



Research article

## Farmland Access and Intergenerational Transfer Among Cocoa Farmers, South-West, Nigeria

*Sijuwade Adebukola Adebayo<sup>a</sup>, Ogundiran Tosin Joyce<sup>a</sup>, Raphael Olanrewaju Babatunde<sup>b</sup>*

<sup>a</sup> Department of Agricultural Extension and Rural Development, University of Ilorin, Ilorin, 240003 Nigeria

<sup>b</sup> Department of Agricultural Economics and Farm Management, University of Ilorin, Ilorin, 240003 Nigeria

### ARTICLE INFORMATION

#### Article history:

Received 05 April 2022

Revised: 20 October 2023

Available online: 01 November 2023

#### Keywords:

Farmland access, Intergenerational transfer, Cocoa farmers, Nigeria

#### Correspondence:

E-mail: [adebayo.sa@unilorin.edu.ng](mailto:adebayo.sa@unilorin.edu.ng)

[sijuadeadebayo@yahoo.com](mailto:sijuadeadebayo@yahoo.com)

### ABSTRACT

The study focused on the farmland access and intergenerational transfer among cocoa farmers in South-west, Nigeria. The objectives of the study were to investigate cocoa farmers' accessibility to land holdings, determine cocoa farmers' perceived timing of intergenerational farm transfer among others. A multistage sampling procedure was used to select 342 cocoa farmers. The data were collected through interviewer administered questionnaire and analyzed using descriptive statistics and Pearson Moments Products Correlation. Results showed that majority of the respondents were male (77.0%), having farm size of 5 ha and below (84.9%), the mean age of the respondents was 58 years while the mean household size was 6. The result shows that majority (89.6%) of the respondents had access to cocoa farmland by purchase, perceived timing of intergenerational farm transfer plan is after the farmer' demise (72.2%) and preferred their son (86.4%) to be their successor. However, alternate plan for those who have not identified a successor preferred to sell off (45.6%) the farm. The highest ranked constraint to farmland access was high cost of land with the mean = 2.89. Result shows positive correlation between respondents 'age ( $r = 0.222$ ,  $p = 0.000$ ), farm size ( $r = 0.051$ ,  $p = \text{value } 0.000$ ), and access to farmland. The study concluded that cocoa farmers had access to their farmland by purchase with majority having not identifying possible successor. The study recommended that relevant stakeholders should create awareness and train cocoa farmers on the need to identify and engage possible successors early in order to ensure family farm sustainability.

@2023

## 1. INTRODUCTION

Access to land and other natural resources is crucial for lifting rural communities out of poverty. However, inequalities in access to land and supportive services hinder full utilization of these resources and contribute to rural poverty (Makate et al., 2019). Kang et al. (2023) found that

smaller land holdings and lower utilization rates are concentrated among the poorest segments of society, while larger land holdings and higher utilization rates are more common among the affluent.

Increasing access to farming land has been shown to improve dietary diversity, food security, and caloric intake (FAO, 2018a). Whitney et al. (2018) and Atube et al. (2021) suggest that the diversity of crops produced and sold is

