



## MARKETING ANALYSIS OF CHILLI PEPPER IN KANO STATE MARKETS, NIGERIA

\*Lawal, A. T., Gaya, A. Y., Alhassan, A., Suleiman, I., Abdulwahab, F. S. and Umar, H.

Department of Agricultural Economics and Extension, Kano Uni. of Sci & Tech, Wudil

\*Corresponding Author's email: [altaofeeq2000@yahoo.com](mailto:altaofeeq2000@yahoo.com), 08035820042

### ABSTRACT

The study analyzed the marketing of chilli pepper in selected markets in Sumaila local government Kano State, Nigeria. The study focused on the socioeconomic characteristics of the chilli pepper marketers, profitability and marketing efficiency of chilli pepper as well as constraints of chilli pepper marketing. The result of socioeconomic characteristics showed that majority of the chilli pepper marketers (96.2%) were male and 46.2% were between the ages of 30-39years, and the majority of the marketers had attended various level of education in the study area which means they can read and write. The results showed that 69.8% of the sampled marketers have less than 10 people in their household. The result further revealed that 49.1% of the marketer's have less than 10 years' experience in the marketing of chilli pepper in the study area. Chilli pepper marketing was profitable venture with a net margin of 2,520.74 per 30kg of bag. Marketing of chilli pepper was found to be efficient in view of the high marketing efficiency obtained. The result revealed that the constraints faced by chilli pepper marketers were lack of uniform measure, poor credit facilities, transportation, inadequate storage facilities and poor market infrastructures. It can be concluded that pineapple marketing was profitable and efficient in the study area despite the constraints faced by the marketers. And therefore can be recommended that Construction of good road network to reduce damage of pineapple during transportation and plastics trays should be provided.

**Keywords:** Analysis, Chilli, Marketing, pepper, and Kano State

### Back ground to the study

Agricultural production plays an important role in the economic development of Nigeria. An estimated 60-70% of Nigerians live in the rural areas and majority is engaged in small scale agricultural production Okunneye, (2001); Adegboye, (2011); Akpan *et al.*(2014). Apart from contributing to the largest share of gross domestic product (GDP), agriculture is the largest non-oil foreign exchange earner, the largest employer of labour and a key contributor to wealth creation and poverty alleviation in Nigeria (Adams *et al.* 2013). Yet several problems associate the various activities that are involved in the production and marketing activities in the great enterprise. The sound management and conservation of this resources in one of the priority issues of the global strategy for sustainable development Kolosov *et al.*(2012). The pivotal role of marketing in enhancing rural income and in the overall development of any economy of the world cannot be overemphasized. In fact, one of the major functions of agricultural marketing is to bring items trade from surplus to deficit areas.

Chilli pepper (*Capsicum frutescens*) is an important agricultural crop not only because of its economic importance, but also due to the nutritional and medicinal value of its fruit, as well as being an excellent source of natural colours and antioxidants compound (Howard *et al.*, 2000). Chilli pepper is the one of the most varied and widely used foods in the world (Dipeolu and Akinbode 2008). It is the world's second important fruit vegetable, ranking after tomatoes, and it is the most produce type spice flavoring and coloring for food while providing essential vitamins and minerals (Bosland and Votava, 2000).

According to Bosland and Votava (2000) chilli pepper production has increased worldwide and this could be ascribed partly to its high nutritional value. Comparatively yield in the developing countries is about 10-30% of that in developed countries (Grubben and Tahir 2004). Nigeria is known to be one of the major producers of chilli pepper in

the world, accounting for about 50% of the African production and major areas of production are Northern Nigeria (Business day, 2007). Chilli pepper is produce in large quantities in the northern part of the country and the north supplies the bulk of the chilli pepper need for the southern parts whose production is still at small scale. Despite increasing cultivation of pepper in the south-western part of the country price fluctuations and scarcity is still common (Dipeolu and Akinbole, 2008). High potential chilli pepper producing areas of Nigeria such as Kaduna, Kano, Jigawa, Katina, Sokoto, Plateau and Bauchi state (most of which also lie within the Derived Savannah zone) produce enough chilli pepper to meet the needs of the people in the deficit areas such as southwest, that is Oyo, Ondo, Osun, Ogun, Ekiti and Lagos State (Adigun 2001).

