Fresh Yam Storage Management and Gender Participation among Yam Marketers in Anambra State (Nigeria)

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Abstract. The study examined Fresh yam storage management and gender participation among yam marketers in Anambra State.The specific objectives were to: ascertain the storage methods used by the fresh yam marketers, determine gender participations among yam marketers, find out the source of fresh yam tubers in the study area and ascertain the transaction cost associated with fresh yam business. Multistage sampling techniques were used for this study. Fifteen (15) yam marketers were selected from each circle using simple random techniques and this gave a total sample size of one hundred and twenty (120) respondents. Data were collected through questionnaires. Data collected for the study were analyzed using descriptive statistics. The findings showed that majorities (75.8%) of the respondents were female while 24.2% of them were male. The average age of fresh yam marketers was 31 years while an average fresh yam marketer has a family size of 3 persons. On the other hand, majority (73.3%) of the marketers bought wholesale while 61.7% of them sold their fresh yam tubers at retail price. The average income from fresh yam business was N105483.33. However, majority (53.3%) of the respondents sourced fresh yam tubers from farm gate, while 19.2% of them sourced fresh yam tuber from Anam market respectively. In terms of gender participation among fresh yam marketers, majority (59.2%) of young men involved in land clearing and mound making while selling of fresh yam was dominated by 60.8% and 26.7% of female adults and young women respectively. Stored in a ventilated environment, regular inspection, heaping and covering the tuber with shade-thatched house and plastering the bruised tubers with mud had dominated the method of fresh yam storage used by the marketers in the study area. However, majority (22.5%) of the respondents spent between N5001-6000 on transportation per a heap of fresh yam tubers while 20% of the respondents spent between N8001-9000 on fresh yam transportation. In terms of weight per kg, the average retail price for 0.5-0.9kg, 1-2kg, 3-4kg and 5-6kg tubers were N294.12, N1148.24, N2392.94 and N4584.71 respectively. It is recommended that: the marketers need to be organized into cooperatives, through this; the marketers can have access to credits and better training from the extension service of the State's ADP on how to preserve their yam tubers against spoilage. Both the cooperative societies and the marketers are advised to pull their resources together and take advantage of economies of scale in carrying out marketing functions like transportation, loading and off-loading as concerned in fresh yam business.

Key words: fresh yam, management, gender, marketers.

Introduction

Yam *(Dioscorea*spp.) is an annual tuber and monocotyledonous crop that belongs to the Genus of over six hundred species with only ten species producing edible tuber. However, six of these edible species are cultivated in Africa and only three of them are available in Nigeria. The primary species cultivated in Nigeria are the white yam *(Dioscorearotundata*), yellow yam *(Dioscoreacayensis*) and water yam (*Dioscoreaalata*)

(Ibitoye and Onimisi, 2013: 470-475 Nigeria is the largest yam producer in the world with about thirty five million metric tons produced annually (FAO, 2008). Currently, Nigeria accounted for about 71% (26 000 000 tons) of the total world production of yam harvested from 2,760 ha (Food and Agricultural Organization) (FAO, 2002: 41-43; Ibitoye and Onimisi, 2013: 474-475). This increase in output is attributed more to the large area planted to yam than to increased productivity (Izekor and Olumese, 2010: 30-35).

The major yam producing areas in Nigeria include the middle belt (Benue, Nasarawa, Kwara, Kogi and Niger), Eastern parts of Nigeria (Anambra and Imo) and southwestern parts. The middle belt dominated yam produced in Nigeria, followed by southwestern region. The regions represent about 90% of the total world production of edible roots and tubers (Zaknayiba and Tanko, 2013: 73-80).

Yam is a major food item for millions of people in West Africa and contributes significantly to rural food security (Ile et al., 2006). Yam also provides income for semi subsistence and commercial producers.It is a source of export income for nations and accounts for about 32% of farm income earned from crops (Simpa and Nmadu, 2014: 95-105).

