Spatial Profit Differential of Yam Marketing in Gombe Metropolis, Gombe State, Nigeria.

Hamidu K.[1*], Adamu Y.[1] and Mohammed S. Y.[1]
Department of Agricultural Economics and Extension, Faculty of Agriculture, Federal University Kashere,
P.M.B 0182, Gombe State – Nigeria.
[*]Correspondence Email:ummuiees@gmail.com (+2348039122692)

Abstract

The study examines the spatial profit differentials of yam marketing in Gombe metropolis. Primary data were collected using questionnaires which were administered to 40 randomly selected respondents, 10 from each selected markets. Farm budget model was used to analyse the data. The result indicated that 60% of the respondents were within the age bracket of 21 to 40 years and the literacy level of the respondents was moderate, where those with primary and secondary education constituted 25% each out of the total respondent. The highest profit was realised in Pantami market with N19.2/tube and the lowest was in Gombe Old market with N32.5/tube. The major constraints to yam marketing were insufficient capital with 32.5 percent while high cost of transportation and poor storage facilities constituted 25% each. It was therefore recommended that appropriate means of products preservation and famers should form associations in order to have access to loans which would boast yam marketing.
Keywords: Spatial, Differential, Marketing, Yam

Introduction

Yam *Dioscorea species* of genus *dioscorea* and family *dioscoreacea* . This thick, tropical-vine tuber crop is native to warmer region of both hemisphere and it is popular in Africa, the West Indians and part of Asia, South and Central America. By virtue of its excellent palatability, it's a high value crop. Yam is cultivated throughout the tropics and in part of the sub-tropics and temperate zone. In West Africa and New Guinea, yam is a primary agricultural commodity. Yam is one of the important tuber crops which contributes in both food security and economic development of all African countries and the world at large. The production of the yam is 51.4 million tonnes per year in the world out of which Nigeria account for an average of 36.2 million tonnes, Ghana for 3.6 tonnes and coted'ovore for 4.8 tonnes,(NEPC, 2008).

The Nigerian government has been making effort to boost agriculture as an alternative source of revenue. The Nigerian Export Promotion Council in collaboration with other state government has designed appropriate means of packaging yam for export to United Kingdom. About 73.5 metric tonne of yam value at about £30,000 equivalent to N7.23million was exported from July to December, 20004. The agency notes that although Nigeria is rated as the largest producer of yam in the world, it has not made much significant impact in the export trader (Izekor *et al.,* 2010).

Some founded project, therefore seeks to tackle the challenges helping in the development of a framework for yam research and development in West and central Africa. Yam is second to cassava as the most important tropical root crop. It is a stable crop in many parts of Africa and South-east Asia. Yam is a significant food crop and commercial crop accounting for over 20%, 8.1% and 4.6% of the total dietary intake in the kingdom of Togo, Solomon and New Guinea respectively. Apart from its importance as a source of food and income, yam also plays a significant role in the socio-cultural live of some producing region in most West African states as justified in New Yam Festival in West Africa.

Problem Statement

Transportation cost of yam from southern states of Nigeria, where it's been cultivated in large hectares, affects the availability of it in the market and it plays a significant role in determining the price of yam. The marginalization and demand of yam product in different yam markets in Gombe metropolis which may tend to be a major factor that enables the suppliers to know the quantity of yam that can be supplied to the marketing. The efficiency of yam storage for marketing and consumption is also a thing to consider. Storage of yam is a

problem to the marketers because it can easily become a rotten especially when it is not in high demand and not properly kept. Demand for yam in Gombe metropolis is very high given the fact that it is eaten boiled, fried and pounded in homes and restaurants. This is an indication of a potential market for the produce, which leads to the study of spatial profit differential of yam marketing in Gombe metropolis.

Research Questions

The study attempted to answer the following questions:

1. Is the marketing of yam profitable in the study area?

2. How different are the prices of yam between the markets in relation to the transportation

   costs between the markets?

