



EVALUATION OF FACTORS ASSOCIATED WITH BUSHMEAT MARKETING IN IGBOMINA DISTRICT OF KWARA STATE NIGERIA

***Babalola, Folaranmi D. and Oladipupo Azeez D.**

Department of Forest Resources Management, University of Ilorin, PMB1515, Ilorin,
Kwara State, Nigeria

*Corresponding Author: babalola.fd@unilorin.edu.ng. Phone No: 08132019259

ABSTRACT

Bushmeat consumption is a culture to people of Igbomina. The people are known for their hunting prowess due to proximity to forest rich in wild games. Majority of the residence are hunters, farmers and traders of wild resources. The study therefore analysed the marketing of bushmeat in Igbomina District, located in Kwara State, Nigeria. Snowball sampling techniques was used to survey both the hunters in the villages and marketers of bushmeat in the markets. A total of twenty hunters and thirty marketers of bushmeat were sampled. Other intermediaries that engaged in marketing of bushmeat to the final consumers were sampled. Structured questionnaires and oral interview were used to collect primary data from 50 respondents which comprise twenty hunters and thirty marketers of bushmeat. Data was analysed descriptively. All the hunters sourced the bushmeat from the wild. Majority (93.3%) of bushmeat marketers were female while all the hunters (100%) were male. Stakeholders involved in the trade of bushmeat include local hunters, village merchant, retailer and wholesaler at local and city markets, and consumers. As a result of value addition, there was progressive increase in prices of bushmeat from the hunters to other middlemen along the marketing chain. Increase pressure on the wild animals was given as one of the reasons for the decline of the wild animals. There is the need for empowerment and training of the local hunters on the domestication of the wild animals consumed as bushmeat. There is also the need for proper coordination and monitoring of processing and marketing of the bushmeat; and construction of rural road networks to facilitate transportation of the bushmeat.

Keywords: Igbomina, wild animal, local hunter, bushmeat, marketers, marketing chain



INTRODUCTION

Bushmeat is an important source of protein and widely consumed in both rural and urban areas of developing countries (Ntiama-Baidu, 1997; Wilkie and Carpenter, 1999; Fa *et al.*, 2003). It is also one of the most valuable non-wood products obtained from tropical forest after timber (Wilkie and Carpenter, 1999). bushmeat has been important part of local diet for centuries. National estimates of the value of the domestic trade in bushmeat range from US\$42 to US\$205 million across countries in West and Central Africa (Davies, 2002). In Nigeria, Ajayi (1991) reported that wild animal consumption among rural resident of rainforest was 20% of their total animal protein intake compared to the 13% for the whole country. According to Olawumi, (2009), 15% of animal protein consumed by Southern Nigeria is obtained from Bushmeat and this was valued at over nine million naira per annum. Hence, the importance of bushmeat for subsistence economy cannot be undervalued especially in sub-Saharan Africa where majority of the populace earn below a dollar per day.

In the past, hunters of wild animals engaged in the activity for domestic consumption. Today, hunting is considered as a lucrative business with a high proportion of hunters marketing their quarry. Income generated from the business is sometimes used to purchase cheaper forms of protein such as fish while left over used to purchase other basic family needs. According to survey of farmers' hunting activities in Sunyani in the Brong-Ahafo Region of Ghana it showed that 80 farmers sold 2,840 kg of their catch from hunting for ₦3,849.40 giving an average daily income from part time hunting of ₦1.78 which was comparable to the daily government wage of ₦2.00 at that time (Asibey, 1977). Contribution of bushmeat is no doubt a driver of economic growth, create employment opportunity and protein supplement to meet household requirement. However, little or nothing has been done with respect to optimally explore the potentials of wild games.

Ayodele, *et al.*, (1999) postulated that the supply of bushmeat from wild sources can serve as the possible measure to bridge the gap between livestock production and human population growth. This means that marketing of bushmeat can play a key role in meeting basic needs of hunters and other stakeholders found along the value chain. As bushmeat changes hand, from



hunters to final consumers, marketers and intermediaries along the chain engage in processing of the meat to enhance value of the final product. In consonance with this, prices also change from one stakeholder to the other. These activities provide a wide range of transaction networks and returns for marketers of bushmeat and other associated products, invariably serving as sustenance of livelihoods. From the foregoing, the study therefore assessed value chain and marketing network of Bushmeat in Igbomina District of Kwara state. Specifically, the study evaluated factors associated with bushmeat marketing and these include socio-economic characteristics of the hunters and marketers, types of wild animals killed and consumed as bushmeat, prices of different bushmeat, and other issues relating to production and marketing of bushmeat.

