

Marketing Of Onion in Aliero Central Market, Aliero Local Government Area of Kebbi State

Illo A. I., Kaka, Y., Hassan U., Umar S. and Bamidele, A. A.

Department of Agricultural Economics and Extension, Kebbi State University of Science and Technology, Aliero, Nigeria

Abstract: *The study was carried out in Aliero central market in Aliero local Government Area of Kebbi state to examine the marketing of onion. It examined the socio-economic characteristics of onion marketers, profitability of onion marketing, market structure and performance of the market. A purposive sampling technique was used to select 60 respondents through structured questionnaires supplemented with oral interviews to collect relevant data from the study. Descriptive statistics, gross margin, marketing margin and Gini coefficient were used to analyze the data. The result obtained showed that, all the onion marketers were males (100%) and 56.6% of them had Qur'an education. The profitability analysis showed that an average marketer incurred an average total variable cost of N 14, 472.12k and N15, 325.33k for both wholesalers and retailers respectively, which indicates that an average marketer earned N5,402.88k and N4,340.67k for wholesalers and retailers as their gross margin respectively. The problems limiting efficient onion marketing in the study area; poor transportation, large number of middlemen, inadequate storage facilities, lack of farmer's organization and pests and diseases. Therefore, there is need to rehabilitate roads, reduce fuel price, and provide storage facilities by the Government for the improvement of onion marketing in the area.*

Key Words: *Market, Marketing, Wholesaler, Retailer*

I. Introduction

Onion (*Allium cepa*.L.) belongs to the family Alliaceae, genus allium. Onion is a product to Asia and Middle East, and it is only second to Tomatoes among vegetables in world trade (Gandi *et al*, 1992). According to FAO (2004a), the world production of onion has increased steadily from about 11 million metric tons in 1969 to about 55 million metric tons in 2004 on about 3 million hectares (FAO,2004b),

The world leading producers of onion are United States of America, China, Russia and Japan. Other important producing countries include: Turkey, Spain, Brazil, Italy and Egypt (FAO, 2004c). The crop is grown primarily for its bulb while the immature ones are used as flavourings and seasoning due to its composite aromatic volatile substances (allyl propyl disulphide). Onion and its wastes are also used as livestock feeds. The leaves are highly relished by camels. The plant is used by traditional folk as medicine (Purseglove, 1978). Since introducing the production of onion in Nigeria, it has been an important commercial vegetable in the northern parts of the country where the bulk of it (onion) is grown during dry season in lowland "Fadama" as well as other irrigable area (Amans *et al*. 1990). The production of onion is of great importance (such as source of income, food and livestock feed, e.t.c) particularly in Kebbi State, which has suitable condition for the cultivation of the crop (Anon, 2009)

The production of Onion in Kebbi state has generated job opportunities for many people in the area. These include craftsmen and weavers who produce onion production equipment such as rake, watering cans, knives, jute bags, and baskets among others. The production of onion in the area also provides employment opportunities to others that are not engaged directly in dry season farming. Hired labourers are cheaply used during land preparation, transplanting, weeding and harvesting. It also provides jobs for local transporters who convey Onion from the farm gate to the market and then to various parts of Nigeria; and to the retailer who sells onion in rural markets. Onion producing farmers have double opportunities of engaging in both rain fed and irrigable crops production (such as tomatoes, pepper, maize etc). Green (1971) reported that the marketing of onion in northern Nigerian has never been organized thus, a trader can buy onion in certain part of the northern states and by transporting down south, he may obtain more than 50 percent return of what he paid for the bulbs even at the peak period of harvest. Harrison (1985) also emphasized on the marketing problems of onion in which he itemized; high cost of marketing of the crops, involvement of many middle men to the detriment of farmers and consumers, high physical losses during marketing exposure, insufficient market information to farmers and consumers, lack of grades and standards for the commodities.

Afolami (2000) implicated the middlemen on these factors which he believed to have contributed to high prices of food crops to the detriment of farmers and consumers.

Efforts to satisfy the need of consumers with respect to space and time are among the functions of marketing performed by middlemen. Pricing efficiency studies therefore, attempts to appraise the system by comparing actual prices with the ones that are generated by perfectly competitive markets (Bressler and kings, 1970).

