



Analysis of Trade and Marketing of *Chrysophyllum albidum* (G. Don) Fruits in Mushin Local Government Area of Lagos State, Nigeria

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Abstract

This study was carried out to investigate the trade and marketing of *Chrysophyllum albidum* fruits, an important Non-Timber Forest Product (NTFP) in Nigeria. The tree grows as a wild plant and belongs to the family of Sapotaceae which has up to about 800 species and constitutes almost half of the order. An investigation on the antioxidant and food value of *Chrysophyllum albidum* showed the plant contains some phenol, flavonoid, anthocyanin and proanthocyanidin and also a high antioxidant value. This makes the study significant with a view to creating awareness on the nutritive value of the fruit. Purposive random sampling technique was used. Primary data were collected through the use of structured and pretested questionnaire administered to the *Chrysophyllum albidum* fruits traders in some selected markets in Mushin Local Government Area (L.G.A) of Lagos State. The markets were Ojuwoye, Kajola, Mushin, Nitel, Under-Bridge, Daleko, Odo-Ashimolowo and Ijesha. The questionnaires (200 copies) were distributed to 25 respondents in each of the selected 8 markets. The data collected included socio-economic characteristics of the respondents and market variables such as transportation, storage/rent and labour costs. Other information collected includes selling price, tax and cost price. The analytical techniques employed include descriptive statistics, budgetary analysis, analysis of cost and returns, profitability ratio and multiple linear regression analysis. The result showed that 62% of the respondents were retailers and that the trade and marketing of *Chrysophyllum albidum* fruits was gender sensitive as 85% of the traders were female. Majority of the respondents were married (67%) while the modal education status recorded was the primary school leaving certificate accounting for 53.5% of the total. The analysis of cost and returns indicated that the Gross Profit ranged from ₦64260 in Kajola market to ₦141180 in Ojuwoye market while the Net profit per month ranged from ₦1830 in Odo-Ashimolowo market to ₦82240 in Mushin market. The results of the multiple linear regression showed that transport cost, rent/storage cost, labour cost, cost of wares and processing cost/market tariff were the major determinants of selling price of *Chrysophyllum albidum* fruits in the study area. The marketing efficiencies were greater than 1 in all the markets and ranged from 5.3% in Kajola market to 67.2% in Odo-ashimolowo market. The Rate of Return (ROR) ranged from ₦104 in Kajola market to ₦157 in Ojuwoye market while the Rate of Return on Investment (RORI) ranged from 4% in Kajola market to 57% in Ojuwoye market. The study concluded that trade and marketing of *Chrysophyllum albidum* fruits is a profitable business, the mass cultivation is therefore advocated in the study area because of its values in subsistent economy.

Key words: *Chrysophyllum albidum*, Marketing, Non-Timber Forest Products (NTFPs), Cost and returns, Profitability, Marketing Efficiency, Rate of Returns.

Introduction

Forest resources are important and useful in maintaining ecological balance, providing fuel, raw materials for many industries, protection to wild animals and conservation of the soils. They are also responsible for maintaining a specific microclimate around forest and urban areas. They are able to conserve the soils FAO (1992). Although wood products (timber) are the most popular forest products (Adekunle, 2008), there are other numerous and vital forest products which household can derive some income to increase their means of livelihood and economic

empowerment. These products are collectively called Non -Timber Forest Products (NTFPs). FAO (2001) defined NTFPs as consisting of goods of biological origin other than timber, derived from forests, other wooded land and trees outside the forest. Non-timber forest products (NTFPs) are useful substances, materials and commodities obtained from forests which do not require destructive harvesting of trees in most cases. They include game animals, fur-bearers, nuts, seeds, berries, mushrooms, oils, foliage, medicinal plants, peat, fuel wood, forage plants, e.t.c.