Gender inequality remains a problem that has characterized the Nigerian agricultural climate. In Southern part of Nigeria women are meant to do most of farm work and have ownership of the farms while in the Northern part, men do most of the farm work and ownership of farms. Given that gender roles are culture specific, it was observed that in the middle belt region of Nigeria women make ridges and mounds while in the Eastern part of the country that is certainly a job for men (Olagunju et al., 2013: 1-13). Gender differences have implication for farming responsibilities as it influences the farming activities performed. However, the contribution of women farmers in meeting this challenge of agricultural development cannot be overemphasized. Women make a significant contribution to the food production, processing and marketing of foodstuff. They provide some 60-80% of agricultural labor and are responsible for 80% of food production (Ojo et al., 2013: 1-8).

Nigeria has not yet been able to attain self-sufficiency in annual food production, this may be related to the fact that despite women's major contribution to agricultural production, their productivity is often constrained by a lack of access to productive resources and various socioeconomic obstacles which affect their productivity in the agricultural sector (Ojo et al., 2013: 1-8). Even though it has been recognized that they play a major role in food production and processing, women have more difficulty in gaining access to resources such as land, some crops that are gender specific in some areas, credit and productivity-enhancing inputs and services than men (Rahman, 2009: 61-68).

Agriculture uses combination of male and female household labor and hired labor. Hired labor in many areas of the world is solely composed of men, while most of the family labor in agriculture is often offered by women and children (Shaw, 2004). Farm operations that require a lot of energy such as land clearing and land preparation are predominantly carried out by men, while women predominantly carried out relatively lighter operations in the farm which include processing, harvesting, storage and marketing (Ojo et al., 2013: 1-8). The labor productivity of men however, tends to be higher than that of women.

In Anambra State, yam is produced in very large quantities in various local governments of the state while Ayamelum, Anambra East, Anambra west and Ogbaru are the major yam producing local government areas in the State. Yam production in

Anambra State to a large extent is dependent mainly on hired, family labour and other sources of labour. Household labour (family labour) is an unpaid form of labour and its use in yam production is the physical effort put in by family members (father, mother, children and relatives) and others living with the family to ensure that the practices required for the growth of the crop are carried out. However, to ensure adequate maintenance of farming operation for large areas of land, farmers in the state used hired labour to meet up with the time frame required to round off the farming activities in yam production (Simonyan and Obiakor, 2012: 1-16).Using other sources of labour such as communal labour, among others are just supplementary.

There is an amount of distinction between male and female roles in yam production. Land clearing, harvesting. Marketing, planting of yam produce and so on are mainly male dominated activities while the females are more often responsible for, weeding, fertilizer application, marketing, and other assisting occupation like Land clearing. Division of roles and responsibilities among the households cut across management, performance of tasks, decision-making, and ownership control over resources and distribution of benefit/product. Household priorities may be influenced by its individual members in a variety of ways which implies that certain categories of people (the elderly women, elderly men and very young children) in a household may be prohibited from engaging in some specific labour activities due to their weak nature (Simonyan and Obiakor, 2012: 1-16). With the role segment, the socio-cultural allocation of functions between male and female may or may not be consistent depending on the changes in cultural, social, economic and institutional conditions, which may occur over time with potentially critical impact on traditional household roles, opportunities, and constraints in agricultural production and Processing (Achilike, 2002).

Marketing of agricultural products has great importance in developing countries due to its potential applications in policymaking (Tiku et al., 2015: 2). The extent of market integration gives the government a direction on how to formulate polices of providing infrastructure and regulating services to avoid markets exploitation. Markets that are not integrated may convey inaccurate price information, distorting the marketing decisions of yam producers and contributing inefficient product movements. An analysis of market integration is useful for studying the degree of co-movement of price in spatially separated market. Yam marketing involves intermediaries between the producers and the consumers, who facilitate exchange among trading partners to move yam to consumers, these intermediaries function in an environment constrained by low investment in marketing and poor market infrastructure, shortage of food supply and the limited progression towards more visible market arrangements. One sure area to seek solution to food shortage is to focus attention on the marketing system with particular emphasis on the movement of agricultural product prices and an efficient marketing system will ensure that certain products are directed to area of greater demand (Tiku et al., 2015: 2).