Problem Statement

Agricultural marketing is an important area of agriculture which plays a significant role in determining farmers "level of income in terms of profits and losses (Faye, 2005).

Onion marketing in Aliero Local government Area (L.G.A.) is militated by many problems such as product damage caused by lack of good handling, transportation problem, inadequate and inefficient storaged facilities and poor marketing channels among others. It is against this background that, this study intends to investigate marketing of onion in Aliero L.G.A with a view to addressing the following research questions;

1. What are the socioeconomic characteristics of the onion marketers in the study area?
2. Is marketing of onion profitable in the study area?
3. Does the onion market in the study area have any structure?
4. What are the perception of both farmers and consumers with regards to marketing of onion in the area?
5. Who are the participants in the marketing of Onion in the area?

Objectives of the Study

The broad objective of the study is to determine the marketing of onion in the study area. The specific objectives are:

1. To describe socioeconomic characteristics of onion marketers in the study area.
2. To identify the marketing channels existing in the onion market of the study area.
3. To compare the costs and returns for producers, retailers and wholesalers in the study area.
4. To identify the problems inhibiting the successful marketing of onion in the study area.

Justification of the Study

The extensive use of onion both for human consumption and the medicinal uses have created increasing demand for onion in the study area, which has led to the search for a more effective way of marketing the crop. Owing to its high demand there is a need to meet this demand.

Although several studies have been conducted on the marketing of onion in different areas of kebbi state, not enough had been done on the study area, purported to be the major producing point in the state. The importance of onion in human diet cannot be over emphasized. However, the product is highly perishable hence, the need for adequate marketing facilities and efficient transportation mechanism that will reduce losses from the farm gate to the consumer door step.

The middlemen are unavoidable participants in marketing, generally. Therefore, their activities are known largely to influence the prices of the products. In view of this, the study aims at examining the costs and returns incurred by the middlemen compared to what the farmers receive. The findings at this research would also be useful in generating information on the marketing systems of onion in the study area, which can alleviate some problems encountered by traders and producers.

II. Methodology

The Study Area

The study was conducted in Aliero central market, Aliero Local Government Area of Kebbi state, Nigeria. The area is located on latitude 12°6' to 42'N and on longitude 4°7' to 6'E of the equator. It has a total area of 412 square kilometers with an estimated population of about one hundred and twenty-five thousand, seven hundred and eighty three people (125,783) (NPC,2006). It is located in the south east of the state, and bordered in the North-East by Gwandu Local government area, in the South-West by Jega Local Government, and in the North-West by Birnin Kebbi Local Government area.

The town enjoys a tropical climate, which is generally characterized by dry and rainy seasons. The rainfall begins in May/June and ends in October with the heaviest fall occurring in July and August. The extremely cold harmattan period is usually accompanied by dusty winds and fog with alarming intensity; prevails in November through January. The annual temperature varies considerably but usually ranges between 26° and 37°C while mean annual rainfall is about 500mm (SERC, 2000)

Majority of Aliero people engage in agriculture with emphasis on millet, sorghum, maize, onion, pepper and tomatoes production etc. Aliero community is one of the major producers of onion in Nigerian and has one of the largest onion markets in North-western Nigeria (Dogondaji *et al*, 2006).

Sampling Techniques and Sampling Size

Market information was collected through a purposive sampling technique to select two sets of onion markets (i.e wholesaler and retailer) in the study area. 30 wholesalers and 30 retailers were selected from the sample using simple random sampling technique; this gives total sample size of 60 respondents.

Data Collection

A structured questionnaire was used to gather information from the selected participating marketers (Primary data) and supplemented with oral interviews. The secondary data for the study was restricted to published and unpublished documents, text books, journals, proceedings, and internet.