Chrysophyllum albidum (African star apple) fruits

known as 'Agbalumo' and 'Udara' among Yoruba and Igbo in Nigeria is one of the NTFPs of importance in the socio-economic lives of rural and urban dwellers.. The fruit of *C.albidum* is edible and are usually common during the dry season of the year in south eastern and south western Nigeria. The fruit has been enjoyed by Nigerians over the years as a fruit snacks. The specie has been reported to be important in folklore medicine used in treating diseases such as diabetes, heart diseases and drug resistant bacteria (Oluwalana, *et al.*, 1998). The fleshy pulps of the fruit has been found to have higher contents of ascorbic acid than oranges and guava. It is also reported as a good source of vitamins, irons, flavors to diets, e.t.c. The seeds are also used for local games, traditional dance or as counter by small children. The fruit pulp is rich in Vitamin C and iron and an excellent source of raw material for industries. Tannins, flavonoids, terpenoids, proteins, carbohydrates and resins are the phytochemicals that have been reported in *Chrysophyllum albidum* fruits.

Essential information is presently lacking; with respect to their trade and marketing. Where these information are available, they are usually scanty and sometimes inaccessible to consumers and policy makers. Also, the cultivation of *Chrysophyllum albidum* has not been popularized, probably due to lack of relevant information on its economic potentials. Hence, this study investigated and analysed trade and marketing of *C. albidum* fruits in Mushin Local Government Area of Lagos State, Nigeria.

Methodology

Study area

This study was carried out in Mushin Local Government Area of Lagos State. Mushin LGA is one of Nigeria's 774 Local Government Areas. It is located 10 km north of Lagos city. It is a largely congested residential area with inadequate sanitation and low-quality housing. It has a population of 633,009 inhabitants (NPC, 2006). This represents 31.7% of the state total population. In the North, Mushin LGA shares boundary with Oshodi/Apapa expressway, in the South, it is bounded by Surulere Local Government Area. In the East, it shares boundary with Agege motor road from Oshodi to Bishop Street while in the West, it is bounded with Oshodi/Apapa expressway.

Sampling procedure and sample size

Purposive sampling technique was adopted to

select 200 respondents for this study because it was targeted at retailers of *Chrysophyllum albidum*. The study area was stratified into four zones which include Isolo, Oshodi, Mushin and Ijesha. In each zone, major markets were selected for the sampling based on the number of markets available. The zones and the number of markets selected are as follows; Isolo, 1market; Oshodi, 2 markets; Mushin, 4 markets and, Ijesha 1 market. Further details are shown in Table 1. The primary data were collected by the means of a structured and pretested questionnaire that were administered to *Chrysophyllum albidum* fruit sellers in the 8 selected markets with 25 respondents selected in each market. Data analyses included Descriptive, Budgetary analysis, Analysis of costs and returns, Profitability ratio, Multiple linear regression and Analysis of marketing efficiency.

1. Descriptive Statistical Analysis

Descriptive statistical tools such as frequencies, means, modes and percentages were used to summarise the socio economic variables of interest such as age, sex, education and marital status of the respondents

2. Budgetary Analysis

Budgetary analytical techniques following Momoh *et al.*, (1999) were used to assess the cost and returns to *Chrysophyllum albidum* fruit sales. Gross profit and net profits were used to provide estimates of profitability of trade in the commodity.

3. Analysis of cost and returns

- Variable cost (VC) were made up of transportation cost, labour cost, cost of wares and market tariffs
- Fixed cost (FC): the fixed cost incurred by the traders are the cost of bags and baskets used for storage
- Total cost (TC)=TVC+TFC (₦)

Where

₦ = Naira

TC= Total cost

TVC= Total variable cost

TFC= Total fixed cost

- Gross profit(GP)= TR-TVC

Where

TR = Total Revenue (₦) is given by $Py * Y$

Where P_y = price/unit and product

$$Y = \text{Product}$$

₦ = Naira

a) Net profit (NP) = GP - TFC

Where

₦ = Naira

GP = Gross Profit

TR = Total Revenue

1. Profitability ratio

A. Rate of return (ROR %) =

A. $\frac{TR}{TC} \times \frac{100}{1}$

B. Rate of Return on investment (RORI %) = $\frac{TR - TC}{TC} \times \frac{100}{1}$

5. The multiple linear regression was adopted to find out some of the factors that contributes to the selling price of *Chrysophyllum albidum* in the study area the model specification will be given as

