indicate their agreement or disagreement with the defining statements. The data obtained were analysed using frequency counts and percentages, then presented in a tabular form.

The adaptation strategies adopted by cashew farmers in the study area was ascertained using a multi-choice response format. A multi-choice response format was used because it has been observed that the main practices actually followed by farmers are mostly taken in combination with other measures and not alone. To that end a number of adaptation strategies garnered from empirical literatures (mulching, improved irrigation, soil erosion prevention measures, integrated pest management, selection of appropriate varieties to cultivate, use of fertilizer, use of manure, intercropping, regular weeding) were presented to the respondents to select the strategy(s) that they practice in order to adapt with climate change. In addition an open ended provision was made so as to take care of any adaptation strategy(s) practiced by cashew farmers in Oyo and Osun State but not explicitly captured in the provided options. This is of particular significance because it will lead to discovery of adaptation strategies (if any) that are unique to the crop in question or to the study area. The multiple responses were then analysed to give frequencies and percentages, which was then presented in Tabular form.

Furthermore, a number of hypotheses were specified for the study. The essence of the hypotheses is to test for dependence between cashew farmers' adoption of at least one adaptation strategy and a number of independent socio-economic variables. Towards that end, dependence between cashew farmers' adoption of at least one adaptation strategy and socio-economic variables including *gender*, *farm size*, *age*, *experience* and *household size* was evaluated. Chi-square (X^2) goodness of fit test was utilised to test the significance of hypotheses in relation to the aforementioned variables.

RESULTS AND DISCUSSION

Socio-economic Characteristics of Sampled Farmers

Table 1 illustrates that Majority of the respondents were males (78.8%), and of active age (60.6%), ranging from 25-50. Secondary school dominates as the highest level of education attained by the respondents (33.7%), whereas 20.2% of the respondents had no formal education. It is also evident from table 1 that a vast majority of the respondents (81.7 %) were married, with a household size of 5-10 persons (73.1%). Also, most of the respondents (37.5%) had farm holdings ranging in size from one to five hectares and have been in the business of cashew farming for a time period ranging from 1-10year (55.8%).

Table 1: Socio-economic Characteristics of Sampled Farmers

Socio-economic characteristics	Frequency	Percentage
Gender (categorical)		
Male	82	78.8
Female	22	21.2
Total	104	100
Age (Years)		
<25	7	6.7
25-50	63	60.6
>50	34	32.7
Total	104	100
Mean	44	
Educational Status (Categorical)		
Primary	28	26.9
Secondary	35	33.7
Higher Education	20	19.2
None	21	20.2
Total	104	100
Marital Status (Categorical)		
Married	85	81.7
Single	19	18.3
Total	104	100
Household Size (Integers)		
<5	12	11.5
5-10	76	73.1
>10	16	15.4
Total	104	100
Mean	08	