Different indigenous knowledge systems of yam storage have been used by most cultures over time to preserve their produce after harvest. For Nigeria, in the tropical region of the world, yams can be stored in trench silos dug in the fields; left in the ridges after maturity; stored in a yam barn or on a platform. They can also be stored under a conical protective roof made from maize or millet stalk; or left in heaps on the ground (Ofor et al., 2010: 51-56). The above storage systems are for yam made for future use, depending on the intensions of the farmers. Some farmers in various locations in Nigeria grown fresh yam primarily to meet up with the people's demand within a short period. Fresh yam productions in this context are those yams planted between

November- Decembers with the sole aims to harvest freshly at the peak of raining seasons (June-August) just to meet up with people's need for yam. However, observation has shown that yams can be freshly harvested and sold immediately to marketers. The duration of the fresh yam harvested in the custody of the buyers may vary from days to days and weeks to weeks depending on the turnover rate per a marketer. To protect the life span of the yams, fresh yam marketers have adopted different storage methods across different locations in Nigeria. Therefore, it is on this ground that the inspiration of this research was born to find out the storage management and gender participation among yam marketers in Anambra State, Nigeria. The specific objectives were to ascertain the storage methods used by the fresh yam marketers, determine gender participations among yam marketers, find out the source of fresh yam tubers in the study area and ascertain the transaction cot associated with fresh yam business.

Material and Methods

The study area for this research is Anambra State. The State is presently located in the South-East of Nigeria. The State is bounded by Delta State to the West, Imo State to the South, Enugu State to the East and Kogi State to the North. It has estimated population of 4, 177, 828 million people (National Population Commission, 2006) which stretches over about 60kilometers between surrounding community. The State lies on the longitude 6^0 35E and 7^0 21E and latitude of 5.38N and 6^0 47E (Wikipedia, 2010). Anambra State comprises 21 local governments and is predominantly occupied by Igbo people who are farmers and business incline.

The target population for this study was all the Yam marketers in the State. Anambra State comprises four agricultural zones: Awka, Anambra, Aguata and Onitsha zones. Multistage sampling techniques were used for this study. In the first stage, two (2) zones out of the four zones were purposively selected due to the popularity in yam marketing; these are Onitsha and Anambra Zones. In the second stage, two blocks each from the selected zones were selected to give four (4) blocks that were used for the study. Here, Ayamelum block and Anambra East blocks from Anambra zones, Onitsha North block and Ogbaru block from Onitsha zone. In third stage, two markets each from the blocks were selected. Omor market, and Anaku market in Ayamelum block, Anam market and Igbariam market in Anambra East block, Ose Okwaodu market and Ajasa market in Onitsha North, Atani market and Ossamala market in Ogbaru block.. This gave a total of eight markets. In the fourth Stage, fifteen yam marketers were selected from each circle using simple random techniques and this gave a total sample size of one hundred and twenty respondents. Data was collected through questionnaires. Data collected for the study were analyzed using descriptive statistics.

Result and Discussion

Table 1 showed that majorities (75.8%) of the respondents were female while 24.2% of them were male. The implication is that female population dominated the male counterpart in terms of fresh yam marketing in the study area. This finding agrees with Okoedo-Okojie and Okwuokenye (2016: 1-8) who observed in their study that females dominate retail yam marketing. However, 40.8% of the fresh yam marketers were married while 21.7% of others were single. Similarly, 64.2% of the respondents were between the age ranges of 26-35 years. The average age of fresh yam marketers was 31 years. This shows that majority of the marketers were in their active age which could

bring positive results in their fresh yam marketing business. This result agrees with Alabi et al. (2005) who observed that farmers' age has great influence on agricultural business in Kaduna State with younger farmers producing more than the older ones probably because of their flexibility to new ideas and risk. An average fresh yam marketer has a family size of three persons. This implies that the family size is relatively moderate compare to other family size in agricultural production.