Method of Data Analysis

The data obtained was analyzed using frequency count distribution; percentages and mean variations were determined using test analysis. The degree of associations between the dependant and independent variables were determined using Chi-square, Pearson Product Moment Correlation and t-test. The data collected from the study was subjected to statistical analysis

Specification of the Tools of Analysis

The following tools were used for the analysis;

1. The descriptive statistics technique, such as frequency and percentage table were used.

$$\text{Percentage} = \frac{\text{No of observation}}{\text{Total no of population}} \times 100$$

2. Gross margin was used to determine profitability of onion marketing

i.e $GM = GI - TVC$

Where: GM = Gross margin

GI = Gross income

TVC = Total variable cost

3. Gini co-efficient was used to analyze market structure

i.e $G I = 1 - \sum x_i Y_i$

Where: G = Gini co-efficient

I = constant

x_i = percentage of sellers in the class of i th markets.

Y_i = cumulative percentage of seller in the i th classes

III. Result And Discussion

Socio-economic characteristics of the respondents

Gender of the respondents

Table 1 shows the gender distribution of the onion markers in the study area. Table I reveals that 100% of the markers are males. This could be attributed to the fact that males are mostly involved in farming and marketing of the agriculture products in the area. This statement is in accordance with the findings of Chinyere (1993) who reported that rural female farmers are not statistically identified as an active population in farm operations. As a result, their productive economic roles are regarded as part of their domestic and reproductive roles.

Table 1: Distribution of Respondents According to Gender

Gender	Frequency	Percentage (%)
Male	60	100
Female	0	0
Total	60	100

Source: Field Survey 2012

Marital status of the respondents

Marital status classifies respondents as married, separated, divorce, widow, widower, or single. Marital status may likely influence the amount of available labour for onion marketing. Table 2, reveals that most of the onion markers interviewed in the study area are married, constituting 76.6% of the population and 23.3% are single while there were on percentage for divorced, window. The reason for higher percentage of the married people engaging in onion marketing could be to generate income so as to adequately cater for the welfare of their family. The high population of the married people also could be attributed to the tradition of the people in the area which allows or permit early marriage for their children in their early age. This result agrees with

findings of KARDA, (1998) which reported in a socioeconomic/income assessment study of National Fadama Development Project in Kebbi Kebbi State that all the respondents were male and married. Distribution of respondents according to their marital status is presented in table 2.

Table 2: Distribution of the respondents according to marital status

Marital Status	Frequency	Percentage
Married	46	76.6
Single	14	23.3
Divorce	0	0
Widower	0	0
Window	0	0
Total	60	100

Source: Field survey, 2012

Age distribution of the Respondents

Ogunfowura *et.al.*(1973) reported the age of farmers as one of the factors that determine the production level. The age of an individual determines his level of responsibility and efficiency with which he does his work. Table 3 reveals that 43.3% of the respondents fall between the age brackets of 21-30 years. This could be as a result of the fact that they are in their active working age. It could also be said that respondents in these age group tend to provide more effort by partaking in onion marketing. Therefore, they are mostly engaged in marketing activities in order to earn their living as indicated in Table 3 below.

Table 3: Distribution of the respondents according to age

Age	Frequency	Percentage
10-20	0	0
21-30	26	43.3
31-40	25	41.6
41-50	9	15
51& above	0	0
Total	60	100

Source: Field Survey,2012

Family size of the respondents

Household size in Nigerian is an indication of the available labour force to most farmers, factors conditioning the level of production and productivity of peasant farm family are therefore, the composition and size of their family (Abdullahi, 2002). Table 4 reveals that the largest family size of the respondents in the study area is 6 -10 family members, constituting 48.3%, while the smallest family size of 11 & above range made up 6.6%. The family size range of 1-5 has 45%, because majority of the group members are single and some were newly wedded. It was also observed that family labour is one of the major source of labour in the area, hence a reason for the high percentage in the 6 -10 family size.

Table 4: Distribution of the respondents according to family size

Family size	Frequency	percentage
1-5	27	45
6-10	29	48.3
11& above	4	6.6
Total	60	100

Sources: Field Survey, 2012

Educational level of the Respondents.

Attainment of education was found to have a positive relationship with the individual's attitudes towards change agents and as such favourable attitude to innovativeness. The level of education of respondents enhances the assimilation and adoption of new agricultural innovation, including marketing. Table 5 reveals that majority of the respondents have Quranic education i.e 56.6% of the total population, while 43.3% have western education (i.e primary, secondary and Tertiary). The finding implied that almost all the farmers had attained one type of education or the other. This finding is in accordance with Okwu *et al* (2007) who reported that an individual's level of education was found to affect his or her access, comprehension and adoption of modern agricultural practices (including marketing).