influenced by factors such as land size, market prices, and access to inputs. Furthermore, access to agricultural land plays a significant role in food sovereignty and resilience, according to a study by Calo et al. (2021). The study found that land ownership often leads to exploitative decisions that affect vulnerable populations. This, in turn, contributes to the disparity between different groups. Additionally, Moreda (2023) reported that the decreasing access to land is driving young people in rural areas away from agricultural livelihoods, compelling them to migrate in search of other sources of income. Therefore, it is essential to understand the evolving dynamics of access to land and livelihoods. In many developing countries, land is the primary means of generating livelihoods and often the main vehicle for transferring wealth between generations. Therefore, how land is accessed and ownership transfers are planned has significant implications for food security and sustainability of family farms/businesses. It has been observed that a considerable number of family-owned farms in Nigeria do not survive beyond their first generation due to the absence of a succession plan. Additionally, several large farms that were managed by untrained individuals have suffered significant setbacks or collapsed entirely due to poor management by their successors. Tetteh and Boehlje (2019) found that farmers are concerned about the future of their farms and are often kept awake by this issue. It is common for farming businesses to be passed down from the older generation to the younger generation to ensure that the farm stays within the family. If the farm transfer is not initiated at the right time, the younger generation may not be able to take advantage of their higher productivity, leading to a loss of personal wealth and reduced growth for the family business. Therefore, it is crucial to make plans for the transfer of the farm to avoid any negative consequences. Delaying the farm transfer decision can undermine the continuity of the farm business (Tetteh & Boehlje, 2019). This study aimed to examine farmland access and inter-generational farm transfer among cocoa farmers in South-west, Nigeria. The study had several objectives including ascertaining the socio-economic characteristics of cocoa farmers, examining their accessibility to farmland holdings, investigating their perceived timing of inter-generational farm transfer, identifying their preferred successor and alternative plan, and identifying the constraints to their access to farmland.

## 2. METHOD

### 2.1. *The Study Area*

The area of study is South Westerns Nigeria. South Western States were purposively chosen for the study because cocoa is widely grown in these areas. South Western States are one

of the Geopolitical Zones in Nigeria has six (6) States, namely: Lagos, Ekiti, Osun, Oyo, Ondo and Ogun. The geopolitical zone is bound by the Republic of Benin on the West, Edo and Delta States on the East, Gulf of Guinea in the South and in the North by Kwara and Kogi States. It lies between latitude 7° 5'N to 9°20'N of the Equator and longitude 3°30'E to 10°E of the Prime Meridian. It has a total land mass of 76,852 square kilometers and a population of 27,581,992 people (NBS, 2019) and controls up to 60% of the nation's industrial capacity. South western States has a tropical climate with two distinct seasons: the raining season (April-October) and the dry season (November-March). The major occupation of the inhabitants is farming. Agricultural practice and is still largely traditional and is characterized by small land holdings (1.2 ha average holding). The use of simple tools such as hoe and cutlass, communal or family land holding and shifting cultivation are still predominant. Food crops cultivated include: Yam, Cassava, Cocoyam, Maize, Rice, Plantain, leafy and fruit vegetables, Cash crops include: Cocoa, Kolanut, Oil palm, and Rubber. Timber is also found in the forest region.

### 2.2. *Sampling Procedure and Sample size*

A three-stage sampling technique was used in the selection of the respondents for the study. Firstly, three (3) States were randomly selected from the six (6) States in South Western Nigeria for the study because cocoa is widely grown in these States (Okojie, 2018). Secondly, ten (10) cocoa farming communities that fell within the ADP Zones were randomly selected from each of the State selected. Lastly, five percent (5%) out of the 6,843 total registered cocoa farmers were randomly selected from each of the selected community. A total of 342 cocoa farmers were used for the study.

### 2.3. *Data collection procedure and analysis*

The study was a survey conducted among Cocoa farmers using a questionnaire. The questionnaire was carefully developed and validated by experts in the department of agricultural extension and rural development to ensure its accuracy and reliability. Test-retest method was used to measure the reliability of the instrument. The instrument has a reliability coefficient of 0.79. The data was analysed using percentages, graphs while PPMC was used to analyse the hypothesis for the study.

The cocoa farmer's accessibility to land holdings was recorded as eight codes: (1) by partnership; (2) by inheritance; (3) by leasehold/ rent; (4) by gift; (5) by family land; (6) by sole proprietorship; (7) by marriage; (8) by purchase.

The Cocoa farmers' perceived timing of intergenerational farm transfer was measured by asking the cocoa farmers to indicate the appropriate time they think farm should be transfer to younger generation on 11 items and was coded as: before a child is fully matured =1, immediately a male child is born into the family= 2, the moment the child starts following the farmers to the farm =3, at/ after child 's marriage=4, at farmer's old

age/retirement =5, after farmer 's death=6, anytime a child picks interest=7,when the child (successor) is above 18 years of age=8, when a child is between 20-30 years of age=9 above 18 years of age =9 When the child is above 30 years= 10 and any time =11.