This distribution of chilli pepper over time in Nigeria has helped in facilitating its availability even in those areas that pepper are not heavily produced. Some of the major distribution channels employed by chilli pepper marketers in Nigeria generally follow the normal chain of distributive trade from the producers to the wholesalers, passing through the retailers and lastly to the final consumers. According to Udegbe *et al.*, (2012), marketing of agricultural produce such as chilli pepper consist primarily of moving the produce from the production sites to points of final consumption. In this regard, the market performs exchange functions as well as physical and facilitating functions involves buying, selling and pricing, while transportation, product transformation and storage are physical functions. Financing, risk bearing and marketing information facilitate marketing. The general objective of the study is to analyze marketing of chilli pepper in Sumaila local Government, the specific objectives are to: describe socioeconomic characteristics of chilli pepper marketers; determine the cost and return associated with chilli pepper marketing; determine the efficiency of chilli pepper marketing and describe the constraints associated with chilli pepper marketing in the study area.

**METHODOLOGY**

**Study area**

Sumaila local government is one of the forty four (44) local governments in Kano State, with 80 km south of Kano city and is bounded on the east coast by Albasu local government on the west by Kibiya to the north by Garko and to the south by Ningi local government of Bauchi State with the population of 253,661 according to 2006 census. The local government comprise of one (1) district and about (27) villages head and eleven (11) wards. The study area lies in the Savannah region with two distinct seasons, dry and rainy season.

**Sampling techniques**

Two stage sampling were used for the study, in the first stage two (2) markets were purposely selected based on concentration and intensity of chilli pepper marketers, the market were Dagora and Magami. In the second stage a simple census (numeration) of the marketers were conducted in both markets in which 106 marketers were selected randomly when calculated with Yamane formulae 1967. In Magami market there are 110 marketers of chilli pepper and

118 in Dagora market in which 52 respondents found in Magami market and 54 in Dagora market making 106 respondents respectively. And the research was conducted solely on retailers since all the marketers in both markets were retailers.

$$n = \frac{N}{1 + Ne^2}$$

So for Magami market

$$n = \frac{110}{1 + 100(10/100)^2}$$

$$n = \frac{110}{1 + 110 \times 0.01}$$

$$n = \frac{110}{2.1} = 52$$

For Dagora market

$$n = \frac{118}{1 + 118(10/100)^2}$$

$$n = \frac{118}{1 + 118 \times 0.01}$$

$$n = \frac{117}{2.18} = 54$$

**Table 1: Sampling frame and sample size of the chilli pepper marketers in Magami and Dagora markets**

Markets	Sample frame	Sample size
Magami	110	52
Dagora	118	54
Total	228	106

**Method of Data Collection and Analysis**

The data for the study were collected from the primary source and was collected using structured questionnaire. The questionnaire was structured to reflect the objectives of the study. It contains sections where questions were asked on the objectives of the study such as socio economic characteristics, marketing margin, profitability, marketing efficiency and problem encountered and other relevant information on the marketing of chilli pepper in Sumaila Local Governments Area of Kano State. The data for this research was analyzed using descriptive statistics, marketing margin and efficiency of chilli pepper marketers.

**Analytical Techniques**

**Descriptive statistics**

These are concerned with scientific methods for summarizing presenting and analyzing data as well as drawing valid conclusions and making reasonable decision on the basis of such analysis. This will be done with the aid of mean, percentage, frequency distribution etc.