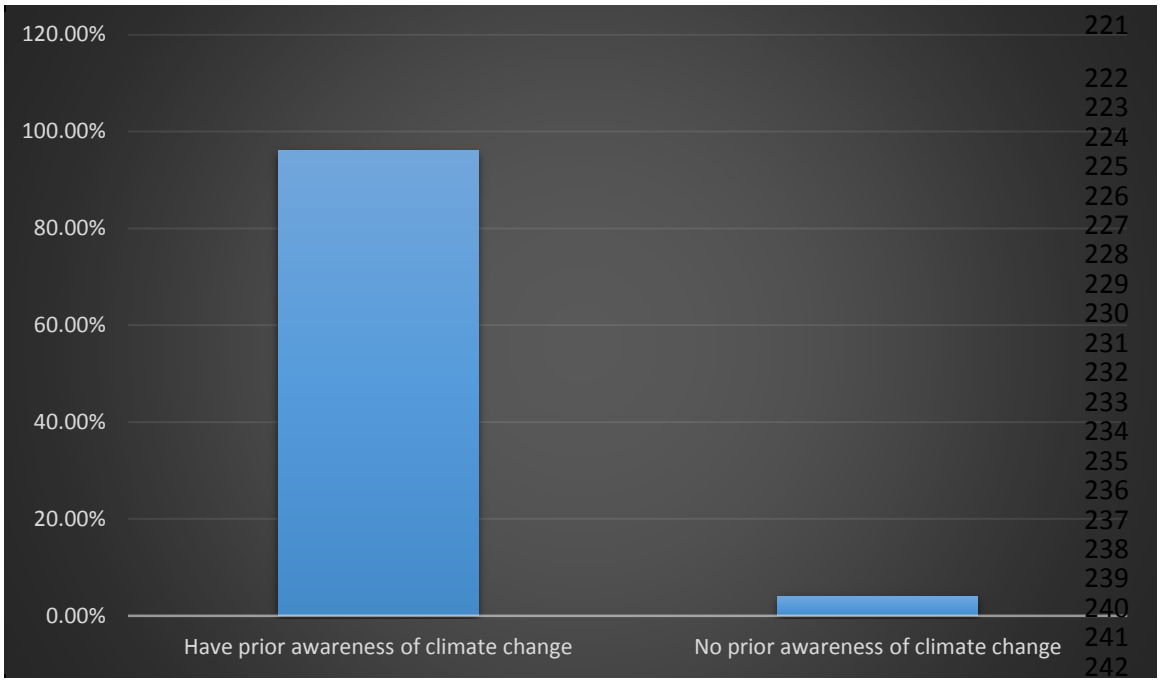
Land Size (Hectres)		
<1	18	17.3
1-5	39	37.5
6-10	25	24.0
10-15	7	6.7
>15	15	14.4
Total	104	100
Mean	05	
Experience (years)		
1-10	58	55.8
11-20	31	29.8
>20	15	14.4
Total	104	100
Mean	10	

Source: Survey result (2017)

Farmers Awareness of Climate Change and Source of Awareness

Result of analysis depicted in figure 1 shows that a large proportion (96.2%) of the respondents were aware that there has been a change in climate over time. However, it is worthy of mention that just about all the respondents who have noticed such variations in climate did not know it in that coinage "climate change." But, they could give a passive description of it based on their assessment of increases in temperature and changes in the duration and timing of rainfall. This finding is in line with results of a study [12], which indicated that Majority (97%) of the respondents observed climate change in one form or the other. Although contrary to our findings, in a study of climate change implications on smallholder farmers in Ghana, distribution of responses showed that majority of the respondents (72%) had no idea about climate change [25].

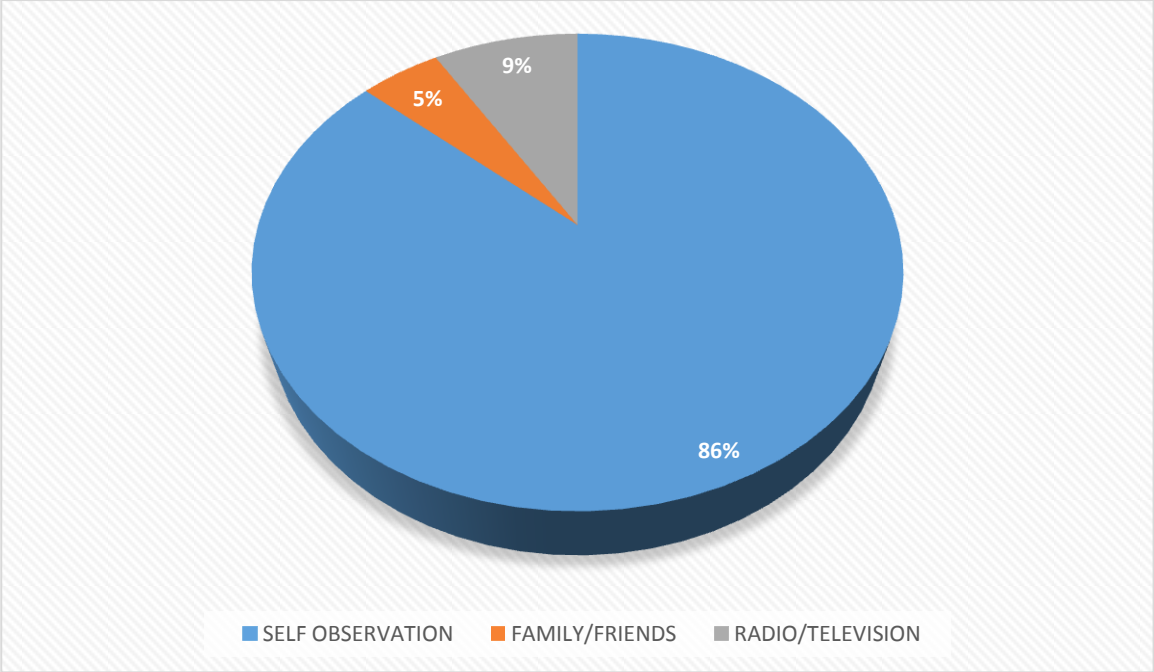
Figure 1: Farmers' awareness of climate change