Respondents were required to indicate their preferred successor on 3 items and was coded as 1=son, 2= daughter and 3= relative(s). Respondents with no successor were to indicate their alternative plan on intergeneration farm transfer plan and was coded as 1= to adopt a son, 2=to sell off the farm, 3=give out the farm, 4=contract out the farm

The constraints to cocoa farmers' access to farmland was recorded by a 3 points scale of 3 = Greater extent, 2 = Great extent and 1 = No extent 3.

### 3. RESULTS AND DISCUSSION

The study found that the majority (77.0%) of cocoa farmers in the study area were male, while only 23.0% were female, indicating a male-dominated sector. This could be attributed to the perception that farming is a male-dominated field because of its physically demanding nature. This finding is consistent with Uwagboe et al.'s (2016) report, which showed that men dominate cocoa production in Cross River State of Nigeria. Additionally, the study revealed that about half of the respondents (52.3%) were between 31 and 60 years old, with a mean age of 58.4 years, indicating an aging population. This aligns with Fasina et al.'s (2013) finding that farmers' productivity decreases as they age. Adeogun et al.'s (2010) report also showed that the majority of cocoa farmers in Nigeria are over 54 years old.

The study further revealed that 30.2% of the respondents had secondary education, while 21.8% had primary education, indicating that cocoa farmers are moderately educated. This finding is consistent with Adeogun's (2008) report, which showed that few cocoa farmers in Nigeria hold tertiary education. In addition, the study found that 69.5% of the respondents were married, suggesting that there are more family members available for labor activities on the cocoa farm in the study area. This is consistent with Nmadu et al.'s (2015) report, which stated that farm labor force is typically limited to family members.

Moreover, the study found that the mean household size was six, indicating that cocoa farmers have larger household sizes, which could impact cocoa production. This aligns with Akinagbe's (2017) finding that larger household sizes are typical of cocoa farmers in South western Nigeria. The study also found that 84.9% of the respondents had farm sizes of 5 hectares and below, indicating that cocoa farmers have small holdings. This finding is consistent with Adeogun's (2008) report, which showed that most farmers in the five cocoa-producing states in Nigeria have farm sizes of 5 hectares and below. Additionally, the study revealed that 50.8% of the respondents grow other crops aside from cocoa, indicating that cocoa farming alone is not sufficient to meet their financial obligations, especially during the off-harvesting season. This is consistent with Kraan's (2009) report, which indicated that having supportive occupations would improve the livelihood of cocoa farmers, particularly during the off-season period.

Lastly, the study revealed that 50.5% of the respondents had been cocoa farming for 11-20 years, with a mean farming experience of 14 years, indicating that cocoa

farmers are knowledgeable about cocoa farm management. Additionally, 70.7% of the respondents had utilized family labor on the farm, which could be a way of reducing production costs. This finding is consistent with Mugwe et al.'s (2009) report, which highlighted the importance of family labor as a component of the labor force for small-scale farmers.

Table 1. Socio-Economic Characteristics of Respondents

Variables	Frequency (n = 331)	Percentage (%)	Mean
Age			
≤30	5	1.5	
31-60	173	52.3	58.4
≥61	153	46.2	
Gender			
Male	263	77	
Female	79	23	
Religion			
Islam	121	36.6	
Christianity	196	59.2	
Traditional	14	2.4	
Education			
Non formal	86	26.0	
Primary	72	21.8	
Secondary	100	30.2	
Tertiary	73	22.1	
Marital status			
Single	36	10.88	
Married	230	69.50	
Widow/widower	65	19.64	
Household size			
1-5	151	45.6	
6-10	153	46.2	6
≥6	27	8.2	persons
Farm size			
1-5	281	84.9	
6- 10	45	13.6	3.7
>10	5	1.5	
Farming experience			
1-10	167	50.50	
11-20	92	27.80	
21-30	45	13.60	
>31	27	8.20	
Number of wives			
0	95	28.70	
1	205	61.70	
2	30	9.10	
3	1	0.30	
Secondary occupation			
Farming (other crops)	168	50.8	
Trading	66	19.9	
Artisan	33	10.0	
Agro processing	34	10.3	
Civil servant	21	6.3	
Labour used			
Family	234	70.70	
Hired	219	66.20	
Contract	56	16.90	
Cooperative	28	8.5	