Mean; this is the sum values in the data group divided by the number of values it is the most useful and fundamental measures of location.

$$\bar{X} = \frac{\sum fx}{\sum f}$$

Percentage; this is the proportion obtained by dividing the number of observations in each class by the total number of observations multiplied by a hundred

$$\text{Percentage} = \frac{\text{actual change}}{\text{Original amount}} \times 100 \dots\dots\dots (1)$$

Frequency Distribution; this is an organized display of data set which falls into each mutually exclusive class. Therefore for easy comprehension of findings of this research and its contribution to knowledge it will be to grouped data in the form of frequency distribution tables, bar charts, pie charts and percentage tables.

**Marketing Margin Analysis**

This refers to difference in price paid for a commodity at different stages in marketing. Therefore the marketing margin of the chilli pepper marketers is the difference between the price paid by the consumers and that received by the producer.

$$MM = \frac{\text{Selling price} - \text{supply price}}{\text{Selling price}} \times 100 \dots\dots\dots (2)$$

Where MM=Marketing Margin for chilli pepper marketers

$$\text{Net margin (NM)} = \text{TR} - \text{TMC} \dots\dots\dots (3)$$

Where TR=Total revenue, TMC=Total market cost.

**Return/Naira Invested**

The return per naira invested will be used to determine cost and return of chilli pepper marketing in the study area. It is represented as;

$$\text{Return per naira} = \frac{MN}{TMC} \times 100 \dots\dots\dots (4)$$

Where NM=Net margin  
TMC=Total marketing cost

**Marketing Efficiency**

Marketing efficiency is the maximization of out-input ratio. The output connotes consumer’s satisfaction or utilities created in a marketing system, while the inputs are the different resources used. The cost is measurable but consumer’s satisfaction or benefits cannot be easily measured. Despite this set back, it has been widely used to measure market performance. The efficiency of chilli pepper marketing in the study area will be measured using this model. The model is specified as

$$ME = \frac{\text{Value added by marketing}}{\text{Cost of marketing services}} \times 100 \dots\dots\dots (5)$$

Where; ME=Marketing efficiency  
Value added by marketing=retail price at consumers level less than producers price  
Cost of marketing service=service cost of performing various marketing  
The decision rule is that if; Marketing efficiency (ME) >100 implies positive return to business.  
While if Marketing efficiency (ME) <100 implies negative return to business.

**RESULTS AND DISCUSSION**

**Socioeconomic Characteristics of Chilli Pepper Marketers**

The socioeconomic factors considered in this study include age, sex, marital status, household size, education level, and marketing experience. The distributions of marketers according to their socioeconomic characteristics are presented below.

**Table 2: Distribution of Chilli pepper Marketers according to their socio-economic variables (Quantitative)**

Variables	Frequency	Percentages
<b>Age (Years)</b>		
20 – 29	14	13.2
30 – 39	49	46.2
40 – 49	28	26.4
50 – 59	10	9.4
60 – 69	5	4.7
<b>Total</b>	<b>106</b>	<b>100</b>
<b>Household size</b>		
1 – 10	74	69.8
11 – 20	27	25.5
21 – 30	4	3.8
31 – 40	1	0.9
<b>Total</b>	<b>106</b>	<b>100</b>
<b>Marketing experience</b>		
1 – 10	52	49.1
11 – 20	38	35.8
21 – 30	14	13.2
31 – 40	2	1.9
<b>Total</b>	<b>106</b>	<b>100</b>

Source: field survey 2020

**Age distribution of chilli pepper marketers**

The age distribution of different respondents is important to identify the character of their business operations. The result presented in table below revealed that 46.2% of the marketers were within the age range of 30-39 years, this shows that the marketers were strong and can participate fluently in marketing activities. This is important because as youth, they may be willing to assume greater risk in anticipation of high returns than older ones that are often more risk averse. This means that the enterprise was dominated by younger ones who are more active and strong.