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e_i$$

Where

Y = selling price

X_1 = Transportation cost

X_2 = Labour cost

X_3 = Cost price

X_4 = Tariff

e_i = error term

a, b_1 , b_2 , Are the parameters to be estimated

6. Analysis of marketing efficiency

$$\frac{\text{Total sales}}{\text{Total marketing cost}} \times \frac{100}{1}$$

Table 1: Number of markets and respondents selected from the four zones in the study area

Zone	Number of market	Number of respondents
Isole	1	25
Oshodi	2	50
Mushin	4	100
Ijesha	1	25
TOTAL	8	200

Results

Socio-demographic characteristics of the respondents

The result presented in Table 2 showed that 85% of the respondents were females, while 15% were males. The largest number of respondents were recorded in the age group of 41- 50years representing 53% of the total respondents, followed by those in the age bracket of 31-40 years representing 29% of the total number of respondents (Table 2) . The average age of the respondents was 45years. This shows that the majority of those involved were active people who can still move around to source for product for the purpose of transacting business. This observation has implications for conservation of *Chrysophyllum albidum* i.e. the more active

people in the business, the more the extraction of the fruits from its sources. With respect to marital status 67% of the marketers were married while 57.5% with an average household size of 3. Being married with children could motivate them to be more dedicated to the business. This is due to the financial needs to feed and train their children and also support the family (Mafimisebi, 2000). There is also the possibility of the transfer of the trade of the fruits to on coming generations. All the respondents had formal education with primary education recorded as the modal level of education. Those with secondary education constitute 42.5%. Sale of the fruits were dominated by Igbos of South eastern Nigeria accounting for 42.5% of the total respondents, majority of the traders were found in Mushin Area. T

Table 2: Socio -Economic Characteristics of the Respondents in the study area

Variables		Frequency	Percentage	Mode
Gender	Male	30	15.0	
	Female	170	85.0	Female
	Total	200	100.0	
Age	21-30	30	15.0	
	31-40	58	29.0	
	41-50	106	53.0	41-50
	51-60	6	3.0	
Marital status	Single	25	12.5	
	Married	134	67.0	Married
	Divorce	19	9.5	
	Others	22	11.0	
No. of children	1-2	61	30.5	
	3-5	103	51.5	3-5
	>5	26	13.0	
	None	10	5.0	
Household size	1-5	115	57.5	1-5
	6-10	82	47.0	
	10 and above	3	1.5	
Level of Education	Primary	107	53.5	Primary
	Secondary	85	42.5	
	Tertiary	1	0.5	
	None	7	3.5	
No. of Years in School	6	98	49.0	6
	12	83	41.5	
	16	13	6.5	
	>16	6	3.0	
Ethnic Group	Igbo	85	42.5	Igbo
	Yoruba	81	40.5	
	Hausa	34	17.0	
	Total	200	100.0	

Respondent's source of capital, years of experience, annual income, nature of participation and sources of wear

The results in Table 3 revealed that 62.5% of the traders source their capital from personal saving while 33.5% source their capital from co-operative societies. It further indicated that 50% of the respondents have annual income of between ₦50,000 and ₦150,000. A total of 23% of the trader had less than five years of marketing experience, 50% had between 5-10 years' experience, 11.5% had between 10-15 years' experience while 5.5% of the respondents had more than 15 years' experience. 11% of the traders were wholesalers, 65.5% were retailers while 23.5% were found to be both wholesalers and retailers. Majority of the wholesalers (36%) sourced their fruits from wild/free forest areas,

35.5% obtained their fruits from both personal farm land and wild/free forest while 28.5% procured their fruits from personal farm land. About 93.5% of the respondents procured the commodity from wholesalers while only 6.5% got from retailers (Table 3).

Mode of trade and source of *Chrysophyllum albidum* fruits

As shown in Table 4, 79% of the respondents were found to be part-time traders while 21% were full-time traders. The implication of this is that *Chrysophyllum albidum* fruit trade provides both part-time and full-time employment.

