



## Analysis of Shea Butter (*Vitellaria paradoxa*) Marketing in Ibarapa Central Local Government Area of Oyo State, Nigeria

\*<sup>1</sup>AYANRINDE, FA; <sup>2</sup>OYEWOLE, SO; <sup>3</sup>AYANRINDE, OA; <sup>4</sup>OYEWOLE, AL

<sup>1</sup>Department of Horticulture and Landscape Technology, Federal Polytechnic Ede, Osun State, Nigeria

<sup>2</sup>Forestry Research Institute of Nigeria, P.M.B. 5054, Ibadan, Oyo State, Nigeria

<sup>3</sup>Elicar Farm Ventures Ede, Osun State, Nigeria

<sup>4</sup>Federal College of Forestry, Ibadan, Oyo State, Nigeria

\*Corresponding Author Email: [omolaalaaa4real@gmail.com](mailto:omolaalaaa4real@gmail.com); Tel: +2347060897501

Co-Authors Email: [shola4delord@yahoo.com](mailto:shola4delord@yahoo.com); [awoyrinde@gmail.com](mailto:awoyrinde@gmail.com); [akintolaadekemi@gmail.com](mailto:akintolaadekemi@gmail.com)

**ABSTRACT:** Shea butter marketing is one of the options for sustainable livelihood business and employment creation in Nigeria. However, shea butter marketing has not been fully considered as profitable enterprise with investment potential in the country. Hence, this study was carried out to analyse marketing of Shea butter in Ibarapa Central Local Government Area of Oyo State, Nigeria using standard methods with of well-structured to select 60 respondents. The result of budgeting analysis revealed that the rate of return on investment indicated a positive average of 0.64. Benefit cost ratio analysis gave a value of 1.64 which suggested that the business is lucrative and profitable. Lack of capital, high cost of transportation and lack of storage facilities were identified as a major constraint in Shea butter marketing. The study recommends provision of credit facilities at low interest rate, appropriate government policies to promote export and adequate transport facilities for easy movement of Shea butter from producing areas to urban centres.

DOI: <https://dx.doi.org/10.4314/jasem.v27i9.13>

**Open Access Policy:** All articles published by **JASEM** are open-access articles under **PKP powered by AJOL**. The articles are made immediately available worldwide after publication. No special permission is required to reuse all or part of the article published by **JASEM**, including plates, figures and tables.

**Copyright Policy:** © 2023 by the Authors. This article is an open-access article distributed under the terms and conditions of the **Creative Commons Attribution 4.0 International (CC-BY- 4.0)** license. Any part of the article may be reused without permission provided that the original article is cited.

**Cite this paper as:** AYANRINDE, F. A; OYEWOLE, S. O; AYANRINDE, O. A; OYEWOLE, A. L. (2023). Analysis of Shea Butter (*Vitellaria paradoxa*) Marketing in Ibarapa Central Local Government Area of Oyo State, Nigeria. *J. Appl. Sci. Environ. Manage.* 27 (9) 1985-1988

**Dates:** Received: 27 August 2023; Revised: 10 September 2023; Accepted: 25 September 2023 Published: 30 September 2023

**Keywords:** Shea butter; sustainable livelihood; budgetary techniques; *Vitellaria paradoxa*

Nigerian agriculture is an important sector of notable relevance in economic development and growth. Presently, Shea nut tree has gained importance as an economic crop because of the heavy demand for its butter, both locally and internationally. The shea tree is one of the most important sources of vegetable oil in rural areas of the savannah zone of West Africa. FAO, (2019) estimated that the total shea nut production was approximately 500,000 metric tons. About 45 percent of the land area in Nigeria is suitable for the growth of the shea plant. The bulk of the shea nuts produced in Nigeria is for home consumption and local trading. The reports of the Central Bank of Nigeria (CBN, 2012) and Oil Seeds Association of Nigeria (OSAN)

also confirmed that Nigeria produces significant quantity of shea nuts annually. In 2018, Nigeria produced 263,374 metric tons of shea nut (FAO, 2019). The productivity in the sub-species of *Vitellaria paradoxa* rises rapidly from the age range of 40-50 years. Due to the adverse weather conditions in the Sahel, fruit production fluctuates considerably from tree to tree, and between seasons. Shea nut and butter are value-added products with outstanding export growth potentials for Nigeria. According to Schreckenber, (2004), Shea butter tree (*Vitellaria paradoxa*) is a non-timber forest products which is far gaining much attention among the researchers and breeders as a tree which enormous potentials worth

