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Email: tajar2011@yahoo.com, tajar2011@gmail.com
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ASSESSMENT OF WOMEN INVOLVEMENT IN SHEA BUTTER PRODUCTION IN NIGER STATE, NIGERIA

[*]Okolo, C.C[1]., Omoregbee, F.E[2]. and Alufohai, G.O.[2]
[1] Nigerian Institute for Oil Palm Research, PMB 1030, Benin City, [2] University of Benin, Benin City.
*Corresponding Author: e-mail: eddieokolo02@yahoo.com

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Abstract
The study assessed women involvement in shea butter production activities in Niger State, Nigeria. The objectives were to examine the socio-economic characteristics of the women involved in shea butter production, ascertain thelevel of their involvements,benefits derived as well as constraints faced during the production activities. Data were collected from ninety six (96) respondents from the state using questionnaire and interview schedule method. The data collected were analysed using descriptive statistics (frequency distribution and percentages).The results show that the majority of the respondents had between 1 -5 years' experience in shea butter production, married, illiterate, young within the age bracket of 30 - 39 years and had family size of 5 – 7 persons and did not belong to any farm association. Major benefits derived from shea butter processing business include better feeding of household (46.9%), more savings (51.0%) and improved usage (55.2%). The two major constraints faced in their processing activities were hazards associated with fruit collection (mean = 2.53) and inadequate inputs (mean=2.44). It was concluded that the shea butter production activities in the study area was dominated by women with no formal education.
Key Words: Women, Shea butter, production, Benefits, Constraints.

Introduction

The shea tree (*Vitellaria paradoxa* Gaertn. F.) grows naturally in the wild in the Savannah belt of Africa, from Senegal in the west to Sudan in the east and into the foot hills of the Ethiopian highlands, as well as in 17 countries across the African Continent: Benin , Ghana, Chad, Burkina Faso, Cameroon, Central African Republic, Guinea Bissau, Cote D' Voire, Mali, Niger, Nigeria, Sierra Leone, Togo, Uganda, Zaire, Guinea and Gambia (USAID, 2004). The tree generally grows in the wild and its fruits, when ripe, fall off the tree and are collected, boiled or roasted to extract the nuts (Baba, 2008). In Nigeria, the tree grows abundantly in Niger, Nasarawa, Kebbi, Kwara, Kogi, Oyo, Ondo, Kaduna, Adamawa, Zaria, Taraba, Borno and Sokoto States (Ogunsami, 2008). Niger State ranks first in terms of density and distribution of the tree (Okolo *et al.,* 2012). Baba (2008) stated the benefits derivable from the shea butter tree as comprising the pulp of the fruit which is edible while the bark and root are used in traditional medicine. Locally, it is used in childhood ointments for minor scrapes and cuts, and the shell of the nuts can be used to repel mosquitoes. Above all, the seed, when crushed, yields a vegetable oil that can be used in cooking, soap making, skin and hair care. It is this that makes it a valuable trade commodity. Collecting the nuts and making butter have traditionally been women's work. Suleman (2008) observed that marketing the oil was giving women better opportunities, primarily through improved income. However, over 70% of the fruits produced is usually not collected or collected but not evacuated for processing leading to enormous waste due to the high labour input requirements and other factors. (Suleman, 2008).

Shea butter production activities in North Central States of Nigeria are sources of income to many people, especially women but the level of income received is generally low when compared with the potentials. This is attributable to several factors. First the handling and processing methods adopted result in low quality of nuts and butter which fetch low prices and this reduces access to international markets. This situation is worsened by lack of awareness by the collectors and processors of superior handling and processing methods and equipment. Even in cases where they are aware, the cost of such equipment is generally beyond what they can afford as individual operators. Secondly, most of the collectors and operators are in small, scattered and remote areas which make access to markets