Majority (51.7%) of the respondents completed secondary school education while the average marketing experience was 4 years. Since majorities of the fresh yam marketers have formal education and an average, 4 years of marketing experience. It implies that they are in a better position to understand the various techniques associated with fresh yam business as well as being able to overcome some unforeseen risks in fresh yam business. On the other hand, majority (73.3%) of the marketers bought wholesale while 61.7% of them sold their fresh yam tubers at retail price. Similarly, 55.8% of the respondents were into trading as their major occupation while 22.5% of them were into farming. The average farm size of the fresh yam marketers was 1hactare. This implies that they were all small-scale farmers. This result is in consonance with the finding of Udemezue and Nnabuife (2017) which indicated that yam farmers in the study area were small-scale farmers.

Majority (49.2%) of the respondents used hired labour for their farm while 48.3% of them sourced agricultural inputs from input dealers. The average income from fresh yam business was N105483.33. This implies that fresh yam business is lucrative and needs to be improved upon to increase the livelihood of the participants. In other hand, majority (90%) of the respondents sourced credit from Isusu club while 68.3% of them sourced credit from micro-finance banks. Isusu club dominated the source of credit in the study area because it could be due to small nature of the risk associated with it as well as the convenience in terms of payment. Majority (70.8%) of the respondents have access to extension agent while 28.3% of them did not have. This implies that there are a limited number of extension agents in the study area.

Table 1. Results distribution among respondents

Variables	Frequency	Percentage	Mean
Age:			
18-25	20	16.7	
26-35	77	64.2	
36-45	23	19.2	31 years
Sex:			
Male	29	24.2	
Female	91	75.8	
Marital Status:			
Single	26	21.7	
Married	49	40.8	
Widow	15	12.5	
Divorced	19	15.8	
Separated	11	9.2	
Family Size:			
1-2	53	44.2	
3-4	67	50.8	3 persons
Level of Education:			
Non formal education	9	7.5	

Primary school Secondary school OND/NCE	39 62 10	32.5 51.7 8.3	
Marketing Experience: 1-2 years 3-4 years 5-6 years 7-8 years	 48 23 16 33	 40.0 19.2 13.3 27.5	4 years
Do you Buy in Bank?: Yes No	 88 32	 73.3 26.7	
Do you Sell to Retailers or Wholesalers: Retailer Wholesaler	 74 46	 61.7 38.3	
Estimated Income: 20,000-50,000 51,000-90,000 91,000-400,000	 39 38 43	 32.5 31.7 35.8	N105483.33
Farm Size: <1-5ha 2-3ha 4-5ha	 87 15 18	 72.5 12.5 15.0	1ha
Sources of Labour: Family Hired Exchange Personal labour	 26 59 24 11	 21.7 49.2 20.0 9.2	
Source of Input: Input dealers Other farmers Open market Saved	 58 24 16 22	 48.3 20.0 13.3 18.3	
Access to Credit: Yes No	 92 28	 76.7 23.3	
Institutional Source: Commercial bank Agric bank Micro-finance bank	 8 30 82	 6.7 25.0 68.3	
Non Institutional Source: Isusu Money lenders Personal savings	 90 21 9	 75.0 17.5 7.5	
Access to Extension: Yes No	 34 85	 28.3 70.8	
Occupation:			

Farming Trading Civil servant Pensioner	27 67 18 8	22.5 55.8 15.0 6.7	
Source: Field Survey, 2018.			

Table 2 showed that majority (53.3%) of the respondents sourced fresh yam tubers from farm gate, while 19.2% of them sourced fresh yam tuber from Anam market. Similarly, 18.3% of them sourced fresh yam tubers from Omor market while 5% and 4.2% of the respondents sourced fresh yam tubers from farmers' farm and Onitsha market respectively. In terms of ranking, 1st, 4th, and 3rd were ranked as the first three major source of fresh yam tubers. While 5th and 2nd were the least source of fresh yam tuber in the study area. Since farm gate, Anam market and Omor market were ranked as the first three major source of fresh yam tubers in the study area, it could be appropriate and just to serve as a directive and a spring board to a new person who wants to engage into fresh yam business.