\*Corresponding Author Email: [omolaalaaa4real@gmail.com](mailto:omolaalaaa4real@gmail.com); Tel: +2347060897501

investigation for the purpose of domestication and also as an agricultural tree crop. The tree grows within Nigeria in large quantity in the guinea savannah and Sudano-Sahelian regions. The Shea tree has played an important role in the livelihoods of rural people in Nigeria. The local Shea business apart from farming activities is a vibrant business among rural people particularly women in Nigeria. Shea butter is a staple component among diets of rural people and together with the kernel serves as source of income for rural women. The tree has great potentials to earn foreign exchange for Nigeria. The Shea fruit pulp is very nutritious which contains protein and minerals and is highly medicinal. The fruit pulp has laxative properties and it is edible. Shea nuts are a good source of affordable cooking fats. Shea butter is locally produced by rural women as loaves in the market. Shea butter is used as a base in medical, cosmetic ointments, as an illuminant and hair cream. Shea butter obtained from Shea nut trees is used in food, pharmaceutical, and cosmetic industries. The Shea butter refined can be used as substitutes for cocoa butter and margarine in food industries. The Shea butter from Shea nut have up to 50% oil content and contains high concentrations of triglyceride and is used for shampoo, skin creams and cosmetics (Maranz S, *et al.*, 2004). Africa produces about 1,760,000 metric tonnes of raw Shea nuts annually. Large quantities of Shea nuts are produced in West Africa. Seven African countries that produced Shea nuts include: Nigeria, Ghana, Burkina Faso, Benin, Cote d'Ivoire, Mali, and Togo. The seven West African countries produce about 500,000 tonnes of Shea nuts. These countries export about 270,000 tonnes as raw nuts. Europe is the regular importer of Shea nuts with annual import values between 6000 tonnes and 60,000 tonnes (Wiesman, *et al.*, 2003). Four major players that control refining of Shea in the world markets are: Denmark, Japan, Sweden, and Holland. Most of the exports of Shea from West Africa consist of crude butter that has no significant refining. The West African variety of Shea butter (*Vitellaria paradoxa*) has been traditionally processed and locally used. Shea butter trade is a good source of income and has potentials to raise the standard of living of rural people in subsistence economy. Marketing is the sum total of all business activities involved in the movement of commodities from production to consumption (Ugese, *et al.*, 2005). It was observed that the marketing of many non-timber forest products, including Shea butter, is specialized, involving producers, wholesalers, retail traders in rural, regional and urban areas (Umobong, 2006). Studies on the marketing of Shea butter is not limited, a review of some of the studies on Shea butter revealed that much emphasis is laid on the production and consumption of Shea butter in Nigeria and its implications on the

Nigerian women livelihood in the environment. Marketing of Shea butter is a lucrative business and unattractive, but can fetch the country revenue through export. Hence, the objective of this study is to analyse Shea butter (*Vitellaria paradoxa*) marketing in Ibarapa Central Local Government Area of Oyo State, Nigeria.

## MATERIALS AND METHODS

This study was carried out in Ibarapa Central Local Government area of Oyo State, which lies within the tropical zone in the rain forest region of South Western part of Nigeria. It is located between latitude 8.0°N and Longitude 4.0°E of Greenwich meridian of the equator. This area was purposively selected for the study and the location enjoys the wet and dry seasons, average annual rainfall is estimated at 1,278mm, while sunshine hours range from 2.4 hours in August to 7 hours in February, average temperature of 27°C. Based on the prevailing climatic and soil characteristics, three vegetation zones are identified in the areas, these are Forest, Savanna and Derived savanna. The Forest zone with high relative humidity favours the cultivation of tree crops such as cocoa, kolanut, citrus, oil palm, *Vitellaria paradoxa* tree, arable crops (like yam, cassava, maize and rice) as well as fruit crops (like cashew, mango, grape, guava and watermelon). The derived savanna has a mixture of forest and savanna vegetations. The population Figure of Ibarapa North and Ibarapa Central are 306,795 and 102,979 respectively (NBC, 2006).