difficult resulting in low prices. Thirdly, they lack bargaining power as they operate mostly as individuals. This frequently places them at the mercy of middlemen who usually go into the rural areas to purchase the nuts and butter. The collectors and processors who are mostly women therefore do not reap the expected benefits and recognition for their labour. Chalfin (2004) had reported a drastic decline in quantity and quality of cocoa in the international market. Because of this perceived drop in its supply shea nuts become highly valued, primarily for use as a cocoa butter equivalent (CBE). Shea butter is usually cheaper than cocoa butter and also adds durability to chocolate, and other beverages making them more uniform, thereby leading to an increased demand of the products. Though a lot of studies have been carried out in the shea industry as enumerated above, none has specifically studied women participation in shea butter production exclusively in the study area. However, to develop and derive more rewarding benefits from the shea tree, the analysis of its benefits becomes pertinent.

This study therefore examined the socio-economic characteristics of the women involved in shea butter production, ascertain the level of their involvements, benefits derived as well as constraints faced during the production activities.

Methodology

The study was conducted in Niger State, Nigeria. The State is the largest State in Nigeria with a total land area of 76,363 sq km. It is bordered by Kwara State in the south, Kogi and the FCT in the east and Zamfara, Kaduna and Kebbi States in the north. It has human population of 3,950,245 (2006, census). Two of Nigeria's major hydroelectric power stations, the Kainji Dam and the ShiroroDam, are located in Niger State. Also situated there is Kainji National Park, the largest National Park in Nigeria, which contains Kainji Lake, the Borgu Game Reserve and the Zugurma Game Reserve. The State is endowed with great potential for agricultural production because of the availability of abundant arable land.

The Niger State Agricultural and Rural Development Project is divided into three zones - Zone A (Niger South), Zone B (Niger Central), Zone C (Niger North). For administrative purposes, each zone is made up of 10 extension blocks and each block has 8 extension circles. Similarly each extension circle has 8 extension sub-circles. From this structure, each zone is made up of 640 extension sub-circles and a total of 1920 extension sub-circles in the three zones of the entire State.

The population for this study included all women shea butter producers in Niger State of Nigeria. Sampling of respondents was done using the multi-stage sampling process. The first stage involved the purposive selection of Zone A (Niger South) for its more intensive shea butter production activities. The zone like the other zones had 10 extension blocks. Each block had 20 registered women shea butter producers making a total of 200.

In the second stage 50% of the sample frame i.e. 100 women shea butter producers, were randomly selected for the study.

Data required to accomplish the objectives of the study were obtained from primary (questionnaire/interview schedule) and secondary (i.e. textbooks, journals and publications) sources. For the primary data a comprehensive open and close-ended questionnaire/interview schedule was developed and administered to the women shea butter farmers who constitute the target population of the study. The data collection instrument was validated by extension experts in the field before final administration to respondents. The instrument schedule was structured in such a way that it enabled the respondents provide information about their personal characteristics which included sex, age, marital status, educational background, household size, religion, farming experience (years), estimated income per month from shea butter production, membership of association, frequency of extension contact (weeks).

For the benefits associated with the shea butter processing activities, the respondents were required to indicate the various benefits they derive from the production of shea butter. Their responses were coded as Yes or No. A list of constraints sourced from previous studies and literature were made available to the respondents to identify those that apply to them in shea butter production. Their perceived constraints was measured on three scale item of 3 = Very Serious, 2 = Serious and 1 = Not Serious. To determine

which constraint was serious the perceived mean of 2.00 was used. Thus any constraint with a mean score of 2.00 and above was considered serious or otherwise if less than 2.00. This mean was determined as follows: [3+2+1]/3 = 2.00

Secondary data were collected from literature and records of the ADPs.

Instrument for data collection was subjected to face and content validity: For face validity, assistance was solicited from experts in the field of rural sociology, rural health and agricultural extension. These experts were required to examine the question instrument and ensure that its contents were adequate in terms of measuring what it was designed to measure.

