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Research Paper

Determinants of youth's involvement in cashew production towards income generation in Osun State, Nigeria

Ayinde, Julius Olatunde

Department of Agricultural Extension and Rural Development, Faculty of Agriculture, Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.

*Corresponding author. Email: jayinde@oauife.edu.ng, tundeyjoy@yahoo.com. Tel: +2348035719389.

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Abstract. The study determined the crucial factors limiting the involvement of youth in cashew production towards income generation in Osun State, Nigeria. A multistage sampling procedure was adopted to select 96 respondents and a structural interview scheduled was used to collect data from the selected respondents. The data collected were subjected to descriptive statistics and inferential analysis. Results show that the majority (83.3%) of the respondents are male with a mean age of 30.94 ± 2.4 years, a mean farm size of 2.19 ± 0.45 hectares and a mean annual income of ₦164,844 00 ± 41,965.40 ($457.9 ± 116.6). About 53.1 percent of the respondents practice cashew farming mainly to earn a living. Friends, printed materials and farmers' groups play a vital role in disseminating information. The major factors that militate against their involvement in cashew production were inadequate funding and inadequate input services among others. Furthermore, there are positive and significant relationship between income (r= 0.466, P ≤0.01), household size (r= -0.118, P ≤ 0.01); and number of constraining factors identified (r = 0.007, P ≤ 0.01) and their involvement in cashew production. The study concluded that inadequate funding and inadequate infrastructural support were the main factors limiting the involvement of youth in cashew production. There is a need for the agricultural development stakeholders to intensify efforts in assisting youths in cashew farming with accessing loans and grants, also support from financial institutions and agricultural extension on cashew value-chain development.

Keywords: Youth empowerment, involvement, cashew development, value-chain, income generation.

INTRODUCTION

Cashew (*Anacardium occidentale* L.) is a very popular and widely propagated tree in Nigeria. It is often propagated for the economic importance of the nut it produces as well as the "cashew apple" or pseudo-fruit which is a swollen stalk leading to the nut. Cashew was introduced into Nigeria between the 15th and 16th centuries by the Portuguese explorers (Ventakaramah, 1976). Cashew became a popular crop in 1953 when planted on a large scale principally for the nuts, afforestation and erosion prevention programmes in the escarpment areas of Udi, Mbala, Oghe, Oji, Isuochi and Kingie in Eastern Nigeria by the defunct Eastern Nigeria Development Corporation (Akinwale and Esan, 1989). In Western Nigeria, the first planting of cashew started in the 16th century at Agege in Lagos (Ventakaramah, 1976). The commercial cultivation started in the 1950s at Iwo, Eruwa and Upper Ogun in defunct Western Nigeria by the then Western Nigeria Development Corporation (WNDC) (Sanwo *et al.*, 1972).

Cashew was thereafter, introduced into the Middle Belt

and Northern Nigeria from Eastern and Western Nigeria. These cashew nuts were mainly of the medium nut-size biotype, which according to ISO-6477 standard fall within the W320 category (Hammed *et al.*, 2008). This cashew biotype, therefore, constitutes the landrace of cashew in the Nigerian cashew plantations. This biotype, which was an introduction from the Asian continent, attracts a low premium in the International market (Sanwo *et al*., 1972). However, with the recent introductions of the Brazilian cashew biotype (jumbo nut-size), by the Cocoa Research Institute of Nigeria (CRIN), which is now being grown by cashew farmers, the cultivation of the crop is rapidly spreading to all agro-ecologies of Nigeria (Topper *et al*., 2001).

Cashew is an economic crop because of its by-products like cashew juice, honey, nuts and chocolate among others, and is growing in demand globally. The global demand for cashew is growing strongly in terms of volume and value; and the world demand for cashew will continue to increase rapidly (Yusuf *et al.*, 2015). This presents an opportunity for the nation to not only ensure food security but also increase foreign exchange earnings, diversify agriculture products, develop agro-industries and of course, provide employment for the teeming youths. Cashew is one of Nigeria's main agricultural export products with about 325,000 hectares presently cultivated and local processing capacity is just 10 percent. There is a projection for increasing locally processed cashew to 50 percent in the future (Adeigbe *et al.*, 2015).