*Sampling techniques and data collection:* Random sampling technique was used to select 60 respondents that engaged in Shea Butter marketing. Data were collected using well-structured questionnaire copies of which were administered to the selected Shea butter sellers in the study area. Also, the socioeconomic characteristics of Shea butter were considered (like age, education, working experience, household size, credit availability, gender and marital status) in data collection.

*Analytical techniques:* Data collected were analysed using both descriptive statistics and budgetary tools. The budgetary tools include return to investment, gross margin, cost and return analysis as well as benefit cost ratio were used to measure profitability of Shea butter marketing. Net income and returns per naira invested were computed with the help of the total cost and gross income. The model can be specified as follows:

$$TC = PC + MC$$

Where: TC = was captured as purchase cost; MC = Marketing cost

Gross Income is mathematically defined as:

$$GI = Q * Py$$

Where; GI = Gross Income ;

Q = Quantity of Shea butter marketed ;

$$Py = \text{Unit Price of Shea Butter} \frac{\text{₦}}{\text{weight}}$$

Net Income was captured as the traders' profit in Shea butter marketing. Thus;

$$NI = GI - TC$$

Where NI = Net Income ; GI = Gross Income ; TC = Total Cost

Return per naira invested (RNI): This is the necessary return obtained from marketing of locust bean for every one naira invested. It is otherwise called marketing margin which is used as a measure of profitability.

$$RNI = GI \div TC$$

Where, RNI = Return Per Naira Invested;

GI = Gross Income; TC = Total Cost

Muhammad-Lawal, (2009), explained that if RNI value is greater than 1, the business yields profit and if it's less than 1 it yields loss. On the other hand, if the RNI value is equal to 1, the enterprise is said to make breakeven. Marketing Margin as defined by Adegeye and Dittoh 1985, is the difference between the cost and the profit. Thus, it is the marketing costs and profit or loss incurred. This is given as;

$$MM = RP - PC$$

Where; MM = Marketing Margin ;

RP = Resale Price ; PC = Purchase Price

## RESULTS AND DISCUSSION

The result of the analysis in Table 1 below showed that all the respondents were female (100%). This indicated dominance of female in the marketing of the Shea butter. (91.7 %) of the respondents were less than 60 years old revealing the presence of old, young and little middle-aged individuals who are known to be innovative and active to marketing of Shea butter. Majority of the sellers in the study area are women in which (58.3%) were widow, 36.7% were married and (5%) were single. This indicated that widow and married women were stable & well involved in the trade. About (83.4%) had No formal education, (8.3%) had technical/vocational education skills, (5%) attended secondary school and (3.3%) attended primary school. This revealed that majority of the

women had No formal education but with little formal education and vocational skills. The mean household size was 10. This indicated that the household size of the respondents was relatively large. Credit facilities were enjoyed since all the respondents were active members of the cooperative society. This is due to the presence of Micro Finance institution in the study area. This revealed that marketing of Shea butter among the women is not a newly introduced profession of the people in the study area.

**Table 1:** Socio-economics characteristics of Shea butter in the study area

Variables	Frequency	Percentage
<b>Age</b>		
< 30	2	3.3
31-40	3	5
41-50	10	16.7
51-60	40	66.7
> 60	5	8.3
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Gender</b>		
Male	Nil	Nil
Female	60	100
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Marital Status</b>		
Single	3	5
Married	22	36.7
Widowed	35	58.3
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Education</b>		
Primary	2	3.3
Secondary	3	5
Technical/Vocational Skills	5	8.3
No Formal Education	50	83.4
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Family Size</b>		
1-10	45	75
11-20	10	16.7
>20	5	8.3
<b>Total</b>	<b>60</b>	<b>100</b>
<b>Membership of Cooperative</b>		
Yes	60	100
No	Nil	Nil
<b>Total</b>	<b>60</b>	<b>100</b>

*Profitability of Shea butter in the study area:* The result in Table 2 below revealed that cost of Shea butter processing, containers and transportation cost accounted for 25.77%, 24.05% and 22.34% respectively, while the Gross income was found to be ₦47,840.00. This showed that the business is viable and profitable. The analysis of benefit cost ratio gave a value of 1.64 which is greater than one (>1), suggesting that the Shea butter business is viable and profitable. Rate of return on investment determined the worth of a business and it was stated from the result that the profit made from the sales of Shea butter is 64% over the capital invested. It means that at every one naira invested, 64 kobo profit will be generated, thereby raising the earlier naira invested to ₦1.64 kobo. This implied that the higher the rate of return on

capital, the better for the success of the business (Olukosi and Erhabor, 2005).