Reliability: This test proves reliability of the data collection instrument in terms of providing consistent results when administered to the same respondents on more than one occasion. The reliability of the measuring instrument was estimated using the test-retest technique. This was accomplished by administering the interview schedule to the same group of respondents at different times and the correlation between the two set of observations computed. A correlation value from 0.70 is usually considered acceptable.

Data collected were analyzed using descriptive statistics such as chart and frequency value (mean and standard deviations and percentages).

Results and Discussion

The socio-economic characteristics of the respondents are shown in Table 1. The result for age shows that the majority (58.3%) of the shea butter producers in the study area were within the age bracket of 30-39 years. The average age of the respondents was 37 years suggesting that the producers were generally young. Shea butter production is an energy consuming activity that would be too stressful for older persons to engage in hence the predominance of young persons in the business. Reports by Ani *et al*., (2012) showed that the average age for shea butter processors was about 30 years. However, studies by Daniel *et al*., (2005) found that shea butter producers in their study area were generally older with over 80% of them being above 40 years old.

The results (Table 1) for the marital status of the respondents showed that most of the respondents were married with a percentage of 90.6%. The fact that almost all those involved in shea butter production were married is an indication that they engaged in it to cater for their families. The level of divorce among the respondents was very low with a percentage of 2.1%. This suggests that the family setting is closely knit. The findings agree with the results of Daniel *et al*., (2005) who reported that most shea butter producers were married. An examination of the respondents' household size showed that about 58.3% had 5-7 persons living with them, 15.6% had 8-10 persons staying with them while 9.4% had over 10. The average household size was 7 indicating that the respondents had several persons staying with them. No doubt this large number of persons staying with them can assist them in the shea butter production operation. A household size of 7 was reported for shea butter producers in Benue state by Ani *et al*., (2012).

On educational status, the result also revealed that majority of them were not literate with a percentage of 86.5% having no formal education. About 11.5% attended primary school while 2.1% had NCE. This finding suggests that most shea butter producers in the study area were non-literate with very few having formal education. This finding agrees with the report of Matanmi *et al.,* (2011) who found that most shea butter producers in their study area were not educated. Their low level of education may affect their adoption of new practices such as improved processing methods since it is asserted that being educated enables farmers to understand more easily the use of improved technologies (Tshiunza, *et al*, 2001).

Almost all the respondents interviewed were Muslims with a percentage of 92.7% (Table 1). This suggests that the study area was largely a Muslim area. Another implication of this is that the religion is not against the adherents engaging in shea butter production. The results for the major occupation of the respondents revealed that most of them were farmers. The percentage was 80.2%. Few or 7.3% were into trading as their major occupation. Shea butter production is generally not a sole or major occupation among the respondents. This is because activities of shea butter production are carried out based on the availability of fruits which is seasonal.

Table.1: Socio-economic characteristics of respondents

Characteristics	Categories	Freq	%
Age (Year)	<30	7	7.3
	30-39	56	58.3
	40-49	30	31.3
	50-59	3	3.1
	Total	**96**	**100**
Marital status	Single	5	5.2
	Married	87	90.6
	Widow	2	2.1
	Divorced	2	2.1
	Total	**96**	**100**
Household size range	4 & below	16	16.7
	5-7	56	58.3
	8-10	15	15.6
	>10	9	9.4
	Total	**96**	**100**
Educational level	No formal education	83	86.5
	Primary sch.	11	11.5
	SSS		
	NCE	2	2.1
	Total	**96**	**100**
Religion	Christianity	7	7.3
	Islam	89	92.7
	Total	**96**	**100**
Major occupation	Farming	77	80.2
	Civil service	5	5.2
	Trading	14	14.6
	Total	**96**	**100**
Production experience	1-5	76	79.2
	6-10	11	11.5
	11-15	6	6.3
	>15	3	3.1
	Total	**96**	**100**
Membership of Farm Associations	Fadama association	14	14.6
	Shea fruit association	1	1
	Ena eko kpara chizhi Cooperatives	2	2.1
	None	79	82.3
	Total	**96**	**100**

In terms of experience in shea butter production the results in Table 1 show that majority or 79.2% have been involved for 1-5 years, 11.5% have been for 6-10 years while 6.3% have been involved for 11-15 years. The average shea butter production experience of the respondents was 8 years showing that the respondents were quite experienced in shea butter production.

