Analysis of Melon Marketing among Women in Kabba/Bunu Local Government Area of Kogi State, Nigeria

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Abstract: This study analyzed the profitability of melon marketing among women in Kabba/Bunu Local Government Area of Kogi State. The study specifically described the socio-economic characteristics of melon marketers, identified the forms of melon marketed, determined the profitability of melon marketing and identified the constraints faced by melon marketers in the study area. A total of 120 respondents were randomly selected from four markets. Data collected were analyzed using descriptive statistics and Gross Margin Analysis. The results of the descriptive analysis showed that the mean age of respondents is 46.71. Majority (87.5%) of the respondents were married, while others were either widow, divorce or single. Furthermore, result indicates that 46.6% of the respondents had been in melon marketing for 11 - 20 years with mean years of 18.3years marketing experience. The Gross Margin analysis shows that melon marketing in the study area was profitable with #1.62 realized from every #1.00 invested. The results also shows that irregular supply, price fluctuation, lack of storage facility among others were the major constraints facing marketers in the study area. Therefore, there is need for provision of more storage facilities, establishment of regulated marketing, provision of transport facilities and relevant information for the marketers.

Keywords: Women, Melon, Marketing, Profitability, Kabba/Bunu

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1. Introduction

Egusi Melon *(Colocynthiscitrullus L)* is a herbaceous annual vegetable with trailing hairy, ridge vine which bear tendrils and lobed leaves on long petioles that belong to the Cucurbitacesae family (Agbaef*al*, 2009). Melon *(C. colocynthis)* is well known and widely cultivated in West Africa (Nigeria, Ghana, Togo and Benin) and many other African Countries for the food in the seeds (van der Vossen*et et al,* 2004). Melon canopy controls weed and run- off in newly cultivated plots (Agba, 2004). Olufemi and Salami (2006) stated that, *egusi* melon easily identifiable with the complex traditional mixed cropping systems of the humid and sub-humid tropical zone of Nigeria, as the trailing nature of its vines, alternately arranged and pinnately dissected leaves allow inter - planting at distances dictated by the number, sequence, type and combination of crops in the mixture.

Melon plays vital roles in the farming system and in the well-being of West African rural farmers as a good source of energy, weed suppressants and for soil fertilization (Asoegwu, 1987; Achigan-Dako *et al.* 2008). It is also used as mulch, leaving high residual nitrogen in the soil after harvesting. Melon is one of the most economically important vegetable crops worldwide and is grown in both temperate and tropical regions (Bisognin, 2002). A high-energy, high-protein concentrate, melon seed ideally complement Africa's prevalent diets based on starch-rich grains (for instance, rice, sorghum and maize) and roots (notably cassava, yam and potato). Melon is a vital tool against marasmus (lack of calories), kwashiorkor (lack of protein), and other

debilitations (Gurudeeban *et al.,* 2010). A traditional food plant in Africa, this vegetable has potential to improve nutrition, boost food security, foster rural development and support sustainable land care (National Research Council, 2006). Melon has been recognized as an affordable source of vitamins and micro-nutrients especially in the rural areas. There is also a prospect for use of the melon seed in the improvement of infant nutrition in view of its high protein and fat content (van der Vossen *et al,* 2004).

Almost all the big markets in Nigeria, Benin, Cameroon, Ghana, Togo, and other nearby nations sell the seed. Melon is in high demand in tropical markets, especially in the pre-urban and urban markets. It is also exported to Ethiopia and Sudan where the consumption is high and the extracted yellow oil is in high demand (Schippers, 2000). African is characterized by semi-subsistence, low-input and low-productivity (Govereh and Jayne, 2003; Gray, 2005). The melon production systems bring about income generation, household food security, livelihood, social relationships and seeds for the next cropping season. These potential /benefits have been impaired by the continuous reduction in production and productivity which characterized the Nigerian agricultural sector thereby limiting the ability of the sector to perform its traditional role of economic development (Akubuilo, 2008).