Cost and Returns to marketing of *Chrysophyllum albidum* fruits in the study area

The results of cost and return analysis showed that the Total Variable Cost (TVC) which included

labour cost, rent/storage cost, transport cost, cost of wares/items in store, processing cost /market tariff ranged from ₦54,350 at Odo-Ashimolowo market to ₦110,000 at Mushin market, ₦60,000 at Kajola market to ₦64,200 at Daleko market; ₦63,200 at Ojuwoye market to ₦65,050 at Ijesha market; ₦76,200 at Nitel market to ₦83,400 at Under-bridge market. The Rate of Return (ROR) ranged from ₦104 at Kajola to ₦157 at Ojuwoye market (Table 5). Table 6 reveals that the Rate of Return on investment ranged from 4% at Kajola market to 57% at Ojuwoye market. The management implication of this is that for every ₦1 invested in Kajola market there will be a return of 4% and for every ₦1 invested on Ojuwoye, there will be a return of 57%.

The summary of the type of *Chrysophyllum albidum* fruits traders in the markets are shown in Table 7. 65.5% of the total respondents were retail traders, with the largest number recorded in Under-bridge market, while 23.5% respondents were both wholesale and retail trader. The remaining 11% were *Chrysophyllum albidum* fruits wholesale traders. The

Marketing efficiency

The results of the marketing efficiency analysis in Table 8 showed that all the markets were found to be efficient in *Chrysophyllum albidum* trade. This is because the marketing efficiency determined for each market was greater than 1. The efficiencies ranged from 5.3 (Kajola

market) to 67.2 (Odo-Ashimolowo). The major problem associated with trade and marketing of *Chrysophyllum albidum* fruits was easy spoilage (deterioration) (74%) followed by transportation (13%) and lack of fund which was indicated 8% of the respondents (Table 9).

The analysis of respondents' conservation activities on *Chrysophyllum albidum* tree are summarized in Table 10. None of the respondents were involved in the conservation of *Chrysophyllum albidum* trees (Table 10). Table 10 further showed that 35% of respondents had interest in the establishment of *Chrysophyllum albidum* plantation while 65% of the respondents are not willing to invest in *Chrysophyllum albidum* plantation establishment. This could be because of long gestation period the tree species. Scarcity of land in Lagos could also be another limiting factor. The results of the regression analysis to investigate the determinants of the selling price of *Chrysophyllum albidum* fruits are summarized in Table 11. Processing cost/market tariff was the major determinant of selling price in Ojuwoye Markets. While rent/storage cost was the major determinant of selling price in Daleko market, Labour cost was major determinant of selling price in Under-bridge, Kajola, Ijesha and Nitel markets. The reduced models of the linear equations for the eight markets are as follows:Ojuwoye:

	$Y = 2723.612 + 1.305X_1 + 0.403X_2 + 1.105X_3 - 0.103X_4 + 9.256X_5$
Odo-Ashimolowo:	$Y = 8.027 - 0.02X_1 - 0.026X_2 - 0.002X_3 + 0.003X_4^{***} + 0.414X_5$
Under-bridge:	$Y = 898.359 + 2.756X_1 - 0.012X_2 + 0.039X_3^{**} - 0.142X_4 + 1.434X_5$
Kajola:	$Y = 2485.325 + 3.848X_1 + 0.420X_2 - 0.180X_3 + 0.415X_4 - 5.840X_5$
Ijesha:	$Y = 373.157 + 0.484X_1 + 0.083X_2^{**} - 0.197X_3 + 0.064X_4^{**} - 0.065X_5$
Nitel:	$Y = 93.157 + 0.033X_1^{**} + 0.007X_2^{***} - 0.297X_3 - 0.003X_4 + 0.001X_5^{***}$
Daleko:	$Y = 13720.206 + 4.653X_1 + 4.852X_2 + 0.611X_3 + 0.406X_4 + 14.405X_5$
Mushin:	$Y = 7913.773 - 0.305X_1 + 0.282X_2 + 0.727X_3 + 0.171X_4 + 33.850X_5$
Where:	$Y =$ Selling price, $X_1 =$ Labour cost, $X_2 =$ Rent/Storage cost, $X_3 =$ Transportation cost $X_4 =$ Cost of wears/items in store, $X_5 =$ Processing cost / Market Tariff, ₦ = Naira