### 3.1. The cocoa farmer's accessibility to land holdings

The distribution of respondents in terms of their access to cocoa farmland holdings and ownership structure of farmland is presented in Table 2. The majority (89.6%) of the respondents have acquired access to their cocoa farmland through purchase. This high percentage of acquired farmland suggests that cocoa farmers in the study area have had to incur additional costs for land purchase, which may reduce their overall profits from the enterprise. This finding contradicts the results of Akinnagbe (2017), who reported that cocoa farms in Nigeria were mostly accessed and acquired through inheritance. However, Sharma (2005) found that land purchase remains a major means of farmland access. In terms of ownership structure, 56.2% of the respondents have sole proprietorship/ownership of the land, indicating that the ownership of cocoa farms is mostly in the hands of the principal farm owners, and their success would depend on their individual efforts. According to Foskey (2005), sole proprietors are visionaries who are instilled with autonomy and power to make decisions that will lead them to the realization of their visions. Furthermore, 57.4% of the respondents have access to land through leasehold or rent, indicating that the farmers' farmland will depend on the size of land that is available to them for rent. This result is consistent with the findings of Calo et al. (2021), who reported that access to agricultural land plays a significant role in food sovereignty and resilience.

Table 2. Distribution of the Respondents by Access to Cocoa Farmland

Forms of land access	Yes	No
Partnership	145 (43.8)	186 (56.2)
Inheritance	107(32.3)	224(67.7)
Leasehold/ rent	190(57.4)	141 (42.6)
Gift	37 (11.2)	294(88.8)
Family land	115 (34.7)	216 (65.3)
Sole Proprietorship	186 (56.2)	146 (43.8)
Marriage	91 (27.5)	240 (72.5)
Purchase	295 (89.6)	36 (10.4)

Percentages are in Parenthesis

### 3.2. Perception on timing of intergenerational farm transfer

Table 3 reveals that 72.2% of the respondents believed that intergenerational farm transfer should take place after the death of the cocoa farm owner. This could be because older farmers prefer to leave the issue of succession unattended and allow any family member to take over their farm assets after their demise. The study is consistent with Potter and

Lobley's (2016) findings that some farmers, especially polygamous ones, do not consider succession planning while they are alive because they perceive that such thoughts are equivalent to wishing them an early death. Additionally, 54.4% of the respondents believed that the transfer should occur during the farmer's old age and after retirement. Tetteh and Boehlje (2019) reported that despite the farming business's nature and the farmers' strong attachment to land, the older generations are expected to pass down the farm to the younger generation to ensure that it remains within the family

Table 3. Perception on Time of Intergenerational Farm Transfer

Perceived Time	Yes	No
Before a child is fully mature	2 (0.6)	329 (99.4)
After the farmers' retirement	180 (54.4)	151 (45.6)
The moment a child starts to follow the father to the farm	14 (4.2)	317 (95.8)
At the farmer's old age	180 (54.4)	151 (45.6)
After the death of the farmer	239 (72.2)	92 (27.8)
Any time	56 (16.0)	275 (83.1)

Percentages are in Parenthesis

The majority (86.4%) of the respondents who identified their successor preferred their son as the next in line to take over (Figure 1). This preference may be influenced by cultural norms in many developing countries that prioritize male inheritance over female inheritance. Additionally, the son of a farmer may have a stronger connection to the family's land and agricultural traditions than a close relative. This study is consistent with previous research by Kimhi and Nachlieli (2001), who found that a farm owner's son is typically given priority over the daughter in inheriting the farm.