Table 2. Sources of Fresh Yam Tubers

Variables	Frequency	Percentage	Rank
Farm gate	64	53.3	1st
Onitsha market	5	4.2	5th
Omor market	22	18.3	3rd
Anam market	23	19.2	2nd
Farmer's farm	6	5.0	4th

Figures in Table 3 showed that majority (59.2%) of young men were involved in land clearing activities while 40.8% of male adults were also involved. Similarly, only 12.5% and 20.8% of female adults and young women were involved in land clearing. However, 71.7% of young men were involved in mound making while 28.3% of the male adults were involved in mound making respectively.

Majority (73.8%) of male adults involved in planting of yam while only 26.7% of young men were involved in yam planting. This implies that male dominated and featured well in the activities like land clearing, mound making and planting of yam in the study area. This could be occasioned by the gender specific characterized the activities of yam production in some areas. On the other hand, majority (43.3%) of young women were involved in fertilizer application while 36.7% of young men were also involved in fertilizer application. In the same vein, 10.8% of male adults were involved in fertilizer application while 9.2% of female adults were also involved. With respect to the percentage contribution of each and every one of the participants, it implies that the contributions of male and female adults in terms of fertilizer application are supplementary. Majority (46.7%) of young women were involved in weeding of yam farm while 45.8% of female adults were involved in weeding respectively. More so, harvesting of yam is done by 55% of young men and 45% of the male adults. Similarly, loading and off-loading of fresh yam tubers were done by 85.8% and 14.2% of young men and male adults respectively. In extension, selling of fresh yam tuber was mostly done by 60.8% and 26.7% of female adults and young women, while only 12.5% of male adults were involved in fresh yam marketing in the study area. This also implies that most of the activities in yam business are gender specific to some extent if not young men would have involved in the practice. This finding agrees with the finding of

Okoedo-Okojie and Okwuokenye (2016: 1-8) which said that females dominated the activities of yam marketing in Delta State, Nigeria.

Table 3. Gender Participation among Fresh Yam activities in Anambra State

Activities	Male Adult		Female Adult		Young Men		Young Women	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Land clearing	49	*40.8*	15	*12.5*	71	*59.2*	25	*20.8*
Mound making	34	*28.3*	-	-	86	*71.7*	-	-
Planting of yam	88	*73.8*	-	-	32	*26.7*	-	-
Fertilizer application	13	*10.8*	11	*9.2*	44	*36.7*	52	*43.3*
Weeding	4	*3.3*	55	*45.8*	5	*42.0*	56	*46.7*
Harvesting	54	*45.0*	-	-	66	*55.0*	-	-
Loading of fresh yam	17	*14.2*	-	-	103	*85.8*	-	-
Off-loading of fresh yam	17	*14.2*	-	-	103	*85.8*	-	-
Selling of fresh yam	15	*12.5*	73	*60.8*	-	-	32	*26.7*
Source: Field Survey (2018).								

Table 4 showed the different storage methods used by fresh yam marketers in Anambra state. The methods were categorized into: Always used (3), Used (2), not used (1) and later ranked in descending order of the importance. Stored in a ventilated environment (2.91) was ranked first. Regular inspection to remove rotten tuber (2.88) was ranked second. Heaping and covering the tuber with shade thatched house (2.87), plastering the bruised tubers with mud to avoid sun light (2.86), protection from direct sun light (2.68), avoidance of spreading on the cement floor (2.52), selection of good tubers during purchasing (2.35) and avoidance of injury during harvest (2.31) respectively. However, storing fresh yam in a ventilated environment, regular inspection, heaping and covering the tubers and plastering the bruised tubers with mud were dominated the other methods of storage systems used by the marketers probably they were the most best available method to store yam for a long period of time. This result agrees with Shadrack et al. (2015: 1-10) who recommended storing fresh yam in a ventilated environment, regular inspection, heaping and covering the tubers as one of the methods of yam storage in the local areas.

