



## Analysis of Farmers' Cashew Nuts Marketing Channels and Information Frequency: Implications for Cashew Sustainability in Nigeria

Agbongiarhuoyi A. E.<sup>1</sup>, Uwagboe E. O.<sup>1</sup>, Agbeniyi S. O.<sup>1</sup>, Famuyiwa B. S.<sup>1</sup>, Shittu T. R.<sup>1</sup>

<sup>1</sup>Cocoa Research Institute of Nigeria (CRIN) P.M.B. 5244 Ibadan, Oyo State, Nigeria

Correspondence: [toniagbons@gmail.com](mailto:toniagbons@gmail.com)

**Abstract:** Cashew marketing system in Nigeria is deregulated and influenced by middlemen who determines sales price for rural farmers. They are constraint to sell their produce at cheaper prices. This situation affects producers' livelihood and discourages production. The study assessed the channels of marketing raw cashew nuts (RCNs) by farmers in Oyo and Kwara States. A multi stage sampling procedure was used in selecting farmers and data were obtained using interview schedule. The result shows that male farmers (82%) dominated cashew production. Farmers sold 80kg bag of cashew to buyers for an average price of ₦4,231 (\$10.2) during the 2016 season. This was relatively low compared to cost of production. The most frequent channel farmers used in selling cashew nuts was village buying traders (71.7%). Most (70%) of the farmers had no idea of market information before selling their produce. The major constraints encountered by farmers were low price (95%), dishonesty of middlemen (87.5%) and lack of government regulation on cashew price (86.7%). Significant relationship existed between how often farmers get cashew market information and their marketing channels;  $r = -0.194$ ,  $p = 0.033$ . Multiple marketing channels did not translate to higher frequency of sourcing information about cashew nuts. This was due to farmers' inability to get market information before sales. In conclusion, most farmers obtained low prices from the sale of raw cashew nuts to local buyers. This does not ensure sustainable development of cashew sub-sector because of poor remuneration and information gap.

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### Introduction

Cashew *Anacardium occidentale L.* is cultivated in all the agro-ecological zones of Nigeria including the semi-arid areas, but with a high concentration in the middle belt areas. Cashew production comes from 27 out of 36 States in Nigeria. These include: Kogi, Oyo, Kwara, Enugu and Edo. Others are Abia, Adamawa, Akwa Ibom, Anambra, Bayelsa, Benue, Cross River, Delta, Ebonyi, Ekiti, FCT, Imo, Kaduna, Nasarawa, Niger, Ogun, Ondo, Osun, Plateau, Rivers, Taraba and Lagos. In the past 12 years, production has increased almost thirty-fold from 30,000 metric tonnes in 1990 to 836,500 Metric tonnes from estimated land area of 366,000 ha (Adeigbe *et al.*, 2015). Cashew is an important cash crop which earns foreign exchange and contributes significantly to Nigerian economy.

According to Sotonye of the National Cashew Association of Nigeria (NCAN), export of cashew nuts from 2015 planting season gave Nigeria about ₦50 billion. This was an improvement of ₦24b the sub sector contributed in 2013 and 2014. Cashew earns Nigeria USD 374 Million from export of raw cashew nuts (RCNs) and the country exported 220,000

tonnes of RCNs in 2017 as against 160,000 tonnes in 2016 (Adeniji, 2018). Nigeria is among the leading exporters of quality raw cashew nuts, with an average 48 kernel Output Ratio KOR (Nigerian Export Promotion Council, 2018). The KOR also, referred to as the out-turn rate is measured at the de-shelling stage as the weight of usable kernels in pounds (lbs) per bag of cashew nuts (80 kg or 176 lbs).

Improvement in the quality of Nigerian cashew is mainly due to more commercial plantations being established and application of Good Agricultural Practices (GAP) at the farm level. The Cocoa Research Institute of Nigeria (CRIN) who has national mandate to conduct research on cocoa, kola, coffee, cashew and tea has intervened by training cashew farmers, processors, extension agents on GAP and encouraging farmers to join registered cooperative societies. Majority of the RCNs produced were exported to India, Brazil, Vietnam and China for processing and then re-exported to USA, Europe, Japan and the rest of the world. The selling of raw

cashew nuts (RCNs) to exporters without any form of value addition does not guarantee the sustainability of cashew business in Nigeria. This is because the continuous export of RCNs limits the local market thereby reducing job that would have been created during processing. Therefore, the improvement in performance of the cashew sector is essential for inclusive growth and poverty alleviation geared towards economic performance.