3. What are the problems of yam marketing in the study area?

Justification of the Study

Yam is one of the most popular and widely consumed foods in the world, it plays an important role in the diet of many different countries, among which are South America, Africa and West Indians. In 2004, global yam production was almost 47 million metric tonnes, 96% of which Africa is the producer. And Nigeria alone accounts for about 70 percent of the world production. It is the second most important root/tuber crop in Africa with production reaching just under one third level of cassava. More than 2.8million hectares of the current global area yam under cultivation is in sub-Saharan Africa, where the mean gross yield is 10 tonnes per hectares in Asia, the production yield for 2004 stood at 226,426 metric tonnes (IITA, 2004). However, the fast growing population of the countries provides a continuous and increasing demand for the product. This means that there is a potential good market for yam in Gombe metropolis. This potential can only be realized if the producers are to secure price advantage through efficient marketing of the product. It is there for necessary to understand how the marketing of yam is presently done. And the constraints that are associated with it, with recommendations of how to tackle them.

Objectives of the Study

The main thrust of the study is to determine the spatial profit differential of yam in Gombe metropolis. The study is also specifically: to determine:

i. To determine the profitability of yam marketing in the study area.

ii. To determine the marketing margin of the yam in the study area.

iii. To identify the constraints to yam marketing in the study area.

iv. To suggest possible solutions to the problems.

Methodology

The Study Area

The study was conducted in Gombe metropolis, Gombe State of Nigeria. It is located on latitude 10^0 11N and longitude 11^0 11E. It is in the north eastern geographical zone of Gombe state. It has two distinct seasons dry and wet, the dry season begin in October and end in April (7 month). The wet season lasted for five month (from May -September). The mean annual rainfall varies from 600-1200mm, the temperature ranges between 18.33°C-32^{0}C . The vegetation of the area is open savannah grass land with concentration of wood land in the south-east and south-west (GSADP, 2006).

Sampling Procedure

Resources constraint resulted to the impossibility of whole coverage of Gombe metropolis. Therefore, four markets were purposively selected which are Gombe Main Market, Gombe Old Market, Pantami Market and Nasarawo Market where there are yam marketer in those markets in the study area. Fourty (40) yam marketers were randomly selected for the study, with ten (10) from each market by means of balloting.

Types and sources of Data

Primary and secondary data were used in study. Primary data were collected using questionnaires from the yam marketers. Relevant information related to yam marketers and marketing such as age, sex, marital status, educational level which are their socio-economic characteristics were collected. Costs which involves transportation, storage and market levy were also collected. Revenue, selling prices and problems that were related to the study were collected too.

Data Analysis

The data collected were analysed using descriptive statistics which consist of frequency, distribution and percentage for the socio-economic characteristics and constraints. While marketing margin was used to determine spatial profit differential of yam in the study area.

Where marketing margin (MM) can be calculated as follows:

$$MM = \frac{selling\ price - supply\ price}{selling\ price} \times 100$$

Results and Discussions

Socio-Economic Characteristics of the Respondent

The socio-economic characteristics of the respondents of the yam marketers were presented in the tables below with their discussion.

Age of the Respondents

 Age plays a significant role in yam marketing in the study. It is a determinant factor in adoption of new technology and also the survival or continuity of yam marketing is depended upon it.

This socio-economic characteristic of yam marketing is described in Table 2 below.

Table 1:   **Distribution of Respondents based on their age**

Age	Frequency	Percentage
21-30	10	25
31-40	15	35.5
41-50	11	27.5
51-60	4	10
Total	**40**	**100**

 Source: Field Survey, 2013.

 The Table 1 above shows that an appreciable number of yam marketers fall within the age of 31-40 years which represents 37.5% of the total respondents. While these that fall within the range of 41-50 and 21-30 years constituted 27.5% and 25% respectively. And only10% falls within the range of 51-60 years. Therefore, about 62.5% of the respondents were young, who are in their economically active age. This is in line with Alabi, Omotogba and Kadir, (2007) and Rahma, Ogungbile and Tabo, (2002) who are with the view that middle- aged

normally use to contribute positively production and marketing. And this is because they adopt innovations easily than older once, as shown here where the marketers with age 51-60 constituted only 10% of the total number of the respondents in the study area. This agrees with Obeta and Nwagbo, (1991) who believed that youths are more ameable to new ideas and risk.

Constraints to Yam Marketing

In yam marketing, there are some constraints that the marketers use to encounter. These are presented in Table 2 and discussed

Table: 2 Constraints to yam marketing

Constraints	Frequency	Percentage
Poor Storage Facilities	10	25
Insufficient Capital	13	32.5
Irregular Marketing	7	17.5
High Cost of Transportation	10	25
Total	**40**	**100**

Source: Field Survey, 2013.