Various regions in Nigeria have designed and executed several programmes to promote tree crop production including cashew in a bid to ensure food security, which is also aimed at enhancing economic empowerment of rural youths. One of such programmes is Osun State Agricultural Youth Empowerment Programme (OSSAYEP) (Osun State Agricultural Development Programmes, 2004).

It is a known fact that youths are very important resources for every nation especially for sustaining agricultural productivity, which is an important factor for economic development in a nation. The Children and Youth-in-Agriculture Programme (CYIAP-Network, 2006) took cognizance of the circumstances of poverty, unemployment and deprivations that are prevalent in Nigeria and some other developing countries which make some people still depend on others for survival, protection and development up to the age of 40 years to define youth as people from ages 19 to 40 years.

The poor state of youth participation in agriculture activities has been a subject matter of great concern in Nigeria (Food and Agriculture Organisation, FAO, 2000; Adewoyin *et al*., 2018). For a country to attain stability, the agricultural sector must be very active and youths should be encouraged to practice agriculture. The poor state of agricultural productivity and low esteem for agriculture as seen in youths' low interest in farming, migration of able-bodied men and women has led to worsening Nigeria agriculture (Olarewaju *et al.*, 2018).

The generally low level of improved techniques introduction and acquisition in the Nigerian cashew industry has been a matter of great concern among agriculturists, agricultural researchers as well as agricultural administrators. This situation is because of many constraints in cashew production in Nigeria; these constraints include perpetuation of Cashew landraces on Nigerian cashew plantations, low funding for Cashew research activities, lack of awareness about the economic potential of Cashew, entomological/pathological problems, amongst others (Adebola, 2001; Hammed *et al.*, 2008; Olaoye, 2014; Nwosu *et al.*, 2015). The above problems arouse the quest to identify the determinants of youth's involvement in cashew production towards income generation to enhance food security in Osun State. The Specific objectives of this study are to describe the socio-economic characteristics of the respondents and determine the factors limiting their involvement in cashew production to proffer possible solutions to the problems.

The hypothesis for the study is stated thus:

Ho: There is no significant relationship between the socio-economic characteristics of the youths and their involvement in cashew production for income generation.

MATERIALS AND METHODS

Description of the study area

The study area was Osun State, Nigeria with its capital in Osogbo. It covers an area of approximately 14,875 square kilometers and it is bounded in the South by Ogun State, in the North by Kwara State, in the East by Ondo and Ekiti States and West by Oyo State. It lies between the longitude 6°51'N and 8°N on the North-South pole, and latitude 4°05'E and 5°02'E on the East-West pole. According to an analytical report of the National Population Commission (NPC) (2006), Osun State has 3,423,535 people with six administrative zones (Ife, Ikirun, Ila, Ilesa, Iwo and Osogbo) and thirty Local Government Areas and one area office.

Sample selection

A multistage sampling procedure was adopted for the study. At the first stage, two administrative zones (Iwo and Osogbo) were purposely selected out of six based on the prominence of cashew production in the zones, At the second stage, four LGAs recognized for cashew production were purposely selected from Iwo and Osogbo zones. Ede North, Ede South, Ifelodun, and Orolu were selected from

the Osogbo zone while Ejigbo, Iwo, Irewole, and Ayedire were selected from the Iwo zone. Thirdly, one community well known for cashew production was selected from each LGA, that is, Araromi from Ede-North, Alajue from Ede South, Iba from Ifelodun, Idi-Iroko from Orolu, Iwata from Ejigbo, Ile-Ogbo from Ayedire, Wassimi from Irewole, and Yakoyo from Iwo. Finally, a snowball sampling technique was used to select 10 respondents (youth between ages 8 and 40 years old) for study in each community in the Osogbo zone and 14 in each of the four communities in the Iwo zone because the communities recognised cashew production. In all, 96 respondents were selected for the study. Primary data were collected through interview schedule and data collected were summarized and subjected to both descriptive (frequency count, percentage, and so on) and inferential statistics (chi-square and correlation analysis).