Source: Survey result (2017)

Unsurprisingly, figure 2 demonstrates that majority of the respondent (86%) got to be aware of climate change through their personal observation of changes in certain climate variables (notably temperature and rainfall) over time. In addition, friends/family, as well as news media prove to be an important knowledge base for other respondents, accounting for 5% and 9% respectively. This finding is supported by results reported by [12], in which personal experience (37.1%) and radio (32.9%) were the most important sources of awareness of climate change by the respondents. However, [24] commented that farmers in three selected provinces of South Africa mostly got to know about climate change issues through various news media.

Figure 2: Source of awareness



Farmers Perception of Climate Change

As shown in table 2, a vast majority of the surveyed farmers (82.7%) perceived that precipitation has declined, while 4.8% were of the notion that there had been an increase in the duration of annual rainfall. Rainfall have also been noted to be unpredictable in terms of its onset (54.8%) and dry spells (53.8%) in the course of the rainy season. Conversely, [10] from their study of smallholder farmers' perception of climate change in the upper and lower Niger River basin development authority areas of Nigeria, showed that majority of the respondents (50.5%) perceived that rainy days with heavy rainfall were increasing. On the other hand, survey participants (76.6%) also claimed to have experienced dry spells during the raining season, as well as (69.2%) experiencing unpredictable and unreliable onset and retreat of rains and shrinking of the growing season. Similarly, report of increase in the amount and intensity of precipitation over a period of ten years was also reported by a cross section of farmers' from six agro-ecological zones of Uganda [22].

However, in a study that utilises cross-sectional data obtained from over 8000 farms across 11 African countries, [13] analysed determinants of farm-level climate adaptation measures in

Africa; study results indicates that half of the survey respondents perceived that precipitation has declined. Also one third believe there were pronounced changes in the timing of the rains, and one sixth think droughts are more frequent. The aforementioned perception of this study participants regarding annual rainfall is further consolidated by many other related empirical studies across Africa; South Africa [9], Tanzania [26], Euthopia [21] and Ghana [23].

Furthermore, a significant proportion of the study participants (73.1%) perceived that temperatures have been increasing over the tracking period of ten years and above, as indicated in table 2. This perceived temperature increase is in agreement with the believe of a significant proportion (70%) of respondents in a study conducted in the upper and lower Niger river basin development authority areas of Nigeria [10]. This study also has a commonality of finding with the survey of [23], in which most farmers (89.5 %) interviewed perceived that temperature has increased over the past 30 years in the Vea catchment of Ghana. In a similar vein, across three different provinces in South Africa, 77.3% of potato farmers and 66.7% of cabbage farmers claim to have suffered from high/extreme temperature [24]. In essence, the perception of the study participants regarding temperature resonates with the perception of respondents in many other empirical studies across Africa [13; 26; 22].

It is worthy of note that this study comes short, in the sense that we were not able to employ actual weather information from meteorological station in the study area, as regards rainfall and temperature, in order to complement the survey responses obtained from the cashew farmers. This is of utmost significance given that it is not unprecedented [24] for results of perception analysis to contrast with results analysed from actual weather data of the study area. To that end, this comes across as a gap that future research can harness.