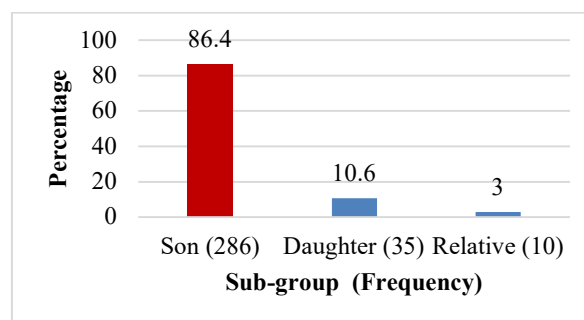


Figure 1. Preferred Successor of Farm Transfer

Figure 2 describes the alternative plan of respondents who have not identified their successors. According to the survey, the majority of the respondents (45.6%) preferred to sell off their farms after retiring, while 38.4% of them wanted to contract their farm out. This could be because cocoa farmers are afraid of conflicts and tensions that may arise among possible successors if intergenerational farm transfer takes place while they are alive. This is a major reason why many farmers are not taking active steps towards intergenerational farm transfer. The study's finding is similar to Sottomayor et al. (2011), which found that farmland without a designated successor is usually sold, rented out, or abandoned.

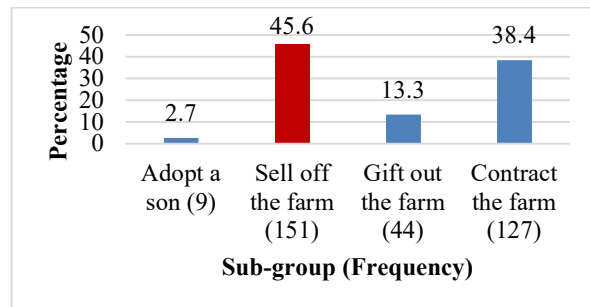


Figure 2. Alternative Plans of Cocoa Farmers Without A Successor

Cocoa farmers face various constraints in accessing land. Table 4 shows that the high cost of land is the most significant constraint, ranking first among the major challenges faced by farmers. This indicates that land is not easily accessible to farmers as it comes at a relatively higher cost. This finding supports the report by Nmadu et al. (2015), which states that the primary challenge faced by farmers is the high cost of land. Other problems include restrictions imposed by family laws and land fragmentation, ranking second and third, respectively. This finding is in line with Adebayo et al, (2020) that found that cultural believe on farm succession and lack of interest by the children were the major challenges faced by the poultry farmers.

Table 4. Rank of Constraints in Accessing Farmland

Constraints to farmland access	Mean (SD)	Rank
High cost of land	2.48 (0.83)	1 <sup>st</sup>
Restriction by family law	2.17 (0.83)	2 <sup>nd</sup>
Land fragmentation	2.11 (0.79)	3 <sup>rd</sup>
Inadequate land	2.00 (0.90)	4 <sup>th</sup>
Urbanization	2.00 (0.81)	4 <sup>th</sup>
Communal conflict	2.00 (0.60)	4 <sup>th</sup>
Government involvement	1.95 (0.87)	7 <sup>th</sup>
The use of land for collateral	1.59 (0.79)	8 <sup>th</sup>
Bureaucracy	1.45 (0.81)	9 <sup>th</sup>

### 3.3. Hypothesis Testing

The main hypothesis tested in this study was there is relationship between selected socio economic characteristics of cocoa farmers and their accessibility to farmland. The results in Table 5 show a significant relationship between the socio-economic characteristics of cocoa farmers and their access to farmland. Specifically, age, farm size, farming experience, and income were found to have a significant positive relationship with access to farmland. This means that as the age of respondents increases, their access to farmland also increases, likely due to accumulated experience and knowledge. Similarly, those with larger farm sizes were found to have greater access to farmland. The years of experience in cocoa farming were also positively related to access to land holdings, suggesting that the longer a farmer has been in the industry, the more likely they are to have acquired the necessary knowledge and experience to gain access to land holdings. Finally, income was found to be positively related to access to land holdings, indicating that those with higher incomes are more likely to have greater access to farmland. The result is in line with findings of Adebayo et al (2020) that there is positive correlation between age and farming experience of the respondents and their inclination to farm succession planning.