Sustainable production has three pillars: economic, environmental and social which are referred to as people, planet and profit. Market scenario in price differentials for cashew producing countries from 2013 to 2020 indicates that Nigerian farmers are among least paid price of RCNs (Adeniji, 2018 and AfriCashew splits, 2020). This was further exacerbated by the current global COVID-19 crisis that impacted cashew market especially during the lockdown. This problem of low RCNs price necessitated Nigeria to demand for a fair price for its raw cashew to be at par with other West African origins, in recognition of the huge improvements in quality of delivered raw cashews in previous years. The demand was made at the 4th Edition of the World Cashew Convention & Exhibition held in Macu 1-3 February, 2018.

The production of RCNs in Nigeria is mostly in the hands of small-scale farmers while the local buyers are in the hands of large number of exploitative middle-men who pay producers far below what the consumer pay for the product. Marketing is one of the vital aspects of agriculture since agriculture entails the production of goods and services and production is said not be completed until the commodity produced reaches the final consumer. Irrespective of its socio-economic role, there are twin issues of marketing and poor pricing of the raw nuts by cashew buyers. Hence, the need for efficient marketing channels and system in the cashew value chain. Based on field observation as an Agricultural Extension Practitioner, RCNs are sold by farmers to buyers via licensed and unlicensed local buyers, sales agents and some few cashew companies. These sales outlets obtain cashew at farm gate or farmers' homes and export the commodity overseas. Local farmers do not usually know the daily cashew price at the international market before selling their produce at any price offered to them by buyers. Adejo *et al*, (2011) also reported that lack of knowledge on the marketing of some crops and their products partly leads to the inherent poor agricultural commodity marketing in Nigeria.

The marketing system of cashew nuts in Nigeria is not properly organized because there are no exclusive traders for RCNs. Often, there are intermediaries between the traders and exporters who provide the services of information and make the deal.

This has resulted in middlemen playing a key role in the marketing of nuts thereby reducing the dividends for the cashew farmers. However, the liberalization policy of government in marketing of commodity crops needs to be reviewed. The policy had good intention of promoting competition and maximizing returns for all players in the value chain. The intended benefits were however short lived, as all kinds of buyers cheat on the farmers with low farm gate price. So, it becomes necessary to analyse the marketing situation of cashew farmers in order to ensure the sustainability of cashew production.

The major objective of the study was to assess the channels of marketing raw cashew nuts by farmers in the study areas. The specific objectives were to: describe the socio-economic characteristics of cashew farmers, examine the various channels farmers use in selling their cashew nuts, examine the sources of information on cashew nuts marketing, ascertain the price cashew nuts were sold to buyers by farmers in the study area, and identify the constraints to cashew nuts marketing in the study area.

#### **Statement of hypothesis**

There is no significant relationship between respondents' frequency of obtaining marketing information and channels of marketing raw cashew nuts in the study area.

#### **Methodology**

##### **Study Area and sample size**

The study was conducted in Oyo and Kwara States of Nigeria. Oyo State is located in South West Nigeria with its capital in Ibadan. According to Nigeria Galleria (2017), Oyo State covers 28,454 square kilometres. It is bounded in the south by Ogun State and in the north by Kwara State, in the west by the Republic of Benin while in the east it is bounded by Osun State. It has a population of 5,591,589 (2006 Estimate). The State covers a total of 28,454 square kilometres of land mass and it is bounded in the south by Ogun State, in the north by Kwara State, in the west it is partly bounded by Ogun State and partly by the Republic of Benin, while in the Eastern part by Osun State. Oyo State has an equatorial climate with dry and wet seasons and relatively high humidity. The dry season lasts from November to March while the wet season starts from April and ends in October. Average daily temperature ranges between 25 °C (77.0 °F) and 35 °C (95.0 °F), almost throughout the year (Oyo State Government, 2018). The vegetation pattern of Oyo State is that of rain forest in the south and guinea savannah in the north. Thick forest in the south gives way to grassland interspersed with trees in the north. The climate in the State favours the cultivation of crops like maize, yam, cassava, millet, rice, plantain, cocoa, cashew and palm tree.