Table 2 shows that 32.5% of the total respondents were faced with problem of insufficient capital in yam marketing. Those with lack of good storage facilities and high cost of transportation as problem constituted 25% each. While irregular marketing with only 17.5% of the total number of the respondent. This implies that insufficient capital is the major constraint to yam marketing in the study area. As agreed by Inuwa *et al.,*(2011) who said that cost associated with marketing of agricultural product is a major problem in marketing of agricultural produces.

Spatial Profit Differential of Yam Marketing

 The spatial profit differential of yam marketing deals with various market locations, average purchase price, average selling price, average marketing cost, average profit and as well as marketing margin of the four selected markets in the study area as presented in the Table below with its explanation.

Table: 3 Spatial Profit Differential Yam Marketing in (N/Tuber)

Market Location	Average Purchase Price	Average Selling Price	Average Variable Cost	Average Profit	Marketing Margin
Pantami mrkt.	160	191	13.3	19.2	16.2
Gombe Main mrkt.	167	182	13.7	16.3	16.5
Nasarawo mrkt.	154	18.5	17.5	15.5	17.5
Gombe Old mrkt.	157	187	14.7	14.6	16.4

Source: Field Survey, 2013.

Note: (Mrkt) means Market

The results in the table above indicated that marketers in pantami market the highest average profit of N19.2 and lowest average variable cost of N13.3. Gombe Main market was second with average profit of N16.3 while the average variable cost was N13.7. Followed by Nasarawo market then Gombe Old market that had N15.5 and N14.6 as average profit respectively. With their average variable cost of N17.5 and N14.7 respectively.

In comparison of the four (4) selected markets in the study area, the result shows that the maximum average selling price and as well as the average profit were obtained in Pantami Market. Mean while, the lowest average selling price with maximum average profit was obtained in Gombe Main Market, this occurs due to the high number of wholesalers and participants in the market. The implication of this is that yam marketers would make more profit in Pantami Market than in any other one among the selected markets in the study area.

Conclusion

The study was designed to evaluate the spatial profit differential of yam marketing in Gombe metropolitan markets. Yam marketing is profitable and marketers will realize higher profit in Pantami Market than any other markets among the once selected in the study area. To overcome the problem inhibiting marketing of yam; marketers should explore the possibility of forming cooperative societies in order to benefit from government incentives, should be provided with information on the appropriate method of storage and preservation of yam in order to reduce infestation insects; and government should maintain subsidy on petrol and gas which will invariably reduce the cost of transportation which relates to the marketing cost.

References

Alabi,O.O, Omotogba, J.T and Kadir, S.S 2007, ' Resource use efficiencies of maize-soya beans intercropping mixture in Kachia Local Government Area of Katsina state Nigeria' *Proceedings of the 21st Annual Conference of (FAMAN) Farm Management Association of Nigeria.* Editors Aihonsu, J, Olubanjo, O.O, Akinleye, S.O and Okunneye, P.A 3rd-6th September 2007 at the College of Agricultural Sciences, Olabisi Onabanjo University, Yewa Campus, Ayetoro, Ogun State. Pp 274-279

Gombe State Agricultural Development Project (GSADP) 2006, 'Agriculture in Gombe State' *Progress Report.* Pp 25

Inuwa, M.S, Kyiogwom,A.L, Ala, A.L, Maikasuwa,M.A and Ibrahim, N 'Profitability Analysisof Rice Processing and Marketing in Kano State, Nigeria. *Nigeria Journal of Basic and Applied Science.***19**(2):293-298

Izekor, K.O and Olumese, S.O 2010, 'Determination of Yam Production and Marketing Profitability in Edo State, Nigeria' *African Journal of General Agriculture* **2**(2):35-37

Nigerian Export Promotion Counsel (NEPC) 2005, Annual Report Yam Export, Abuja, Nigeria**. 2**(1):25

Rahman, S.A, Ogungbile, A.O and Tabo, R 2002, 'Factors Affecting Adoption of ICSV 4000 Sorghum Varieties in Guinea and Sudan Savannah of Nigeria' *Journal of crop research, agro forestry and enviromental* **1**(1):1-21

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