Table 5 distribution of the respondents according to the level of education

Level of Education	Frequency	Percentage
Primary Education	18	30
Secondary Education	6	10
Tertiary education	2	3.3
Quranic education	34	56.6
Adult education	0	0
Total	60	100

Sources: field Survey, 2012

Mode of transportation of onion produce

Onion producers and marketers in the study area use various means in conveying their produce either from farm gate to central market or from stores to the central markets. The various means used by onion producers and marketers are presented in table 7, which reveals that 93.3% of the respondent use vehicles while 6.6% of the respondents use motor-cycles (i.e motor bikes, /okada/kabu-kabu).

Table 6 also shows that majority of the respondents convey their produce to and fro the central market by means of motor vehicles which are considered to be the most efficient means of transporting the produce not only to the market but to the various sales locations. The use of animals is negligible due to time wastage, and they are not available in large quantity as compared to motor vehicle.

Table 6: Distribution of the respondents according to the mode of transporting their produce

Mode of Transportation	Frequency	Percentage
Animals	0	0
Motor Vehicles	56	93.3
Motor Cycles	4	6.6
Other	0	0
Total	60	100

Source: Field Survey, 2012

Onion storage

Effective and efficient storage methods protect them from spoilage due to rot, pest and diseases and also make such produce always available all year round, thus meeting the demand of the consumers. Different products require different storage mechanisms depending on their shelf life. Table 7 reveals that 18.3% have access to store their produce before selling while 81.6% did not store the produce. This can be attributed to lack of storage facilities, lack of effective methods of preservation of onion for a long period of time; many of the respondents are small scale farmers that do not produce enough to store.

Table7: Distribution of respondents according to accessibility of storage facilities

Response	Frequency	Percentage
Yes	11	18.3
No	49	81.6
Total	60	100

Source: Field Survey, 2012

Average cost and returns in respect of a wholesaler

The average cost and returns is usually used in determining the profitability of the marketing of a particular commodity. Table 8 showed the average cost of onion per bag, as well as other costs incurred by the wholesaler. The total variable cost (including other costs incurred during the purchase of the commodity) is N14, 472.12. The table also showed the cost of selling the onion by the wholesaler to be at N19,875, and the gross margin (profit realised from the sale of onion) is N5,402.88

Table 8: Average cost and returns in respect of a wholesaler (per bag)

Item	Cost (N)	% of total cost
Average cost per bag	14,150	97.8
Average cost of transportation	85.42	0.5
Ave cost of loading and per bag	100	0.7
Average commission per bag	136.7	0.9
Total average cost	N14,472.12	100
Average selling price per bag	N19,875	
Gross margin	N5,402.88k	

Source: Field Survey, 2012

Average cost and returns in respect of retailers

Table 9 indicated the average cost and profit realized by the retailers during the marketing of onion. The essence of this table is to determine the profitability of onion marketing from the retailers' point of view in the study area. From table 9 the total variable costs incurred by the retailer is N15,325,33k, while the selling price per bag is N19,666k, and the gross margin realised (total profit realized by the retailer) is N4,340.67k.

Table 9: Average cost and returns by retailer

Item	Cost (N)	% of total cost
Average cost per bag	14,700	95
Ave cost of transportation per bag	250.00	1.63
Ave. cost of loading and off- loading per bag	100	0.65
Average commission per bag	275.33	1.79
Total average cost	N15,325.33	100
Average selling price per bag	N19,666k	
Gross margin	N4,340.67k	

Source: field survey, 2012

From table 8 and 9, the average gross returns of N14,472k and N15,325.33K per bag was received by a wholesaler and a retailer respectively. This gives a net income of N 5,402.88k and N4, 340.67k for the wholesaler and retailer respectively. Therefore, the difference income between the wholesaler and retailer could be due to bulk transaction of the commodity by the wholesaler as compared to the retailer who sells in smaller quantity directly to consumers.

Table 10: Distribution of onion wholesaler by monthly sales in the study area.