About 82.3% of the respondents were not members of any farm association. Also about 14% of them belonged to Fadama Association, 2.1% belonged to Ena eko kpara chizhi group while only 1% belonged to Shea Fruit Association. Membership of farm organizations has the benefit of enabling farmers' access information and capital among others (Madukwe, 2005).

Table 2 shows the benefits derived from shea butter production by the respondents in the study area. Based on the results it is seen that the major benefits the respondents derived from this business venture were better feeding of

household (46.9%), more income (43.8%), training of children (35.4%). Others included being able to save (51%), improved knowledge and skill (49%). The results suggest that the respondents are benefiting from shea butter production and this will encourage them to continue to engage in such a business venture. About 27.1% claimed their involvement in the business has helped them to know more customers which will further enhance their business. The results agree with the findings of Mohammed *et al*., (2013), who reported that shea butter producers generally engage in the business to provide their household with food, medicare and education as well as to purchase assets.

Table 2: Perceived benefits derived from Shea butter production

Benefits	Freq	%
Better Feeding	45	46.9
More Income	42	43.8
Improved Child Training	34	35.4
More Savings	49	51.0
Improve Knowledge/Skill of Production	47	49.0
More Output of shea butter	50	52.1
Improved Usage of shea butter	53	55.2
More Customers	26	27.1

The findings of the study indicated that the respondents faced serious constraints especially the hazards associated with fruit collection with a mean of 2.53, poor access to investment credit (mean = 1.94), inadequate production skills (1.97), inadequate inputs (2.00), low income (1.08), lack of government support (1.86), poor market price (1.89) and poor educational level (1.78) and limited knowledge about storage methods (1.78).

The fruit collection process is usually a very stressful activity. Because the fruits are collected from the ground the women have to constantly bend over during the entire collection duration and hand-pick them. Lack of capital did not allow the women to purchase improved processing technology. Moreover, they claimed they did not even know how to operate the technology even if available. They lamented that the price paid for the shea butter in the market was not encouraging and this perpetually kept them in poverty.

Inaccessibility of improved processing methods, high cost of equipment and lack of access to credit have been identified as important constraints facing shea butter processors by Issahaku *et al*., (2011). Holtzman (2004) equally noted that finance constitute a major impediment to improvement in shea butter production. According to Esinam (2010), shea butter producers mentioned lack of capital, inadequate equipment, inadequate water facilities, high cost of fuel wood and production difficulties due to the use of largely manual production tools as the major constraints of processing activities. Furthermore, the marketing constraints of the women, also included inadequate buyers, fluctuation in market prices, high cost of transportation among others. The results show that the respondents faced only two serious constraints, namely hazards of shea butter fruit collection and inadequate inputs with means of 2.53 and 2.00 respectively.

Table 3: Constraints faced by women in shea butter production in Niger State

Constraints	Mean	SD
Hazards faced during fruit collection	2.53*	.68
Poor access to investment credit	1.94	.83
Poor production skills	1.97	.83
Inadequate inputs (improved processing technology)	2.00*	.81
Low income level	1.80	.84
Lack of Government interest	1.86	.80
Low consumer patronage	1.71	.82
Poor market price	1.89	.81
Low level of education	1.78	.81
Lack of knowledge about storage	1.78	.71
Irregular visit by Extension Agents	1.73	.70
Discouragement from husband/religion	1.72	.82

**Serious (mean ≥ 2.00)*

Conclusion

From this study it can be concluded that shea butter production process is dominated by women with no formal education and their participation in the process was affected by or related to some socio-economic characteristics of the women. Also shea butter processing and sales is not a very lucrative business as income level is low. Nevertheless, women involvement was relatively high and income generated was of benefit to them.

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