**Table 2:** Cost and returns of Shea butter marketing in the study area

Variable	Value (₦)	Percentage (%)
<b>Variable cost (₦)</b>		
Storage cost	4,200	14.43
Transportation cost	6,500	22.34
Loading and offloading	3,300	11.34
Cost of processing	7,500	25.77
Handling cost	3,500	17.03
Cost of packaging	2,300	7.90
Cost of containers	1,000	24.05
Total variable cost	28,100	96.56
Fixed cost (₦)	7,000	24.05
<b>Total cost</b>	<b>29,100</b>	<b>100.00</b>
Gross income	47,840.40	
Marketing margin	8,219.47	
Net income	18,740.40	
Benefit cost Ratio	1.64	
Return per Naira inverted	0.64	

*Constraints faced by Shea butter sellers:* The result in Table 3 below revealed the major constraints affecting Shea butter. These constraints include, lack of credit facilities (50.0%). This was ranked first among the problems faced by the seller which is connected to limited access to credit facilities. Lack of storage facilities (33.3%) was ranked second. This is preventing the Shea butter sellers to buy in large quantity due to lack of preservation (storage). High cost of transportation (10.0%) and inadequate extension service (6.7%) were ranked third and fourth respectively.

**Table 3:** Distribution of respondents according to the constraints affecting the sales of Shea butter (*Vitellaria paradoxa*)

Constraints	Frequency	Percentage	Ranks
High cost of transportation	6	10.0	3 <sup>rd</sup>
Lack of credit facilities	30	50.0	1 <sup>st</sup>
Lack of storage facilities	20	33.3	2 <sup>nd</sup>
Inadequate extension services	4	6.7	4 <sup>th</sup>
<b>TOTAL</b>	<b>60</b>	<b>100</b>	

*Conclusion:* Shea butter business in the study area has proven to be profitable and has contributed to the growth and livelihood of women in the environment. However, the government should incorporate policies to promote export of Shea butter which will serve as other sources of revenue. Also, credit facilities should be made available for producers of Shea butter and government should employ more extension agents for proper dissemination of knowledge and skills in the environment.

## REFERENCES

- Adegeye, AJ; Ditto, JS (1985). Essentials of Agricultural Economics. Impact Publishers Limited, Ibadan, Nigeria. Pp 164-177.
- Central Bank of Nigeria (2012). Statistical Bulletin.
- Food and Agriculture Organization, FAO (2019). Shea butter/sheanut Annual Report.
- Maranz, S; Kpikpi, W; Wiesman, Z; Chapagain, B (2004). Nutritional values and indigenous preferences for shea fruits *Vitellaria paradoxa* C.F. Gaertn in African agroforestry parklands: *Econ. Bot.* 58(4):588-600.
- Muhammad-Lawal, A; Omotesho, OA; Falola, A (2009). Technical Efficiency of Youth Participation in Agriculture: A Case Study of the Youth-In-Agriculture Programme in Ondo State, South Western Nigeria. *Nig. J. Agri. Food. Environ.* 5(1): 20- 26.
- National Population Commission NPC, (2006). Provisional census figure. Abuja Nigeria. pp: 12.
- Olukosi, JO; Erhabor, PO (2005). Introduction to farm management Economics.
- Schreckenber, KA (2004). Book on the contribution of shea butter (*Vitellaria paradoxa*) to local livelihoods in Benin. In: Sunderlands T, Ndoye O, editors. Forest Products, Livelihoods, and Conservation. Vol. 2. Bogor: Centre for International Forestry Research; p. 32-7.
- Ugese, A; Ojo, A; Bello, LL (2005). Effect of pre sowing treatment and nut orientation on emergence and seedling growth of seeds of Shea butter tree (*Vitellaria paradoxa*). *Nig. J. Bot.* 18: 294-304.
- Umobong, EA (2006). How to profit from the massive shea butter export boom. Success Digest, February, 8-11.
- Wiesman, Z; Maranze, S; Bianchi, G; Bisgaard, J (2003). "Chemical analysis of fruits of *Vitellaria paradoxa* In: Teklehaimanot Improved Management of Agro Forestry Parkland Systems in Sub-Saharan Africa", University of Wales Bangor, pp. 131-139.