Agriculture in Nigeria is dominated by small-scale farmers who produce about 80% of the total food requirement (Fayinka, 2004). These farmers are characterized by strong dependence on agricultural labour market; little or no forms of savings, inadequate storage facilities and cultural practices adopted are highly labour intensive (Festus, 2005; Fakayode, 2008). The socio-economic and production characteristics of the farmers, inconsistent government policies, the poor infrastructural base, all interact and affect the sector, resulting in low production, high price of food items, inflation, under development and poverty. If Nigeria is ready to go back to agriculture, the problem of poverty, hunger and malnutrition could be deviated. Adequate production of most Nigerian staple crops such as cereals, yam, cassava, crops and some vegetables like melon which is consumed in many parts of the country, will contribute positively to the agricultural sector. Melon is supposed to be one of the vegetable to be produced on a very large scale and even export to some African countries like Sudan Ethiopia where the consumption is high, and the extracted yellow oil is in high demand (ffchippers,2000).The production and marketing of melon calls for a close examination of its importance. It is for this reason that this research work has to find solution to the following questions: how has melon marketing grow? How marketing function activities like sorting, packaging and so on has affect melon prices and marketing? What are the costs and returns to melon marketing? What are the constraints involved in melon production?.

2. Methodology

The study was carried out in Kabba/Bunu Local Government Area (LGA) of Kogi State Nigeria. It is located in the Western Senatorial district of Kogi State. The Local Government was created in 1991 with the headquarters at Kabba town. The LGA comprises of Oke koko, Odolu, Asuta, Egbeda, Oke-bukun, Aiyewa, Aiyetoro, Akutupakiri, Iluke, Olle-okeoffin, Aiyeteju, Kajola, Okedayo, Otu, Bolorunduro, Lodo-Okete wards. It shares boundaries with Ijumu, Lokoja, Adavi, Okehi, and Mopa/muro Local Government Areas. The people of the Local Government speak Okun as their major dialect. It has land mass of 2,748km^2. Kabba - Bunu Local Government Area lies within latitude 8°07'N and 8.117°N and longitude 6°09'E and 6.150°E. The area is in the guinea savanna zone with thick forest and it experiences wet and dry season. The wet begins from April and ends in October while the dry season is between November and March. The annual temperature varies between 27°° *and ST*^{00} with relative humidity between 30% and 40% in January and rising between 70% and 80% in July to August. The soil in the study area is predominantly sandy loam in texture. The major crops cultivated in the area are maize, cassava, yam, pawpaw, melon, citrus, oil palm, coffee and guava. Major livestock reared are swine, sheep, goat, cattle, turkey and poultry. Apart from farming the people of this area also involved in other occupation such as trading and food processing such as garri processing. They also engage in cloth weaving and soap making among others.

1.0

Multi-stage sampling technique was employed in this study. Firstly, four markets (Odogi, Oke-bukun, Kabba Central, and Odo-Ape markets) were purposively selected from the LGA among others, due to the concentration of large number of melon marketers. Secondly, thirty melon marketers were randomly selected from each market making a total sum of one hundred and twenty respondents. Primary data were used in this study. Structured questionnaire coupled with personal interview were used to elicit information from the respondents. Descriptive statistics captured objectives 1 and 2, Gross margin analysis captured objective 3 while 3-point Likert type was used to analyzed objective 4. Problems encountered by the melon marketers; Likert scale of very serious (VS), serious (s) and not serious (NS) with values of 3, 2, and 1 and a total sum of the value (6) was divided by 3 to have a mean score of 2.0. Mean score equals to or above 2.0 was considered as serious constraints and vice versa.

Gross Margin Analysis

GM=TR-TC

Return/Naria invested = TR/TC

Where GM- Gross Margin

TR- Total Revenue

TVC-Total Variable Cost

Gross Ratio (GR) - TC/ TR

GM- Gross Margin

GR - Gross Ratio

TC = Total Cost

TR = Total Revenue

Likert scale specification.