Table 4. Storage Methods used by Fresh Yam Marketers

Variables	Mean	Standard Deviation
Stored in a ventilated environment	2.91	0.291
Regular inspection to remove rotten tuber	2.88	0.34
Heaping and covering the tuber with dry grass	2.87	0.33
Plastering bruised tuber with mud soil	2.86	0.351
Protection from direct sun light	2.68	0.68

Avoidance of spreading on the cemented floor	2.52	.0723
Selection of good tuber	2.35	0.819
Avoidance of injury during harvest	2.31	0.722
Plastering the tuber with clay to avoid sun light	1.51	0.502
Use of fungi treatment	1.47	0.534
Treatment with wood ash	1.26	0.528
Use of pit/hole dug in ground	1.03	0.165
Source: Field Survey (2018).		

Entries in Table 5 showed that majority (75.8%) of the respondents purchased Ekpe variety for their fresh yam business while 15% also purchased Adaka variety with respect to their fresh yam business. Obiaotulugo variety was the least in the percentage selection probably it has low market values relative to other two varieties. However, with respect to the reasons given by the respondents, majority (67.5%) of them selected Ekpe and Adaka variety for their early maturity and ability to meet up with people's needs. Similarly, 22.6% and 10% of the respondents purchased the varieties due to their high market value and ability to use for pounded yam.

Table 5. Percentage Distribution of Yam Varieties Purchased by the Marketers and reasons for selections

Varieties	Frequency	Percentage
Adaka	18	15.0
Ekpe	91	75.8
Obiaotulugo	11	9.2
Reasons for Selection:		
Early maturity and ability to meet up with people's need	81	67.5
High market value	27	22.5
Good for pounded yam	12	10.0
Source: Field Survey (2018).		

Table 6 showed that majority (22.5%) of the respondents spent between N5001-6000 on transportation per a heap of fresh yam tubers while 20% of the respondents spent between N8001-9000 on fresh yam transportation. Similarly, 15% of respondents also spent between N9001-10,000 and N4200-5000 respectively. On the other hand, majority (54.2%) of the respondents paid between N400-2000 for loading of fresh yam tubers while 10.8% of them paid between N8001-9000 and N5001-6000 respectively. However, 15% of the respondents spent between N2001-3000 for loading of fresh yam tubers. More so, 36.7% of the fresh yam marketers paid N1001-2000 for tax while 22.2% of them paid between 401-1000 for tax. However, 33.3% of the respondents paid between N701-2000 for off-loading of fresh yam while 25% of them also paid between N600-700 for off-loading. In the same vein, 15% of the respondents paid between N6001-7000 and N2001-5000 respectively. Similarly, majority (70.8%) of the respondents spent between N200-500 as their miscellaneous expenses while 29.2% of them spent between N501-700 as their contingencies.

Table 6. Transaction Cost for Fresh Yam Enterprises

Variables	Price	Frequency	Percentage
Transportation cost per heap	4200-5000	18	15.0

	5001-6000	27	22.5
	6001-7000	2	1.7
	7001-8000	17	14.2
	8001-9000	24	20.0
	9001-10,000	18	15.0
	10001-11000	1	0.8
	11001-12000	13	10.8
Total		120	100
Loading of fresh yam	400-2000	65	54.2
	2001-3000	18	15
	3001-4000	1	0.8
	4001-5000	2	1.7
	5001-6000	13	10.8
	6001-7000	3	2.5
	7001-8000	5	4.2
	8001-9000	13	10.8
Total		120	100
Tax	300-400	35	
	401-1000	44	29.2
	1001-2000	14	36.7
	2001-5000	27	22.5
Total		120	100
Off-loading of fresh yam		30	25.0
	600-700	40	33.3
	701-2000	18	15.0
	2001-5000	14	11.7
	5001-6000	18	15.0
Total	6001-7000	120	100
Other expenses	200-500	85	70.8
	501-700	35	29.2
Total		120	100
Source: Field Survey (2018).			