316 **Table 2: farmers' perception of climate change**

Defining Phrase	Response	Percentage
Decrease in annual rainfall	Yes	82.7
	No	17.3
Increase in annual rainfall	Yes	4.8
	No	95.2
Early onset of rainfall	Yes	9.6
	No	90.4
Late onset of rainfall	Yes	54.8
	No	45.2
Dry spells in the rainy season	Yes	53.8
	No	46.2
Increase in temperature	Yes	73.1
	No	26.9
Decrease in temperature	Yes	3.8
	No	96.2
Long and sharp harmattan	Yes	26.9
	No	73.1
Short and less vigorous harmattan	Yes	50
	No	50

317 Source: Survey result (2017)

318 **Coping Strategies Adopted by Cashew Farmers**

319 Results of the adaptation strategies adopted by cashew farmers in the study are presented in
320 Table 3. Strategies that were practiced by cashew farmers in the study area in order to cope with the
321 deleterious effects of climate change are: Conserving moisture using mulch, introduction of
322 improved seed variety, diversification by growing a variety of crops on the same plantation,
323 maintaining more than one cashew plantation and to a meagre degree, introduction of irrigation
324 techniques. It is worthy of note that, these adaptation strategies are not mutually exclusive, as such,
325 there are mostly adopted in combination and not necessarily alone.

326 Introduction of new cashew variety stand out as the most common adaptation practice of
327 cashew farmers in the study area. The large extant of adoption of these measures as an adaptation
328 strategy may be attributed to the fact climate change does not affect farmers in isolation, it therefore
329 implies that the farmers collectively face similar challenges and would likewise adopt similar
330 response measures. Above 73% of the respondent introduced new varieties, which are basically

high yielding and mature within a relatively short period of time. By the same token, [24] revealed that cabbage farmers in South Africa planted drought-tolerant varieties as an adaptation strategy. In a similar vein, in a study involving 1800 farming households in South Africa and Ethiopia, planting of different crops and crops varieties were amongst the commonly adopted adaptation strategies by farmers [9]. Yet still, introduction of new varieties which are often early-maturing, high-yielding and/or drought-tolerant has proven to be a common adaptation strategy by myriads of farmers across various parts of Africa, as in Euthopia [21], Uganda (Okanya *et al*., 2013), Ghana [23] and Nigeria [10].

Table 4 further depicts that cashew farmers (35.6%) in the study area intercrop cashew with other crops, basically yam and cassava, at early stage of cashew plantation. This strategy serves as a safety net for the cashew farmers by minimizing risks of total crop loss due to impacts of climate change. As such, this practice is consciously undertaken as a means of distributing risk by ensuring that rain is adequately utilised. In a study covering two agro-ecological zones of Nigeria, the adoption of multiple cropping practice was the most important strategy used to alleviate the effects of climate change by both female and male respondents [12]. Our study result is also consistent with findings by [24], which indicated that potato farmers in South Africa laid more emphasis on the planting of different crops as a strategy to mitigate the impact of climate variability. Furthermore, using a mix of crop types as an adaptation strategy was also report by other studies (26; 23; 10]

Just about half of the respondents (49%) indicated that they maintained more than a single cashew plantation. The farm holdings were usually far apart from one another. The rationale behind such practice is to take advantage of localized variations in rainfall distribution, and by so doing safeguard against total crop lost. This same practice has been shown to be adopted by small holder farmers in in the upper and lower Niger River basin development authority areas of Nigeria [10].

Also Cashew farmers adopted other climate-smart agricultural practices such as conserving moisture using mulch (11.5%) and use of irrigation (2.9%). Adoption of similar adaptation strategies were reported by various studies conducted in different parts of Africa (23; 10]

Table 3: Coping strategies adopted by cashew farmers

Coping Strategy	Percentage
Conserving moisture using mulch	11.5
Multiple Cashew plantation	49
Introduction of new cashew variety	73.1
Irrigation Farming	2.9
Intercropping of cashew	35.6

Note: Total is more than 100 because of multiple responses. n=104

Relationships between adoption of adaptation strategy and some socio-economic variables

Table 4 presents the estimated chi-square values, degree of freedom and the corresponding P-levels from the chi-square test of independence. The results show that most of the explanatory variables are not statistically significant at conventional levels. (1%, 5% or 10%). with the exception of number of years a particular farmer has been producing cashew (*experience*), which was statistically different from zero at *P*= 0.10.