Three (3) likert type of scale was used to measure the constraints faced by melon marketers. Likert scale of very serious (VS), serious (S) and not serious (NS) with values of 3, 2, and 1 and a total sum of the value (6) was divided by 3 to have a mean score of 2.0. Mean score equals to or above 2.0 was considered as serious constraints and vice versa.

Decision Rule: Mean score of 2.0 and above was considered as common while any mean score lesser than 2.0 was considered as not common.

3.   Results and Discussion

3.1 Socio-Economic Characteristics of Respondents.

The results of the analysis of socio-economic characteristics of respondents in Table 1 showed that the mean age of respondents is 46.71. This implies that young and middle age people who were in their active and innovative ages were involved in melon marketing in the study area. Oladoja et al.(2006) supported the findings and they found out that people who are young are more prone to risk taking than the older ones. Majority (87.5%) of the respondents were married, while others were either, widow; divorce or single. Thus, the respondents were responsible people in the community and their family members could be of help during melon marketing activities. Furthermore, result indicates that 46.6% of the respondents had been in melon marketing for 11 - 20 years with mean years of 18.3years marketing experience.

Table1: Distribution of Respondents According to Socio-Economic Characteristics (n=120)

Item	Frequency	(%)	Mean
Age			
Below 30	3	2.5	46.71
31-40	23	19.2	
41-50	55	45.8	
51-60	35	29.2	
60 and above	4	3.3	
Marital status		4.1	
Single	5	87.5	
Married	105	1.7	
Divorce	2	6.7	
Widow			
Household size			
1-5	43	35.8	6.29
6-10	75	62.5	
11 and above	2	1.7	
Experience			
	20	16.7	18.33
11-20	56	46.7	
21-30	34	28.3	
31and above	10	8.3	
Occupation			
Civil servant	23	19.2	
Trading	97	80.8	
Education			
No formal education	99	82.5	
Primary	16	13.3	
Secondary	5	4.2	
Tertiary	0	0	

Source: Field survey, 2015

This result is closely related to reports by Muhammed (2010), who stated that marketing experience is very important as it helps the sellers to know the ups and downs in the enterprise: where and when to buy goods and appropriate time to sell. According to the findings in this study, 62.5% of the respondents had household size between 6-10 and mean household size was 6. This finding agrees with Adegbite (2007) who explained that household size is an important factor in any market development intervention programme. Also, children could assist their parents in the markets while carrying out other household activities. Most (82.5%) of the respondents had no formal education. This implies that the rates of adoption of improved melon marketing in the study area was very low and they held on to primitive way of carrying out their marketing activities. Thus, Nwaru and Iwuji (2005) indicated a positive relationship between education and marketing margin; this is

because education has training advantages that helps the marketers to be informed, innovative and averts risk associated with marketing,.

3.2 The Form in which the Respondents sold their Melon

Table 2 below shows the form in which the respondents sold their melon in the study area. The result shows that 78.00% of the respondents marketed a combination of melon without shell, melon with shell and grinded melon, 12.00% marketed the one without shell only, 7.00% marketed grinded melon only, while 3.00% of the respondents marketed the one with shell only. This shows that the respondents were involved in various marketing function like grading, sorting, packaging, grinding and so on in order to add value to melon for efficient marketing sake. The result also shows that grinded melon and melon without shell was mostly marketed in the study area.