Sales	No of wholesaler	% wholesaler (X)	Cumulative % of wholesaler	Total of monthly salary	% of total sales	Cumulative % of total sale (Y)	$\sum XY$
1000-19,000	-	-	-	-	-	-	-
20,000-39,000	3	6.25	6.25	84,000	1.84	1.84	0.115
40,000-59,000	9	18.25	25	385,000	8.44	10.28	0.193
60,000-79,000	3	6.25	25	197,500	4.33	12.77	0.079
80,000-99,000	5	10.41	16.66	420,500	9.22	13.55	0.141
100,000 and above	28	58.33	68.74	3,475.00	76.17	85.39	0.498
Total				4,562,000			1.026

Source: Field survey, 2012

Mean value of sale = N 95,041.66

$$G = 1 - \sum X_i Y_i$$

$$G = 1 - 1.029 = \mathbf{0.026}$$

Table 11: Distribution of onion retailers by monthly sale in the study area

Sales	No of retailers	No. of retailers (X)	% of retailers	Total values of monthly sales	% of total sales	Cumulative % of total sale (Y)	ΣXY
1000-19,000	1	8.33	8.33	7,500	0.82	0.82	0.06
20,000-39,000	1	8.33	16.66	30,000	3.28	4.1	0.341
40,000-59,000	-	-	-	-	-	-	-
60,000-79,000	3	25	33.33	180,000	19.73	23.03	0.575
80,000-99,000	4	16	41	350,000	58.35	58.1	0.929
100,000 and above	3	35	41	340,000	37.80	76.15	0.190
Total				912,500			1.103

Source: Field survey, 2013

Mean value of sales = 76,041.66

$$G = 1 - \frac{\sum X_i Y_i}{\sum X_i \sum Y_i}$$

$$= 1 - \frac{1.103}{1.103} = 0.103$$

The Gini coefficient of the onion marketers as seen in tables 10 and 11 are 0.026 and 0.103 for both wholesalers and retailers respectively. The difference between these values indicates that the wholesalers were less in concentration than retailers in the study area.

The Gini co-efficient of onion marketers by wholesaler and retailers in the study area have relatively low concentration, and inefficient in the market structure. The value of Gini coefficient greater than this 0.35 is high indication of inequitable distribution of income per sale.

Problems of Onion Marketing

Onion marketing proves to be profitable at both levels, but the activity is not without its problems, the major one related by the onion marketers (50%) is poor transportation, while 8.35% for large number of middlemen, 16.6% for inadequate storage facilities, 18.3% for lack of farmer's organization, and 6.6% for pests and diseases. The problem of poor transportation could be attributed to lack of good roads linking farm sites to market places, and most farmers cannot afford the cost of storage facilities whether local or modern.

Table 12: Distribution of Marketers According to Problems encountered while marketing their Onion

Problems Encountered	Frequency	Percentage
Poor Transportation	30	50
Large number of middlemen	5	8.3
Inadequate storage facilities	10	16.6
Lack of farmer's organization	11	18.3
Others (Pest and Disease)	4	6.6
Total	60	100

Source: field Survey, 2012

IV. Conclusion

Despite the fact that onion trade is old in the study area, it is still very profitable. The study revealed that the marketing of onion is highly carried out by male marketers (100%) in the study area and majority of the respondents combine onion marketing and production as their major occupation (41.6%). The study concluded that most wholesalers engage in onion production in addition to marketing while other few source for onions directly from the producer.

Finally, the problems encountered by the respondents in the study area are in line with the general problems of agriculture marketing in Nigeria.

V. Recommendation

In views of the research findings, the following recommendations are suggested for effective and efficient marketing of onion in the study area.

1. Rehabilitation of roads linking farm sites to the market for easy transportation.
2. Government should provide modern efficient storage facilities.
3. Onion marketers and producers should form a union through which they can easily obtain loan, regulate price of onions during off seasons as well as establishing linkages with distant markets.
4. Agrochemicals should be provided by the government at subsidized rate so that producers and other marketers who engage in production can benefit.

5. The government should reinvigorate through better packaging of an all encompassing extension services in order to boost the potential of onion marketing and production.

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