Table 4: Chi-square test of independence

Variable	Chi-square value	Degree of freedom	P. Value
Age	3.930	2	.140
Experience	5.112	2	.078*
Household size	0.17	2	.992
Farm size	1.062	2	.588

*P = .10

Table 4 revealed that there is a significant relationship between *experience* of cashew farmer and adoption of at least a single adaptation strategy. This implies that more experienced farmers are more likely to adopt at least a single coping strategy than the less experienced. Perhaps this might be because to a certain extent experience is usually associated with better knowledge and information on climate change and by extension better knowledge and information on agronomic practices that cashew farmers can employ to adapt to changes in climate. In another study, experience was found to have a positive and significant relationship with farmers' perception of climate change in north-central Nigeria [12]. In a similar vein, [13] in their studies of farmers'

adaptation to climate change in Africa also found experience to be a significant determinant of farmers' adoption of adaptation strategy. By the same token, a study authored by [27] employed multivariate probit model to analyse the determinants of farm level adaptation measures to climate change in southern Africa; result of the analysis revealed that experience increases the probability of uptake of several adaptation options.

On the other hand, result of this study indicates that *age, gender, household size* and *farm size* had no significant influence on cashew farmers' adoption of adaptation strategy. Therefore, aside experience, farmers' choice of whether to adopt at least a single adaption measure or not, may have been influenced by other numerous factors not captured in this survey.

CONCLUSION

This study revealed that cashew farmers in the study area are fairly aware of climate change. Although they do not know of it in the coinage "climate change" they could give a passive description of it based on their assessment of increases in temperature and changes in the duration, intensity, and timing of rainfall. Patently, farmers' awareness of climate change, bulk of which is acquired through self-observation, and to a small extent via news media, as well as friends/family could come in handy in their plans towards adopting adaptation strategies. Furthermore, the study participants alleged that as a result of the perceived variations in climate, there has been a deterioration in quality of fresh cashew fruit harvested and subsequent decline in crop yield. This implies that cashew farmers in the study area have fair knowledge of the impacts of climate variables, basically temperature and rainfall on their crop. However, as these farmers interact with their local environment over time, their tend to apply the knowledge they have garnered in combination with locally available resources to bring about agricultural practices such as intercropping, planting of improved cashew variety, keeping multiple cashew plantations, conserving moisture using mulch and irrigation as mechanisms for curbing the malaise of climate change and adapting to the changing weather patterns. The study results goes to show that cashew farmers in the study area do not accept changes in climate as an indictment on their livelihood,

403 rather majority of them plant different varieties of cashew as an adaptation option. This is an
404 indication that cashew farmers in the study area see this option as an effective measure to
405 ameliorate the looming uncertainty occasioned by climate change.

406

407 **RECOMMENDATION**

408 Although cashew farmers in the study area adopt a number of adaptation strategies in order to build
409 up resilience and ameliorate the distress caused by change in climate, their effort is not sufficient in
410 and of itself. Therefore, there is a genuine need for their efforts to be complemented by adjusting
411 strategies to meet evolving trends and guarantee their sustainability.

412 First and foremost, there arise a need for urgent attention to be taken by public agencies,
413 private service providers, farmer groups, non-governmental organizations, opinion leaders,
414 community legitimisers and all stakeholders to sensitize the rural public on climate change. This
415 can be achieved through provision of technical assistance in the form of real time weather forecast
416 information, especially regarding rainfall patterns and temperature. This will enable farmers to fully
417 exploit seasonal rainfall distribution to improve and stabilize crop yields, by responding effectively
418 to the impacts of climate change. Towards that end, it makes economic and environmental sense to
419 leverage on already available extension structure as a means of information dissemination.
420 However, these agricultural extension officers should be given the needed training to equip them
421 with knowledge about climate change. In addition, to complement the efforts of extension agents,
422 local frequency modulation (FM) radio stations should be used as a conduit to further equip cashew
423 farmers with technical information using the local language (Yoruba). Use of local language will
424 help cashew farmers to better understand the information relayed to them and as a result they are
425 likely to modify their farming activities accordingly.

426 Secondly, as a proactive approach, there arise a need for accelerated access to improved
427 variety of cashew seeds (at subsidized rates) which are tolerant to drought, and other extreme
428 weather conditions.

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