Table 3: Distribution of respondent's source of capital, years of experience, annual income, nature of participation and sources of wear		To	2	2	2	2	2	2	2	2	1
		tal	25	5	5	5	5	5	5	5	0
											0
											0
											%
Variables		Frequency	Percentage		Mode						
Source of capital	Bank Loan	6	3.0								
	Co-operatives	67	33.5								
	Personal Savings	125	62.5		Personal Savings						
	Other	2	1.0								
Years of Experience	<5	46	23.0								
	5-10	120	60.0		5-10						
	10-15	23	11.5								
	15 and above	11	5.5								
Income per year	<10,000	15	7.5								
	10,000 – 50,000	66	33.0								
	50,000 – 150,000	100	50.0		50,000 – 150,000						
	150,000 – 200,000	19	9.5								
Are you a Wholesaler	Wholesaler	22	11.0								
	Retailer	131	65.5		Retailer						
	Both	47	23.5								
Sources as a Wholesaler	Personal farm land	57	28.5								
	Wild/free forest	72	36.0		Wild/free forest						
	Both	71	35.5								
Source as a Retailer	From Wholesaler	187	93.5		From Wholesaler						
	From Retailer	13	6.5								
	Both	–	–								
	Total	200	100.0								

Table 4: Distribution of respondents according to mode of trade and source of *Chrysophyllum albidum* fruits

Variables	Markets									Total	%
	Ojuwoye	Ijesha	Odo	Kajola	Under	Nitel	Mushin	Daleko			
Part time	15	20	22	20	15	18	25	23	158	79%	
Full time	10	5	3	5	10	7	0	2	42	21%	
Total	25	25	25	25	25	25	25	25	200	100%	

Table 5: Cost and Returns to marketing of *Chrysophyllum albidum* fruits in the study area

Market	Fixed cost										Variable cost									
	TC	*	LC	R/SC	CW	PC/ TAX	Basket	Bag	Bowl	Tray	TVC	TFC	TR	TC ₂	GP	NP	ROR	RORI		
Ojuwoye	15700		20000	10000	11000	6500	44250	5400	16370	8500	63200	74520	215700	13720	141180	66660	157	57%		
Kajola	13000		15000	10000	12000	10000	25000	4620	13420	5000	60000	48040	112300	108040	64260	16220	104	4%		
Under- Bridge	13000		17600	28400	18000	6400	21200	8350	9700	11210	83400	50460	154880	133860	104420	53960	116	16%		
Ijesha	14100		16500	15100	12000	7350	22800	10000	14600	14000	65050	61400	148000	176450	86600	25200	117	17%		
Nitel	17650		15200	17650	20000	5700	23750	5600	14950	6900	76200	51200	137380	127400	86180	28980	108	8%		
Odo	7450		14600	14700	15000	12600	78400	4850	6100	3310	54350	92660	187150	147010	94490	1830	127	27%		
Mushin	16200		20700	27800	40000	5300	28530	6950	9650	8350	110000	53480	189200	163000	135720	82240	116	16%		
Daleko	8000		16800	22500	12000	4900	41950	5060	14540	6000	64200	67520	147415	131720	79895	12375	112	12%		

Where * = Naira (US Dollar = ₦100), TC = Transportation Cost, LC = Labour Cost, RSC = Rent

t/ Storage cost, CW = Cost of wear/items in store,

PC/TAX = Processing Cost/Market Tariff, TVC = Total Variable Cost, TFC = Total Fixed Cost, TR = Total Revenue, TC₂ = Total Cost,

GP = Gross Profit, NP = Net profit, ROR = Rate of Return, RORI = Rate of Returns on Investment.

Table 6: Range of profitability on trade of *Chrysophyllum albidum* fruits in the study area

	From	To
Total Variable cost (TVC)	₦54350 (OdoAshimolowo Mkt)	₦110000(Mushin Mkt)
Total Fixed cost (TFC)	₦48040 (Kajola Mkt)	₦92660 (Odo-Ashimolowo Mkt)
Total cost (TC)	₦108040(Kajola Mkt)	₦163000 (Mushin Mkt)
Gross Profit (GP)	₦64260 (Kajola Mkt)	₦141180 (Ojuwoye Mkt)
Net Profit (NP)	₦1830 (Odo-Ashimolowo Mkt)	₦82240 (Mushin Mkt)
Rate of Return (ROR)%	₦104 (Kajola Mkt)	₦157 (Ojuwoye Mkt)
Rate of Return on investment (RORI)%	(4% (Kajola Mkt)	57% (Ojuwoye Mkt)