Kwara State is located in the North Central geopolitical zone of Nigeria with its capital in Ilorin. According to (National Population Commission NPC, 2010), The State has a population of about 2,454,077 with a total landmass of 32,500 Square Kilometres (Nigeria Galleria, 2017). Kwara State has two main climatic seasons: the dry and wet season with annual rainfall ranging from 1,000 and 1,500 mm while the average temperature lies between 30°C and 35°C. The rainy season lasts between April and October while the dry season starts in November and ends in March of the following year providing ample opportunity for cash crops production and marketing. The major cash crops grown are cashew nuts, cotton, cocoa, coffee, kola nut, tobacco, palm produce and beniseed. Also, the State cultivates arable crops such as vegetables. Marketing business of raw nuts is usually carried out from February and April in Kwara.

A multi-stage procedure was used to select respondents for the study. First stage: Two States, Oyo and Kwara States were randomly selected across two geo-political zones in Nigeria, South West and North Central. Second stage: In each State, two Local Government Areas (LGAs) noted for cashew production were purposively selected. These were Surulere and Ibarapa North in Oyo State, Isin and

Irepodun in Kwara State. Two villages per LGA where cashew is well produced were then selected. Finally, fifteen farmers were proportionately selected in each village to make sixty per State using systematic simple random sampling technique bringing the total number of farmers to 120. The selection of farmers was done based on a list of farmers obtained from the Tree Crop Units (TCU) in the State Ministries of Agriculture. A structured interview schedule instrument was used for field data collection from cashew farmers in the study area.

#### Data and description of variables

The independent variables of the study include sex, marital status, educational status, quantity of cashew bags sold and membership of association. Others were cashew nuts marketing channels, sources of information, price of raw cashew nuts and constraints encountered by farmers on marketing. The dependent variable was the frequency of obtaining cashew market information. The data collected were analysed with descriptive statistics: mean, frequency, and percentage distribution. Pearson Product Moment Correlation PPMC was used to determine the dependent variable. The variables and description statistics are indicated in Table 1.

**Table 1: Description of the explanatory variables**

Explanatory variables	Type of variables	Description
Sex	Dummy	Male=1, Female=0
Marital Status	categorical	Married=1, Single=2, Widowed=3
Educational Status	Alternative	No formal education=1, Primary=2, Secondary=3, Tertiary=4
Cashew bags sold/kg	Continuous	80kg bag
Membership of association	Dummy	Yes=1, No=0
Marketing channels of raw cashew nuts	Categorical with score values	Not at all=0, Occasionally=1, Every time=2
Sources of information	Alternative	Fellow farmers=1, Extension agents=2, Cashew buyers=3
Frequency of obtaining market information	Categorical with score values	Not at all=0, Every two months=1, Once a month=2, Twice a month=3, weekly=4,
Price of raw cashew nuts/Naira	Continuous	Price of raw nuts
Constraints	Categorical	Not constraint=0, Minor constraint=1, Major constraint=2

## Results and Discussion

### Socio-economic characteristics of cashew farmers

The result in table 2 shows that more male farmers (82%) were involved in cashew production than their female counterparts having 18%. This result is similar to the research work of Akor *et al* (2014). They reported that cashew production is dominated by male producers. This could be attributed to the fact that women are given opportunity to cultivate arable crops on their husband's plots while access to permanent crop production is usually restricted to men. It implies that for cashew production to be sustainable, more contribution is required from men.

Majority (95.8%) of the farmers were married while few were single and widowed. In terms of educational background, the farmers had one form of education or the other with about 47% of them attending primary school. The ones that did not have any formal education amounted to 25% of the respondents. Since more of the farmers fell under primary school category, their level of bargaining power in marketing cashew business may be limited and could influence their marketing ability. The sustainability of the cashew business is a function of the educational status of producers.

The quantity of raw cashew nuts sold per annum using 80kg bags indicated that 70% of the farmers sold up to 20 bags which is equivalent to 1.6 tonnes in Oyo and Kwara States. The volume sold reflects the small scale nature of cashew farmers and the poor market situation of domestic cashew trade during the 2016 season in Nigeria. Most (83%) of the farmers belonged to Cashew Farmers Association and cooperative society while a few of them did not affiliate to any

group. Farmers associations provide an opportunity for exchange of ideas, information and means of solving production and marketing problems along the value chain crops. Omonona and Babatunde (2012) reported that for sustainable agriculture to be achieved, farmer organizations have a central role in scaling up production to develop new markets and meet market demands.