Table 5. Test Result on Relationship Between Selected Socio-Economic Characteristics and Access to Cocoa Farm Land

Variables	r- value	p-value
Age in years	0.222**	0.001
Number of wives	0.167	0.179
Number of Children	0.037	0.498
Household Size	-0.074	0.178
Farm size	0.051**	0.001
Years of experience	0.195**	0.001
Income	0.185**	0.0001

\*\*Significant at 0.01 level

## 4. CONCLUSIONS

According to the study's results, cocoa farmers had to purchase access to their farm land at a relatively high cost. Moreover, they believed that intergenerational farm transfer should occur after their passing. Additionally, the farmers generally preferred their sons to succeed them rather than their daughters. In the absence of any possible successors, the farmers preferred to sell off their farm. Therefore, the research recommends that the Government establish a regulatory agency to ensure access to farmland at a lower cost. Furthermore, the Government and relevant stakeholders should create awareness of intergenerational farm transfer. Cocoa farmers should be encouraged to

identify and engage potential successors as early as possible on their farms to ensure the sustainability of family farms.

## ACKNOWLEDGMENT

I acknowledge Mrs Famisa, the Director of Agricultural Extension of Agricultural Development Programme (ADP) Aramoko Ekiti State, Mr. Shaaba, the Director of Produce at the Ondo State ADP, Mr. Bunmi, the Ondo State CFAN Chairman, Dr S.E. Komolafe, and Mr. Ayanfeoluwa for their valuable contributions and assistance rendered during the data collection among the cocoa farmers.