Table 7: Types of *Chrysophyllum albidum* fruits traders in study area

Variables	Market places									Total	%
	Mushin	Ojuwoye	Nitel	Uder-bridge	Kajola	Odo	Ijesha	Daleko			
Wholesaler	10	3	0	0	3	0	4	2	22	11%	
Retailer	9	15	17	22	17	15	17	19	131	65.5%	
Both	6	7	8	3	5	10	4	4	47	23.5%	

Table 8: Marketing efficiency in the different markets in the study area

Markets	Marketing Efficiency
Mushin	8.3
Kajola	5.3
Odo. Ashimolowo	67.2
Ijesha	26.6
Ojuwoye	9.0
Nitel	15.5
Daleko	13.0
Under-bridge	21.0

Table 9: Problems associated with trade and marketing of *Chrysophyllum albidum* fruits

Variables	Ojuwoye	Odo	Under	Mushin	Nitel	Ijesha	Daleko	Kajola	Total
%									
Easy spoilage	20	15	25	25	15	25	13	10	148
Lack of fund	-	6	-	-	5	-	5	8	24
Transport	5	4	-	-	5	-	7	7	28
None	-	-	-	-	-	-	-	-	-
Total	25	25	25	25	25	25	25	25	200

Table 10: Conservation activities on *Chrysophyllum albidum* fruits by the respondents

Variables	Yes	Frequencies	Percentage	Modes
Do plant <i>Chrysophyllum albidum</i>	Yes	—	—	
	No	200	100%	None
	Total	200	100%	
Numbers of hectares	1-3	—	—	
	4-6	—	—	
	7-10	—	—	
	None	200	100%	None
	Total	200	100%	
Willingness to plant <i>Chrysophyllum albidum</i>	Yes	78	39	
	No	122	61	No
	Total	200	100%	

Table 11: Summary of regression results for the estimation of factors that determine the selling price of *Chrysophyllum albidum* fruits in the study area

MARKETS	B ₀	LC X ₁	R/SC X ₂	TC X ₃	CW X ₄	PC/TAX X ₅	R ²	adjusted R ₂	SIG
Ojuwoye	2723.612 (-.874)	1.305 (0.980)	.403 (.315)	1.105 (.795)	-.103 (-.72)	9.256 (.126)	.805	.723	.001* **
Odo	8.027 (.101)	-.020 (-.301)	-.026 (-.581)	-.002 (-.060)	.003 (.456)	.414 (.286)	.479	-.173	.635
Under- bridge	898.359 (-.509)	2.756 (.000)	-.012 (-.015)	.039 (.336)	-.142 (-.654)	1.434 (.976)	.730	.627	.002* **
Kajola	2485.325 (-.856)	3.848 (1.401)	.420 (.386)	-.180 (-.166)	.415 (.869)	-5.840 (-.785)	.400	.224	.094 **
Ijesha	373.157 (-.793)	.484 (3.542)	.083 (.818)	-.197 (-2.34)	.064 (.195)	-.065 (-.057)	.564	.345	.095* *
Nitel	93.157 (3.736)	.033 (2.030)	.007 (.854)	-.029 (-2.94)	-.330 (-.872)	.001 (.040)	.455	.228	.151
Daleko	13720.206 (-4.388)	4.653 (2.133)	4.852 (2.21)	.611 (.988)	.406 (1.135)	14.450 (1.263)	.749	.659	.001* **
Mushin	7913.773 (-2.266)	-.305 (-.135)	.282 (.170)	.727 (.990)	.171 (.529)	33.850 (2.594)	.778	.685	.001* **

Figures in parameter are the t -values, Where :
 Y= Selling price, LC = Labour cost, TC =
 Transport cost, R/SC = Rent Cost/ storage cost,
 CW = Cost of wears/items in store, PC/TAX =
 Processing cost