Measurement of variables

The dependent variable for the study was the constraining factors affecting youth's involvement in cashew production in the study area. The respondents were asked to indicate their agreement to nine identified constraining factors. These were measured using the Likert scale of Strongly Agreed (4), Agreed (3), Disagreed (2), Strongly Disagreed (1), The minimum a respondent can score was 9 and the maximum was 36. However, the factors were categorised into three levels using their mean scores and standard deviation; based on the assumption that the factors scores assumed normal distribution. This was operationalised as follows: High level was perceived by respondents with mean factors score plus one standard deviation and above. Low level was perceived by respondents with factors score below mean perception score minus one standard deviation score. Medium factors were perceived by respondents with mean scores in between the high and low factors.

Ethical consent approval

Informed consent to participate in the study was obtained from the respondents. Also, the names and identities were protected.

RESULTS AND DISCUSSION

Personal and social characteristics

The results in Table 1 show that the mean age of the respondents was 30.94 ± 2.4 years, this implies that they are in their active age and have the strength to be involved in cashew production. The majority (83.3%) were male which might be because males are often more energetic and could readily be available for energy-demanding jobs like cashew farming. About 64.6 percent were single and the majority (97.9%) were literate. This implies that the majority of the respondents were single with a high literacy level, which may be important to access and make use of the agricultural information on cashew production, disseminated to them during extension programmes; this is in tandem with the findings of Nwachukwu, (2008), Mangal, (2009) and Ayoade, (2013), who posited that education offers the opportunities to earn better and could impact significant variation in skills acquisition and adoption of new ideas. A lot (68.8%) of the respondents practiced Islam. This shows that the study area was dominated by the Islamic faithful.

Economic characteristics

The results in Table 2 show that the mean year of cashew farming experience of the respondents was 10.8 ± 3.236 years. This finding reveals that the youth with cashew farming experience of 11 to 15 years dominated the study area. This could however be due to the nature of cashew farming, which likes other tree crops, opens an opportunity for people to start practicing from a relatively young age. It is also evident from Table 2 that the average farm size of the respondents was 2.19 ± 0.45 hectares. This finding is in support of the finding of Koledoye and Olagunju (2018) that the majority of the people in Southwestern Nigeria have relatively small land areas for tree crops. The mean annual income of the respondents was ₦164,844 ± 41,965 ($457.9 ± 116.6) as a result of their involvement in cashew production while their annual expenditure on it was ₦46,698 ± 29,366. This implies that the majority of the respondents earned less than the Federal Government minimum monthly wage of ₦18,000 before it was reviewed in 2019 to ₦30,000. The low average annual income can be attributed to the fact that cashew farming is the major occupation of only 53.1 percent of the respondents, 39.6 percent practice cashew farming to earn extra income, while 7.3 percent of the respondents are engaged in cashew production for family consumption or other reasons including medicinal purposes. The table also shows that about 53.1 percent were involved to earn a living while 39.6 percent were involved to earn extra income among other reasons given for their involvement. This finding implies that respondents practice cashew farming mainly to earn a living through income generated from its cultivation. The findings support the assertion of

Table 1. Distribution of respondents according to their personal and social characteristics (n = 96).

Variables	Freq	%	Mean ± S. D
Age(years)			30.94 ± 2.4 years
20-24	1	1.0	
25-29	34	35.4	
30-34	48	50.0	
35 and above	13	13.6	
Sex			
Male	80	83.3	
Female	16	16.7	
Marital status			
Single	62	64.6	
Married	32	33.3	
Divorced	2	2.1	
Religion			
Christianity	30	31.3	
Islam	66	68.8	
Ethnic group			
Yoruba	87	90.6	
Hausa	3	3.1	
Others	6	6.3	
Level of formal education			
Primary	22	22.9	
Secondary	56	59.3	
Tertiary	16	16.7	
No response	2	2.1	

Source: Field survey, 2018

Tijani and Dahunsi (2007) and Ogunremi *et al*. (2012) that farmers are involved in tree crop farming mainly to generate extra income.