## REFERENCES

- Adebayo, S. A., Sola-Ojo, F. E; Bolarin, O. and `Olusuyi, F (2020) Attitude to Farm Succession Planning among Poultry Farmers in Ilorin Metropolis, Kwara State, Nigeria. *Taraba J. Agric. Res. Vol.8 No.1*.
- Adeogun, S.O (2008). Adoption of Cocoa Rehabilitation Techniques among cocoa farmers in Selected States of Nigeria, An Unpublished PhD Thesis in the Department of Agricultural Extension and Rural Development ,University of Ibadan, Ibadan, Nigeria.86p. Retrieved on 13/11/201.
- Adeogun, S.O.,Olawoye J.E. and Akinbile L.A (2010).Information Adoption of Cocoa Rehabilitation Techniques among cocoa farmers in Selected States of Nigeria. *Journal media and communication studies 2(1). 009-015*
- Akinagbe, O.M (2017). Determination of Factors Influencing Adoption of Cocoa Resuscitation Programme in South West Nigeria. *Asian Journal of Agricultural Extension, Economics And Sociology. 20(3): 1-9, 2017; Article no.AJAEES.36891. ISSN:2320-7027,pp 3-4*
- Atube, F., Malinga, G. M., Nyeko, M., Okello, D. M., Alarakol, S. P., and Okello-Uma, I. (2021). Determinants of smallholder farmers' adaptation strategies to the effects of climate change: evidence from northern Uganda. *Agric. Food Security 10:6*. doi: 10.1186/s40066-020-00279-1
- Calo, A., McKee, A., Perrin, C., Gasselin, P., McGreevy, S., Sippel, S. R., et al. (2021). Achieving food system resilience requires challenging dominant land property regimes. *Front. Sustain. Food Syst. 5:683544*. doi: 10.3389/fsufs.2021.683544
- FAO. (2018a). Food security, resilience and well-being analysis of refugees and host communities in Northern Uganda. FAO Resilience Analysis Report No. 12. FAO.
- Fasina, O.O (2013). Farmer's perception of the effect of Ageing in their Agricultural Activities in Ondo State, Nigeria. Venets: heBelogradchik *Journal of Local History, Cultural and Folk Studies, vol 4, No3, pg 371-387*.
- Foskey, R. (2005). Older Farmers and Retirement, unpublished report to the Rural Industries Research and Development Corporation, Canberra, ACT
- Kang Y, Ganganaboina S, Fang T, Tran A, Suzuki A, Son J and Roh K (2023) Land access, livelihoods, and dietary diversity in a fragile setting in northern Uganda. *Front. Sustain. Food Syst. 7:1178386*. doi: 10.3389/fsufs.2023.1178386
- Kimhi A, Nachlieli N. (2001).Intergenerational succession on Israeli Family Farms. *J. Agric. Econ. 52:42-58*.
- Kraan M. (2009) Creating space for fishermen's livelihoods: Anlo-Ewe beach seine fishermen's negotiations for livelihood space within multiple governance structures in Ghana. African studies collection, Issue 19-336 ISSN Number 978-90-5448-089-11876-018X
- Lobley, M, Bakerb J. R., and I. Whitehead ( 2016)' Farm succession and retirement: Some international comparisons *Journal of Agriculture, Food Systems, and Community Development 1, 1, 49-64. Russian Journal of Agricultural and Socio-Economic Sciences, 1(25) Sociology, vol. 11, no. 2 (2016)*.
- Makate, C, Mango, N & Makate M. (2019) Socioeconomic status connected imbalances in arable land size holding and utilization in smallholder farming in Zimbabwe: Implications for a sustainable rural development. *Land Use Policy Volume 87*, September 2019, 104027. <https://doi.org/10.1016/j.landusepol.2019.104027>
- Moreda, T. (2023) The social dynamics of access to land, livelihoods and the rural youth in an era of rapid rural change: Evidence from Ethiopia. *Land Use Policy Volume 128*, 106616 <https://doi.org/10.1016/j.landusepol.2023.106616>
- Mugwe J., Mugendi d., Muna M.M ( 2009). Determinant of the Decision to Adopt Integrated Soil Fertility Management Practices by Small holder Farmers in the Central Highlands of Kenya. *Expl Agric.*(2009), volume 45, pp61-75@2008 Cambridge University Press. Doi:10.1017/S0014479708007072.
- National Bureau of Statistics {NBS} (2019). *Social Statistics in Nigeria*. Federal Republic of Nigeria.
- Nmadu J. N., Sallawu H. and Omojesho B. V (2015).Socioeconomic Factors Affecting the Farmers in Ondo State, Nigeria. *European Journal of Business, Economics and Accountancy. 3(2):58-66*
- Okojie Josephine (2018). Nigeria's Cocoa Industry: Death of a Golden Goose, an online Article of Business Day News Paper, July, 29, 2018~4:58am .retrieved on 23/12/2018.

- Sharma, P., Chrisman, J., Pablo, A., & Chua, J. (2005). Determinants of initial satisfaction with the succession process in family firms: A conceptual model. *Entrepreneurship Theory and Practice*, **25(3)**, 17-33.
- Sottomayor, M., Tranter, R., and Costa, L. (2011). Likelihood of Succession and Farmers Attitudes towards the Future Behavior: Evidence from a Survey in Germany, United Kingdom and Portugal: *International Journal of Society of Agriculture. & Food*, **18 (2)**, 121–133.
- Tetteh, I. and Boehlje, M. (2019) An intergenerational farm transfer: when to start handing over the reins? CASE STUDY. *International Food and Agribusiness Management Review Volume 22 Issue 3*. DOI: 10.22434/IFAMR2018.0002
- Uwagboe E. O., Meludu N.T., Agbebakue. E.O (2016). Adoption of Integrated Pest Management among Cocoa Farmers in Cross River and Osun States of Nigeria. *Journal of Agricultural Extension* **5:188-201**
- Whitney, C. W., Luedeling, E., Tabuti, J. R. S., Nyamukuru, A., Hensel, O., Gebauer, J., et al. (2018). Crop diversity in homegardens of Southwest Uganda and its importance for rural livelihoods. *Agric. Hum. Values* **35**, 399–424. doi: 10.1007/s10460-017-9835-3