**Household size of the marketers**

Household is simply a social unit, not necessarily living together, comprising of one or more people who benefits

from a specific source of income. The result of the household size in the study revealed that, majority of the marketers (69.8%) had household size that ranged from 1-10 persons, followed by 11-20 with 25.5%, then 21-30 with 3.8% and household size within the range of 31-40 having 0.9%. The household size affect the managerial of marketing through understanding of more responsibility in terms of high number of population in household size which lead to spending most of the earning/profit to family instead of expanding the capital, It also determines the size of marketing either big or small. The result implies that most of the marketers had moderate household size which may be due to the variation in family size may be due to the polygamous nature of most of household in the study area due to culture and religion in

their households and this tallies with (Muhammed, 2012) who found that the mean household size in the Sahel savannah zone of Nigeria was 10.

#### Marketing experience of chilli pepper marketers

Marketing experience is an idea or knowledge that marketers have in terms of management and analysis of marketing activities with regards to chilli pepper. The experience of the surveyed chilli pepper marketers shows that 49.1% of chilli pepper marketers had 1-10 years followed by 35.8% which is in range of 11-20 years, then those that have experience of

21-30 years has a 13.2% and the ones that are within the range of 31-40 years has only 1.9%. The result suggests that majority of the chilli pepper marketers in the area are fairly new entrants into the business. It is generally expected that productivity increases with years of experience. Experience in marketing is a key factor in marketing efficiency, margin, and the longer the years of marketing experience, the more exposed the marketer becomes and the more efficient and effective the marketer is expected to be in allocation of resources (Nwaogu, 2006).

**Table 3: Distribution of Chilli pepper Marketers according to their socio-economic variables (Qualitative)**

Variables	Frequency	Percentages
<b>Sex</b>		
Male	108	96.2
Female	4	3.8
<b>Total</b>	<b>106</b>	<b>100</b>
<b>Marital status</b>		
Single	11	10.4
Married	93	87.7
Widow	2	1.9
Divorce	0	0.0
<b>Total</b>	<b>106</b>	<b>100</b>
<b>Level of education</b>		
Primary	31	29.2
Secondary	22	20.8
Tertiary	4	3.8
Vocational Education	3	2.8
Islamic Education	46	43.4
<b>Total</b>	<b>106</b>	<b>100</b>

Source: field survey 2020.

#### Sex distribution of chilli pepper marketers

Sex refers to the two main categories (males or females) into which humans and other living things are divided. The sex distribution of chilli pepper marketers show that the majority of chilli pepper marketers were male with 96.2%, while females constituted only 3.8%. The result implies that, men are dominant in the marketing of chilli pepper. This is in line with the finding of Lenka *et al.*, (2006) who reported that men are more in to marketing of agricultural produce than women in the far North of the country.

#### Marital status of the marketers

Marital status refers to a person's situation with regard to whether the person is single, married, widowed or divorced. The result of the marital status of chilli pepper marketers showed that the majority of the marketers (87.7%) were married, 10% are single and 1.9% were widows. The high percentage of chilli pepper marketers agreed with Tura *et al.*, (2010) who in their findings reported that most of Nigerian rural people are married at the age of twenty-twenty five years. Research revealed that marital status to some extent influences the population of marketers for marketing purposes because the marriage institutions possess some restrictions as regard to which marketer is responsible and trustworthy. vement.

#### Education level of chilli pepper marketers

Educational background refers to the act or process of acquiring knowledge, especially systematically. The result of education level of the respondents shows that 43.4% of chilli pepper marketers attend Islamic schools, were 29.2% of the respondents had only primary education, about 20.8% had secondary education, and 3.8% had tertiary education, while 2.8% attend vocational school. This indicates that the

marketer's educational level is high. This high education of chilli pepper marketers in the study area implies that the marketers would be better exposed to more reliable information sources and good decision making in their marketing activities.

#### Distribution of marketers based on source of income

Source of income simply means where a person's money is coming from. The result reveals that 50% derived their source of income from marketing of chilli pepper, 33% were farmers, and their major source of income was farming, 11.3% of the marketers derived the major income from civil service, and the remaining 5.7% were Traders. The result shows that 50% of the marketers depend heavily on chilli pepper marketing. This is in line with the findings of Ddungu, (2015) which implies that majority of agricultural marketers do not engage in other occupations.