**Table 2- Socio-economic characteristics of cashew farmers (N=120)**

Variables	Frequency	Percentage
<b>Sex</b>		
Male	98	81.7
Female	22	18.3
<b>Marital Status</b>		
Married	115	95.8
Single	3	2.5
Widowed	2	1.7
<b>Educational Status</b>		
No formal education	30	25.0
Primary	56	46.7
Secondary	26	21.7
Tertiary	8	6.7
<b>Quantity of cashew bags sold/year (80kg bag)</b>		
1-10	56	46.7
11-20	28	23.3
21-30	16	13.3
31- 40	12	10.0
Above 41	8	6.7
<b>Membership of association</b>		
Farmers' cooperative society	34	28.3
Cashew Farmers Association	66	55.0
Not belong to any group	20	16.7

#### **Cashew nuts marketing channels among farmers**

In Table 3, the results reveals that about 72 % of the farmers always sell raw cashew nuts to village traders while other channels such as produce buyers, Licensed buying agents each (11.7%), Village market (18.3%), cashew processor and exporters had equal percentage of 8.3%. Occasionally, some farmers (53.3%) sold their cashew nuts to produce buyers. It means that most farmers market their produce through local village traders and produce buyers who come to buy cashew at farm gate. They are usually itinerant buyers who in most cases exploit the farmers in the study areas. This result is similar to a study conducted by Loganathan and Chandrasekaran (2013) and reported that majority of cashew farmers in India sold their produce through village traders. On the other hand, most farmers do not sell their produce to

processors and exporters. The implication is that they do not deal with them directly in marketing their cashew nuts. Furthermore, the percentage of buyers from licensed buying agents was small compared with the itinerant buying agents who are more. They constitute the middlemen in the marketing system.

Cashew nuts are sold to middlemen whose interest is mainly for profit making at the detriment of the farmers. This situation influences sustainable production because when farmers do not make enough profit from cashew sales, they will abandon cashew farming and this can reduce production. Policies that could improve marketing channels of cashew should be targeted at traders that go to villages to buy cashew nuts so as to protect farmers from undue exploitation from middlemen or buyers who dictates selling prices for local producers.

**Table 3: Channels farmers use in selling raw cashew nuts (N=120)**

Cashew nuts marketing channels	How often		
	Not at all	Occasionally	Every time
1 Village buying traders	22 (18.3)	12 (10.0)	86 (71.7)
2 Produce buyers	42 (35.0)	64 (53.3)	14 (11.7)
3 Licensed buying agents	94 (78.3)	12 (10.0)	14 (11.7)
4 Village market	80 (66.7)	18 (15.0)	22 (18.3)
5 Processors	108 (90.0)	2 (1.70)	10 (8.30)
6 Exporters	102 (85.0)	8 (6.70)	10 (8.30)

Figures in parentheses are percentages

### Sources of information on cashew nuts marketing

The major source of information for cashew farmers was cashew buyers (67 %) while fellow farmers and extension agents constituted the minor sources (Figure-1). It implies that majority of farmers rely on the marketers for obtaining cashew nuts market information. This source will not give farmers adequate and correct information because they are the buyers who could influence purchase price to their favour. There will be likelihood of the buyers dictating price for the sellers. This makes farmers to become price takers rather than price searchers. The implication of this major source on cashew sustainability is that it encourages monopoly of the marketing system which could hinder agricultural growth.

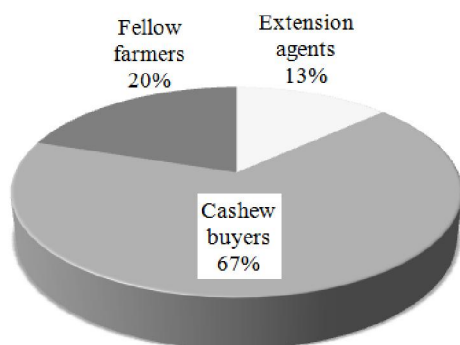


Figure 1: Cashew farmers' marketing information sources

### Frequency of obtaining market information on raw cashew nuts

In Figure 2, the mode of getting cashew market information every two months, once a month, twice a month and weekly was low. Those that did not get information at all (70%) were more than other categories. It means that most of the farmers do not get market information on frequent basis before selling their produce. They are at the mercy of the marketers that come to buy cashew from them. There is need for

extension agents who are saddled with the responsibility of disseminating information to relevant clientele to be proactive in advisory services that will help farmers obtain market information for cashew business.