Data in Table 7 showed that majority (66.7%) of the respondents sold 0.5-0.9kg of fresh yam tuber at the retail price between N200-300 while 29.3% of them sold 0.5-0.9kg at the retail price between N301-400. The average retail price for 0.5-0.9kg tubers of fresh yam was N294.12. However, 49.2% of the respondents sold 1-2kg tubers of fresh yam at the retail price between N1001-1500 while 31.7% of them sold 1-2kg tubers of fresh yam at the retail price between N1501-2000 respectively. The average retail price for 1-2kg tubers of fresh yam was N1148.24 only. Similarly, 60.8% of the respondents sold 3-4kg tubers of fresh yam at the retail price between N2001-3000 while 31.7% of them also sold 3-4kg tuber at the retail price between N1501-200 only. The average retail price for 3-4kg tubers was N2392.94 only. In the same vein, majority (47.5%) of the respondents sold 5-6kg tubers of fresh yam at the retail price between N4001-500 while 31.7% of them also sold 5-6kg tubers at the retail price between N300-400 only. The average retail price per 5-6kg tuber was N4584.71 only.

Table 7. Retail Price per kg of Fresh Yam Tubers

Kg of fresh yam tubers	Price	Frequency	Percentage	Mean

Between 0.5-0.9kg	200-300 301-400 401-500 501-600	80 35 2 3	66.7 29.2 1.7 2.5	N294.12
Between 1-2kg	601-1000 1001-1500 1501-2000	23 59 38	19.2 49.2 31.7	N1148.24
Between 3-4kg	800-1500 1501-2000 2001-3000	9 38 73	7.5 31.7 60.8	N2392.94
Between 5-6kg	1000-3000 3001-4000 4001-5000 5001-6000	6 38 57 19	5.0 31.7 47.5 15.8	N4584.71
Source: Field Survey (2018).				

Table 8 showed that majority (90%) of the respondents confirmed that selling of fresh yam is a part-time while greater proportion (95%) of the respondents also agreed that selling of fresh business lasted between 1-3 months. This implies that selling of fresh yam tubers is a part-time business and can have duration of 1-3 months respectively. However, this can also serve as a reference material to those who want to engage in fresh yam business in the study area as well as other states in the country.

Table8. Time Frame for Fresh Yam Enterprise

Variables	Frequency	Percentage
Is selling of fresh yam a part-time business? Yes No	 108 12	 90.0 10
Duration of fresh yam business Between 1-3 month Between 1-4 months	 95 25	 79.2 20.8
Source: Field Survey (2018).		

Conclusion

The bulk selling of fresh yams in is predominant among farmers in Anambra, State. Still, the economic livelihood of farmers in the study area is considerably very low and this points to the facts that the need for a considerable adjustment, reform, and improvement in the storage of yams and living standard of farmers in particular and rural dwellers in general cannot be overlooked.

The findings of this study have shown that majorities (75.8%) of the respondents were female while 24.2% of them were male. Majority (73.3%) of marketers bought wholesale while 61.7% of them sold their fresh yam tubers at retail price. However, greater proportion (53.3%) of respondents sourced fresh yam tubers from farm gate while 19.2% of them sourced fresh yam tubers from Anam market. In terms of gender participation among fresh yam marketers, majority (59.2%) of young men involved in land clearing and mound making while selling of fresh yam was dominated by 60.8% and 26.7% of female adults and young women respectively. In extension, stored in a ventilated environment, regular inspection, heaping and covering the tuber with shade-

thatched house and plastering the bruised tubers with mud dominated the method of fresh yam storage used by the marketers in the study area. It is recommended that: Government at all levels, planners, policy makers, researchers and farmers should therefore give adequate attention to how best yams production and storage can be improved upon, as well as to improve the standard of living of farmers in the study area.

The State Government should make policies that would help improve on the fresh yam marketing/storage and such policies should base on the socio-economic characteristics found to affect the profitability of fresh yam trade. The marketers need to be organized into cooperatives, through this, the marketers can have access to credits and better training from the extension service of the State's ADP on how to preserve their yam tubers against spoilage. However, both the cooperative societies and the marketers are advised to pull their resources together and take advantage of economies of scale in carrying out marketing functions like transportation, loading and off-loading as concerned in fresh yam business. It is also become necessary for Agricultural Development Programme (ADP) through the extension service unit to introduce better storage technology and this will help to ameliorate the problems of fresh yam spoilage.

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