Discussion

The largest number of children were recorded in 3-5 children representing 51.5%, followed by 1-2 and >5 children representing 30.5% and 13% respectively. The implication of this trend is that a household with large members has access to free labour. 57.5%, 41% and 1.5% of the respondents have a household members ranging between 1-5, 6-10 and >10 respectively. The marketers that had a medium sized household were more likely to devote a larger percentage of their profit to household welfare than those with smaller household size. These categories of marketers were therefore expected to have lesser capacity for savings (Alfre and Akintade, 2002), since majority of the profit made will be directed towards maintaining the family. It was observed that all the respondents had formal education. This could be because of their being residents of Lagos, the commercial capital of Nigeria. Being educated might mean that the market information on price

variation and changes circulated to seller and any new innovation on improvement of *Chrysophyllum alidum* could be adopted by them easily and also helps in communication and effective projections of their enterprise. The trade in *Chrysophyllum albidum* fruit is an age long business which implied that it could have been passed on to their children from older generation. Though years of experience may not be a major factor in determining the level of profit made, the quality of money invested into the business, number of consumers patronizing the business etc., could be factors that can determine the level of profit made. A large percentage of the traders (62.5%) sourced their capital through personal savings, 33.5% through cooperative societies, and 3% through bank loans. This could be because of the bureaucracy involved before obtaining loans from banks, which they may not be able to afford, so the respondents depend on personal savings. Many of the traders sold the *Chrysophyllum albidum* fruits in retail quantity.

This could be probably due to the fact that most consumers are small quantity buyers and is mostly consumed by the youths and children. Investment in *Chrysophyllum albidum* fruits was found to be a profitable venture and rewarding judging from the analysis of cost and return. The result of the rate of return on investment shows that every amount invested in the business; at least 4% profit will be made. It was observed that profit is higher in Ojuwoye market; this could be due to its closeness to residential area and also due to low TVC i.e., little amount of money is spent on the variable costs and the selling price of all the markets are within the same range. This was also reported by (Adekunle *et.al* 2013) on the trade and marketing of *Moringa oleifera*. The marketing efficiency for Mushin, Kajola, Odo-Ashimolowo, Ijesha, Ojuwoye, Nitel, Daleko and Under-bridge markets were 8.3, 5.3, 67.2, 26.6, 9.0, 15.5, 13.0 and 21.0 respectively (Table 8). This means that trade of *Chrysophyllum abidum* fruits was efficient in the study area. Odo-Ashimolowo market was the most efficient. The major problem identified by the respondents is easy spoilage (deterioration) of *Chrysophyllum albidum* fruits. It stays a maximum of 2-3 days after harvesting. Another problem identified by the respondents is transportation which could be in terms of increase in fuel prices and motor spear parts. Lack of fund is also another problem which is identified by the respondents; it might prevent value addition in other to maximize their profit margin. None of the respondents were involved in the conservation of *Chrysophyllum albidum*. The rate of conservation of *Chrysophyllum albidum* in plantation in the study area is very low. This could be because of the long period it takes *Chrysophyllum albidum* tree to reach to maturity and to start bearing fruits. It could also be because the respondents are not knowledgeable about the silviculture of the tree. The management implication of these findings is that the availability of *Chrysophyllum albidum* fruits in the markets may not be sustained.

Conclusion

It can be concluded from this study that *Chrysophyllum* plays a vital role in livelihood and economic empowerment of many people in the study area Forest and farm can make significant

contributions to food security of the rural and urban population providing a vast array of food which supply essential nutrient especially at times when other food sources are unavailable. The study shows that marketing of *C. albidum* fruits is female dominated.

It was also shown that Igbos were more involved in the trade of *Chrysophyllum albidum* fruits. This is because *Chrysophyllum albidum* fruits is one of the most cherish fruit by the Igbos. Trade in *Chrysophyllum albidum* fruit is very profitable especially during the dry season. It could be concluded that trade and marketing of the fruits is a profitable business which provides employment for the respondents especially women in the study area. However, the profitability of this trade is subject to continued availability of *Chrysophyllum albidum* fruits for sale. This is doubtful as the *Chrysophyllum albidum* trees are not cultivated in commercial quantities in Lagos.

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