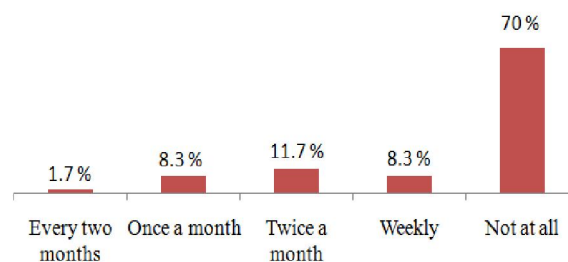


Figure 2: Frequency of obtaining cashew market information N120

### Price of raw cashew nuts sold by farmers

From the result in Table 4, many farmers (42%) sold 80 kg bag of processed raw cashew nuts to buyers for between ₦1,000 to ₦2,000 in both Oyo and Kwara States during the 2016 season. The other price range sold close to the latter was between ₦ 4,000 to ₦ 5,000 amounting to 29%. Those that sold same bag for over ₦5,500 were relatively low. The mean price was ₦4,231 which is equivalent to USD10.2. This indicated the low price that farmers sold their produce is not a fair deal or reasonable pay for them. Sustainable cashew production cannot be achieved with low purchasing price for producers which affect their income hence, encourages poverty and hunger. This has strong implication on the 2015 Sustainable Development Goals (SDGs) of the United Nations Goals 1 and 2 which seek to eliminate hunger and poverty across the globe in the next 15 years.

The finding is in agreement with Olagunju, 2014 who reported that marketing of raw cashew nuts has been inconsistent, and the producer price is very low and completely blind on the rising operational costs and cost of living. The cashew market is speculative in



nature and there is no fixed market price for cashew. Farmers lacked knowledge of local and international price and are compelled to sell at whatever price offered to them by the buyers. An effective marketing

strategy should be developed by relevant bodies to allow farmers negotiate well with buyers, in order to improve the purchase price for their cashew nuts.

**Table 4: Raw cashew nuts price sold by farmers to buyers**

Raw cashew nuts price/Bag (₦)	Frequency	Percentage
≤ 2,499	50	41.6
2,500-3,999	11	9.2
4,000-5,499	35	29.2
5,500-6,999	9	7.5
7,000-8,499	15	12.5
Total	120	100

#### Constraints to cashew nuts marketing

The major constraints to cashew nuts marketing in the study area were low price of raw cashew nuts (95%), dishonesty of middlemen in purchase price (87.5%), lack of government regulation on selling price (86.7%), inadequate market information (70.0%) and transportation problem (45.0%). Insect pests, disease and low productivity of cashew farms were seen as minor problems while Peelability was not identified as problem of marketing raw cashew nuts (Table 5). Peelability is the difficulty in the removal of the testa from the kernel) which adds more to the cost of processing. A study conducted by Agbongiarhuoyi

*et al* (2014) reported similar findings that low price paid to cashew farmers was one of the significant factors responsible for low yield of cashew. By implication, it affects the quality and quantity offered for sale by farmers. Oladejo, (2015) agrees that market information was a serious problem facing farmers in marketing cashew nuts in Oyo State. It means that the aforementioned identified variables were important points to note in solving cashew marketing constraints and promotes sustainable production. Economically, sustainability of cashew is a function of marketing in the production process.

**Table 5: Distribution of farmers' constraints to raw cashew nuts marketing (N=120)**

S/No	Constraints	Not constraint		Minor constraint		Major constraint	
		F	%	F	%	F	%
1.	Inadequate market information	20	16.7	16	13.3	84	70.0
2.	Insect pests and disease problem	18	15.0	59	49.2	43	35.8
3.	Dishonesty of middlemen in purchase price	8	6.7	4	3.3	105	87.5
4.	Low productivity of cashew farms	64	53.3	35	29.2	21	17.5
5.	Lack of government regulation on selling price	12	10.0	4	3.3	104	86.7
6.	Transportation problem	31	25.8	35	29.2	54	45.0
7.	Peelability problem of raw cashew nuts	96	80.0	9	7.5	15	12.5
8.	Low price of raw cashew nuts	5	4.2	1.	0.8	114	95.0

F = Frequencies % = Percentage

#### Correlation between frequency of obtaining cashew market information and marketing channels

There was a significant relationship between how often farmers get cashew market information and their various marketing channels in the study areas ( $r = -0.194$ ,  $p < 0.05$ ). This is reflected in Table 6. The effect was however negative which implies that multiple marketing channels did not translate to higher frequency of sourcing information about cashew nuts. This was due to farmers' inability to get market information before sales. There are many groups of people or individuals that go round cashew producing villages to purchase cashew (licensed and unlicensed buying agents, produce buyers, open market and others). This affects the kind of information farmers

will get from them. This system does not promote sustainable cashew production because producers' access to cashew market information is low. In the work of Omonona and Babatunde (2012), they opined that lack of current market information, trading skills and uncertain policy environment affects market access in developing countries.