Table 2: Forms of melon marketed

Variables	Frequency	Percentage
Melon with shell, unshelled and grinded	93.6	78.0%
Unshelled and Grinded melon	14.4	12.0%
Grinded melon	8.4	7.0%
Melon with shell	3.6	3.0%
Total	120.0	100.0

Source: Field survey, 2015

3.3 Costs and Returns Analysis for Melon

The cost components include costs of transport, grinding, sack/bags, and other miscellaneous costs were put into consideration to arrived at total cost of N54,221.5 as showed in Table 3. The

shows the Gross margin estimated from melon marketing in the study area. The result shows an Annual average profit of ₦433,715.79. The Gross Ratio on melon marketing in the study area is N 0.62 which indicate that the business was profitable. Also, Return/Naira invested wasN1.62; this implies that for every ₦1.00 invested in melon, ₦l .62 was realized. This implies that melon marketing in the study area was profitable. This implies that respondents can re-invest their returns back into their melon marketing activities.

Table 3:Gross Margin Analysis for melon Marketing

Item	Value/year
Revenue	
Average bag (kg)	8.73
Price (₦)	10,073
Total revenue (TR) (₦)	**87,937.29**
Variable Cost (₦)	
Cost of sack/bags	1,820
Cost of Transport	3,713.3
Cost of grinding	3,230.8
Cost of packaging	3,724.1
Cost of melon	42,333.3
Total cost (TC) (₦)	**54,221.5**
Gross profit (TR-TC)	**33715.79**
Gross ratio TC/TR	**₦0.62**
Return/naira investment TR/TC	**= ₦1.62**

Source: Field Survey, 2015

3.4 Constraint to melon marketing

Table 3.3 Distribution of Respondents According to Constraints Encountered in Melon Marketing (N=120)

Marketing problems	VS(3)	S(2).	VS(1)	Mean score	Rank
High cost of transport	10(8.3)	50(41.7)	60(50)	1.68	10th
Lack of Information	53(44.2)	46(38.3)	21(17.8)	2.27	4th
Lack of storage facility	47(39.2)	58(48.3)	15(12.5)	2.27	4th
Price fluctuation	70(58.3)	42(35)	8(6.9)	2.51	3rd
Deterioration	38(31.7)	30(25)	52(43.3)	1.88	7th
Unorganized market	46(38.3)	38"(31.7)	36(30)	2.08	5th
Inadequate capital	8(6.6)	37(30.8)	75(62.5)	4.4	11th
Lack of labour	72(60)	42(35)	6(5)	2.55	2nd
Problem of middlemen	33(27.5)	60(50)	27(22.5)	2.05	6th
Irregular supply	84(70)	27(22.5)	9(7.5)	2.60	1st
Grading problem	12(10)	48(40)	60(50)	1.63	9th
Seasonality of market For melon	33(27.5)	37(30.8)	50(41.7)	1.86	8th

Source: field survey, 2015.
All the values in parenthesis are percentages.
VS-Very Serious
S - Serious NS - Not Serious

The result in Table 4 showed that the major constraints militating against melon marketing in the study area is irregular melon supply with mean score of 2.60. Melon supply vary greatly within the season as a result of inadequate labor input during the cultivation process, disease infestation, climatic change among others, which had effect on the supply of melon. The result further shows that lack of labour with mean score of 2.55, frequent price fluctuation mean score of 2.51, the risk of price fluctuations is higher in agricultural products. The higher risk leads to higher risk premium, which adds to the marketing cost. Lack of storage facility had a mean score of 2.27, lack of information with mean score of 2.27, According to Awoyinka (2009), it was observed that Agricultural marketing information is scarce in Nigeria. Problem of unorganized market had mean score of 2.08 and problem of middlemen with mean score of2.06 were also major constraints that needs to be considered in the study area.

4. Conclusion

The study showed that melon marketing in the study area was profitable and viable, although the marketers experienced some challenges. The analysis shows that lack of information, irregular supply, lack of storage facility, price fluctuation among others had negative influence on melon marketing. Therefore, provision of storage facilities is expedient to solve the problem of irregular melon supply to the market. Relevant

government agency such as ADP should be involved in the dissemination of information on marketing to keep producers and marketers aware of improved and efficient marketing. There is need to establish melon production and marketing cooperatives in order for woman to sell their produce through group marketing practices.

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