Sources of information about cashew production

As shown in Table 3, about 44.8 percent of the respondents obtain information about cashew production from friends and 42.7 percent of them from other sources including printed materials and farmer associations; further analysis revealed that information got include information on cashew cultivation, post-harvest handling, and value addition among others. The result implies that friends, as well as printed materials and farmers' groups, play a vital role in disseminating information about agricultural programmes, cashew production inclusive. This corroborates the findings of Anyanwu *et al.* (2002) who reported that young farmers use more non-professional interpersonal sources of information such as friends to enhance their involvement in agricultural practice.

Constraints/factors affecting youth involvement in cashew farming in Osun State

The number of the constraining factors affecting youth involvement in cashew production was shown in Table 4. Inadequate funding and input services were indicated as

Table 2. Distribution of respondents according to their economic characteristics (N = 96).

Variables	Freq	%	Mean ± SD
Years of cashew farming experience			10.8 ± 3.236 years
Less than 6	4	4.2	
6-10	37	38.5	
11-15	40	41.7	
16-20	14	14.6	
Above 20	1	1.0	
Farm size in hectares			2.19 ± 0.45 hectares
<1	34	35.4	
Above 1-3	61	63.5	
No response	1	1.1	
Capital expenses per year			₦46,698 ± 29,366
Less than ₦80,000	74	77.0	
₦80,000- 100,000	11	11.5	
Above ₦100,000	9	9.4	
No response	2	2.1	
Income per year			₦164,844 ± 141,965 ($457.9 ± 116.6)
Less than ₦150,000	30	31.3	
₦150,000-164,000	12	12.5	
₦165,000-179,000	1	1.0	
₦180,000 and above	50	52.1	
No response	3	3.1	
Reason for practicing cashew farming			
To earn extra income	38	39.6	
Majorly to earn a living	51	53.1	
For family consumption	5	5.2	
Others	2	2.1	

Source: Field survey, 2018

Table 3. Distribution of respondents according to a source of information about cashew production (n = 96).

Source of information about cashew production	Frequency	Percentage
Friends	43	44.8
Relatives	1	1.0
Television	2	2.1
Radio	9	9.4
Others (Farmers' association including printed materials)	41	42.7

Source: Field survey, 2018

the highest, followed by a lack of adequate infrastructural support. This implies that youth involvement in cashew farming may be enhanced if sufficient funding and input services as well as non-provision of infrastructural support for the young cashew farmers. Lack of government support was indicated as third while inaccessibility to extension and advisory services followed. This implies that if extension and advisory

Table 4. Mean factors constraining score about cashew production among respondents in the study area (n = 96).

Constraining factors	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
Inadequate fund and material services*	86 (89.6)	6 (6.3)	4(4. 1)	-
Lack of adequate infrastructural support*	72 (75.0)	10 (10.4)	12 (12.5)	2 (2.0)
Lack of government support*	49 (51.0)	36 (37.5)	7 (7.2)	4 (4.1)
Inaccessibility to extension and advisory services*	40 (41. 7)	42 (43.75)	10 (10.4)	4 (4.1)
Inadequate information on cashew production*	40 (41.7)	44 (45.8)	10 (10.4)	2 (2.0)
Limited access to farmland*	28 (29.1)	57 (59.4)	11 (11.5)	3 (3. 1)
Unavailability of labour*	26 (29.0)	37 (38.5)	29 (30.2)	4 (4. 1)
Low-income generation*	3 (3. 1)	10 (10.4)	55 (57.3)	28 (29.2)
Market availability*	2 (2. 1)	18 (18. 8`)	53 (55.2)	23 (23.9)

SA – Strongly Agreed, A – Agreed, D – Disagreed, SD – Strongly Disagreed. *Multiple responses. Source: Field Survey (2018).

Table 5. Pearson's product-moment correlation and Chi-Square analyses between socioeconomic characteristics of youth and their perception about cashew production (n = 96).