#### Profitability and efficiency of Chilli pepper marketing

The profitability analysis of chilli pepper marketing is presented in Table. The average chilli pepper purchase price was 24,230.46, average cost of transportation was 263.23, average cost of loading and offloading 93.53, average cost of labour of each 30kg of bag was 312.41, average cost of empty bag was 220.23, average tax was 46.36, and finally average cost of storage was 44.25. The average total cost incurred in chilli pepper marketing was obtained from the summation of the average variable cost named above which was found to be 25,210.74 and the Net Margin was found to be 2312.62. This implies that chilli Pepper marketing in the study area was profitable since it is believed that if a business can recover its variable cost, then it is capable of continuing in the short run.

**Table 4: Profitability and efficiency of the marketing**

Items	Average amount in N (30kg bag)
Average selling price of chilli pepper	27,523.36
<b>Variable cost</b>	
Chilli pepper purchase price	24,230.46
Transportation cost	263.23
Cost of loading and offloading	93.53
Cost of labour	312.41
Cost of empty bag	220.23
Taxes	46.36
Cost of storage	44.52
<b>Total variable cost</b>	<b>25,210.74</b>
<b>Marketing margin</b>	<b>12.00%</b>
<b>Net margin</b>	<b>2,312.62</b>
<b>Return per naira invested</b>	<b>0.10</b>
<b>Marketing efficiency</b>	<b>9.17%</b>

Source: field survey 2020.

#### Constraints associated with chilli pepper marketing

The problems faced by chilli pepper marketers in the study area were ranked according to the magnitude of the problems faced by the marketers (Table 5). Lack of uniform measure constitutes about 90.6% of a problem faced by the chilli pepper marketers in the study area. After that, the second problem faced by chilli pepper marketers in the study area was poor access to credit which constitute of 83%. Furthermore, poor transportation facilities and high cost of transportation was complained by 73.6% of the sampled marketers. About 58.5% of the respondents assured that the inadequate storage facilities chilli pepper were the fourth constraint faced by the marketers. Finally, the least severe constraint faced by the marketers was inadequate market infrastructure with 40.6% respectively.

**Table 5: Constraints of chilli pepper marketing**

Constraints	Frequency	Percentages	Rank
Lack of uniform measure	96	90.6	1 <sup>st</sup>
Poor credit facilities	88	83.0	2 <sup>nd</sup>
High cost of transportation	78	73.6	3 <sup>rd</sup>
Inadequate storage facilities	62	58.5	4 <sup>th</sup>
Poor market infrastructure	43	40.6	5 <sup>th</sup>

Source: field survey 2020.

\*Multiple responses recorded

## CONCLUSION AND RECOMMENDATIONS

### CONCLUSION

Based on the findings of the study of chilli pepper marketing in Sumaila local government Kano State, Nigeria was a profitable and efficient enterprise, there were various factors which need attention, the factors were also constraints to chilli pepper marketers in Sumaila local government. The major constraints militating against the marketers in the study area was standard unit of measurement, poor credit facilities, transportation, inadequate storage facilities and inadequate market infrastructure. Therefore to ensure improved performance of chilli pepper marketing in Sumaila local government, there is a need of policies by government that terminate the constraints at various level.

### RECOMMENDATIONS

1. There is a need of room for marketers to improve their technical skills in marketing of chilli pepper in order to ensure that the marketing system becomes more profitable.
2. There is a need for the provision of storage facilities by the government and other stakeholders.
3. There is a need to provide credit facilities in the form of soft loan to chilli pepper marketers, which will enable the small scale marketers to increase their sales volume and enjoy economy of scale.

4. There is a need of construction of road by government in order to reduce the transportation cost which could translate in reducing marketing cost.

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