It will be recalled that the liberalization system of buying cashew nuts from producers in Nigeria accounted for the different buying agents. The policy on liberalization of commodity crops needs to be reviewed so that regulated channels could be used for cashew nuts marketing most especially in the study areas of Oyo and Kwara States. The sources of farmers' information on cashew marketing were not

significant with respect to the marketing channels. There is need for farmers to use limited marketing

channels and improve regular information in selling their produce.

**Table 6: Correlation of cashew market information sources and marketing channels**

Variables	r	p
Source of getting cashew marketing information	0.033	0.722
Frequency of getting cashew marketing information	-0.194	0.033*

### Implications for cashew sustainable production

The implications drawn on sustainable production of cashew was viewed in three levels:

1. **Economic:** The economic sustainability of cashew in the study area is conditioned by many factors in the crop production process. The issue of poor purchasing price offered by buyers does not promote agribusiness for cashew production in Nigeria. A situation where farmers are not making enough profit from their produce discourages the producers and investors in the enterprise. If the situation persists, it will economically affect the sustainability of cashew negatively. Furthermore, there will be no returns on investment which hinders sustainable development in agriculture. Investors will need to apply new marketing systems to help cashew farmers scale up into more productive and sustainable production systems.

2. **Social:** The social aspect of sustainability relates to the quality of life of those who work and live on the farm and those in the surrounding communities. In the cashew value chain, many of the farmers attended primary school. This level of education could influence their level of bargaining power in the business of cashew marketing in Nigeria. However, it is worthy of note from the study that more than half of the farmers belonged to Cashew Farmers' Association. With adequate participation and management, such group can help members market their RCNs and have access to regular cashew market information which was implicated in this study.

3. **Environmental:** Environmental sustainability allows for the needs of man to be met without jeopardizing the ability of future generations to meet their needs. The continuous marketing of RCNs by farmers at cheaper prices for export could impede agricultural growth in developing countries like Nigeria. Goal 8 of the SDGs (Decent work and economic growth) emphasized profit potentials of smallholders in a farm enterprise. This indicates that improved access to market, infrastructure and trade are some of the investments needed to sustain cashew production.

### Conclusion and recommendation

The study concludes that most farmers popularly sold their raw cashew nuts to local village buyers who go to farmers in communities where cashew is

produced and buy cashew nuts. The buyers bought cashew nuts at relatively low prices from the farmers. There was correlation between the regularity of farmers getting cashew market information and their various marketing channels in Oyo and Kogi States. Multiple marketing channels did not actually translate to higher frequency of sourcing information about cashew nuts. This was due to farmers' inability to get market information before sales. The marketing of raw cashew nuts were limited by some major constraints which include low price, dishonesty of middlemen in purchase price, lack of government regulation on selling price, inadequate market information and transportation problem.

It is recommended that farmers should market their produce through formidable cooperative groups in addition to the common channels used by them. This will help create some price differentials that will enable them sell cashew to buyers at much better prices. There is need for farmers to go into processing of RCNs to finished products. Some of these products include edible kernel, fresh cashew apple juice, cashew milk and wine. The products can be sold locally in order to earn extra income and improve their livelihoods. The value addition can be actualized through the effort of group dynamics in producing communities. On the part of government, there should be a centrally controlled Cashew Marketing Board or agency fully backed by law to regulate the activities of all marketing agents. Such policy will invariably reduce the sharp practices of middle men. It will also help local farmers to earn substantial income from the sales of RCNs. Consequent upon this, the current liberalization policy on commodity crops in Nigeria should be restructured for effectiveness and efficiency. Now that government has identified diversification of Nigerian economy through agriculture, cashew marketing could play such role. Therefore, intervention in the area of cashew production is germane in order to improve market potentials for raw cashew nuts.

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