Variables	Correlation coefficient (r)	P-value
Age	0.135	0.305
Income	0.466**	0.000
Household size	-0.118**	0.000
Farm size	0.056	0.254
Number of constraining factors	0.007**	0.002

*Level of significance = 0.01 (P < 0.01)
**Level of significance = 0.05 (P < 0.05)
S = Significant
N/S = Not significant
Source: Field survey, 2018.

services are readily available and within the reach of the youth, their level of involvement may be higher. The Table also shows that inadequate information on cashew production is the next factor limiting youth involvement in cashew farming. This implies that there is a need for greater outlets for information dissemination as regard cashew farming in the state. Various channels such as the internet, mass media and print media may be useful for disseminating information requisite for successive cashew farming. Market availability was among the least factor limiting youth involvement in cashew production although better marketing facilities and strategies could be provided to reduce wastage of cashew products especially the berry as witnessed on the field due to lack of preservative techniques and market unavailability.

Hypothesis for the study

Ho: There is no significant relationship between the characteristics/variables of youths and their involvement in cashew production for income generation.

Results of Pearson's product-moment correlation analysis in Table 5 show that income (r = 0.466, P ≤0.01), household size (r = -0.118, P ≤ 0.01) and number of identified constraints factors (r = 0.007, P ≤ 0.01) were significantly related with the respondents' involvement in cashew production. The statistical results also show that income and household sizes were the socio-economic characteristics that were not significantly related to the respondents' involvement. The result of Pearson's product-moment correlation implies that as the respondents' income increases, their involvement in cashew production towards food security increases by 46.6 percent among others.

Decision rule: Null was rejected since P-value = 0.00 for income and was P-value = 0.01 for household size among others. Hence there is a significant relationship between socio-economic characteristics of youth and their perception of cashew production.

CONCLUSION

It can be concluded from the study that the cashew industry is helping to drive poverty alleviation, create more employment opportunities and improve income generation in the State. Friends, printed materials and farmers' groups play a vital role in disseminating information about cashew production. Respondents practice cashew farming mainly to earn a living through income generated from its cultivation and the major factor that militate against youth involvement in cashew production is inadequate funding and input services among others. However, there is a need for the agricultural development stakeholders to intensify their efforts to assist youths in cashew farming and those who want to be cashew farmers in accessing loans, grants from financial institutions and educate them more about the benefits of practicing cashew farming. Furthermore, there is a need for greater access to extension and advisory services to ensure innovations on cashew farming are properly utilised to achieve greater output with aim of encouraging more involvement.

REFERENCES

Adebola PO (2001). West African Regional Cashew Survey Report (Guinea, Guinea Bissau, Cote d'Ivore, Ghana and Nigeria). Sustainable Tree Crop Programme (STCP) and Biohybrids Agrisystem Limited, UK, 1:110.

Adeigbe OO, Olasupo FO, Adewale BD, Muyiwa AA (2015). A review on cashew research and production in Nigeria in the last four decades. Sci. Res. Essays 10(5):196-209.

Adewoyin EO, Ayinde JO, Torimiro DO, Alao OT, Oyedele DJ, Adebooye Clement O (2018). Assessment of Perceived Knowledge and Consumption Frequency of Underutilized Indigenous Vegetables (UIVs) among the Rural Youth in Osun State, Nigeria. Acta Horticulturae, Belgium, 22:334-39.

Akinwale SA, Esan EB (1989). Advances in cashew breeding in Nigeria. In: Progress in Tree Crop Research, 2nd Edn. Cocoa Research Institute of Nigeria (CRIN), Ibadan, Nigeria, pp. 166-174.

Anyanwu AC, Agwu AE, Umeweni CA (2002). Sources of Agricultural Information Used by Women Farmers in Orumba North Local Government Area of Anambra State, Nigeria. Int. J. Agric. Sci. Environ. Technol. (ASSET) Service, A 2:97-104.

Ayoade AR (2013). The Adoption Impact of Improved Cassava Varieties on the Social Life of Rural Farmers in Oriire Local Government Area of Oyo State. Int. J. Humanit. Soc. Sci. 3:12.

CYIAP-Network (2006). Challenges faced by children and youth: The responses of Development service providers in Nigeria. Torimiro, D.O and Adisa, B.O. (eds). Proceedings of the 8th National Research Conference and Network Meeting of Children and Youth in Agriculture Programme in Nigeria (CYIAP-Network) held the Department of Agricultural Extension and Rural Development, University of Ilorin, Ilorin, Kwara State. November 27-30, 2006.

Food and Agriculture Organization of United Nations (FAO) (2000). Statistics Division. http://faostat.fao.org/site/336/DesktopDefault.aspx ? PageID=336.

Hammed LA, Anikwe JC, Adedeji AR (2008). Cashew Nuts and Production Development in Nigeria. Am. Eurasian J. Sci. Res. 3 (1):54-61.

Koledoye G, Olagunju O (2018). Rural Youth Involvement in Farming Activities: Emerging Trends in Akoko South-West Local Government Area, Ondo State, Nigeria. https://www.researchgate.net/publication/323748308_Rural_Youth_Involvement_in_Farming_Activities_Emerging_Trends_in_Akoko_South2West_Local_Government_Area_Ondo_State.

Mangal H (2009). Best Practices for Youth in Agriculture: The Barbados, Grenada and Saint Lucia Experience. Final report.

National Population Commission (NPC) (2006). Population Census of Federal Republic of Nigeria: Analytical Report at the National Level, pp. 22-54.

Nwachukwu I (2008). Youth Development for Agricultural and Rural Transformation in Nigeria. Proceedings of NRSA, pp. 11-14.

Nwosu C, Adejumo OA, Udoha WN (2016). Cashew apple utilization in Nigeria: Challenges and prospects. J. Stored Prod. Postharvest Res. 7(2):29-31, February 2016. ISSN 2141-6567.

Ogunremi OO, Ogunremi JB, Faleyimu OI (2012). Relevance and benefits of agricultural youth empowerment programme to participating youth in Osun State, Nigeria. Asian J. social Sci. Humanit. 1(2):33-38.

Olaoye OA (2014). Potentials of the Agro Industry towards Achieving Food Security in Nigeria and Other Sub-Saharan African Countries. J. Food Secur. 2(1):33-41.

Olarewaju BE, Ayinde JO, Torimiro DO, Alao OT, Oyedele DJ, Adebooye CO (2018). Knowledge, Attitude and Practices (KAP) Analysis of Under-utilized Indigenous Vegetables (UIVs) Technologies among the Southwest Nigerian Young Farmers. Acta Horticulturae, Belgium, 22:334-39.

Osun State Agricultural Development Programme (2004). Bulletin. Part I pp. 6-10.

Sanwo JO, Kuti BO, Osundolire DO (1972). Cashew Germplasm collections. The Annual Report of Cocoa Research Institute of Nigeria, 1972/73, pp: 100-110. (Eds.), pp. 15-25.

Tijani RT, Dahunsi EA (2007). Potentials of Tree Crop Farming for Improved Rural Livelihood in Nigeria. Agric. J. 1(3):508-512.

Topper CP, Caligari PDS, Camara M, Diaora S, Dijaha A, Coulibali F, Asante AK, Boamah A, Ayodele EA, Adebola PO (2001). West African Regional Cashew Survey Report (Guinea, Guinea Bissau, Cote d'Ivore, Ghana **and Nigeria).** Sustainable Tree Crop Programme (STCP) and Biohybrids Agrisystem Limited, UK, 1:110.

Ventakaramah TM (1976). Cashew nut production and processing: Nigeria agronomic aspect of cashew nut production. Unpublished paper submitted to Cocoa Research Institute of Nigeria, p. 39.

Yusuf VA, Agbo AD, Suleiman M, Adoyi ME, Nuruddeen NA (2015). Cashew can earn Nigeria foreign exchange, www.dailytrust.com.