METHODOLOGY

The study was conducted in Igbomina District of Kwara State, Nigeria. Igbomina District occupies the eastern part of Kwara state. It's an averagely populated area dominated by rural communities. It spreads across three local government areas which include Irepodun, Ifelodun and Isin. Due to her proximity to large vast of forested land area rich in games, Igbomina and its suburb are renowned for their agricultural and hunting prowess, as well as their woodcarving, leather art, and the famous Elewe masquerade. Feasibility of the study in the District can be accrued to majority of Igbomina's being either hunters or farmers who engage in hunting of game in the wild.

One major market, that is Idofian market, and two neighboring villages in each of the local government areas earlier mentioned were purposively selected for the study. This makes a total of three local government and six villages selected for the study. Snowball sampling techniques was used to survey both the hunters in the villages and marketers of bushmeat in the markets. A total of twenty hunters and thirty marketers of bushmeat were sampled. Other intermediaries that engaged in marketing of bushmeat and sold the processed products to final consumers were sampled in restaurants, beer parlor, palm wine joints. Structured questionnaires were developed for each group of respondents, and were administered through individual and focused group discussions. Interview was conducted to supplement the data obtained from the questionnaires.



The study of the sales analysis, marketing, and economic contribution of bushmeat started from hunters who are engaged in killing of wild animals. This was followed by the investigation of how bushmeat exchange hands along the marketing chain, the stakeholders and/or intermediaries that were involved and processing that the bushmeat were subjected to. The changes in price among the different stakeholders were also accessed. Finally the impact of bushmeat trading to the livelihood of Igbomina people was analyzed. All the data used for the study are primary data which are analyzed descriptively using percentage, frequency distribution, and charts.

RESULTS AND DISCUSSION

Description of hunting activities

Hunting in Igbomina is mainly crude activities which depend on locally made instruments like cutlass, guns, bow and arrow hunting, setting of traps. Professional hunter's kit would include a gun, a small bag (often made of animal skin) containing a supply of gun powder and cartridges, a cutlass or knife. In the case of night hunters, there is need for powerful torch or headlamp which is tied on the head and projecting on the forehead. The hunting lamp is made from brass with a polished reflecting surface directing beam of light outward. It contains carbide chamber which is loaded with carbide. When water is dropped on the carbide, it produces acetylene which burns to give the strong light of the head lamp. The reflecting effect of the lamp in the eyes of the wild animal at night enables the hunter to spot the animals. As informed by the hunters, the strong light has the effect of dazzling the animals making the hunter to approach the animal and shoot at close range. Farmers, women and children are also involved in hunting. However, they usually engage in close farmyard hunting collection of insect, snail, setting of trap to catch small animals such as rodents, among others.

Demographic information of the hunters and marketers

Table 1 shows the socio-economic characteristics of the hunters and bushmeat marketers. From the table, 93.3% of bushmeat marketers were female; and they engaged in secondary processing and marketing of the meat. Culturally, hunting were mainly male (100%) in the community, while marketing of the bushmeat was dominated by the female gender. Hunting was considered



as male occupation especially when it involves handling of gun and going into the wild, while selling of the processed kills in the market was generally considered as female affair. In places where males were found as marketers of the bushmeat, these are non-indigenes to the community.

Majority of the hunters (95.0%) and marketer (86.7%) were married with considerably large family size of (6-10) individuals. More so, majority of the hunters were in their early 40's, making between ₦7,000 – 20,000 per month from hunting. This shows that trading in bushmeat is such a lucrative and profitable venture in this community as they are able to maintain large family size. Based on literacy level, more than half of the hunters (55.5%) and the marketers attended secondary school. Although it was not certain if majority of the respondents successfully completed the secondary school education as claimed.

Table 1: Socio-economic characteristic of various bush-meat stakeholders in Igbomina

Socio-economic characteristic	Hunter (n=20)		Marketer (n=30)	
	Freq	Percent	Freq	Percent
Age				
Under 18 years	1	5	3	10.0
Between 18-40 years	6	30	12	40.0
Over 40 years	13	65	15	50.0
Sex				
Male	20	100	2	6.7
Female	0	0	28	93.3
Marital status				
Single	1	5	4	13.3
Married or divorced	19	95	26	86.7
Level of education				
No formal education	2	10	9	30.0
Primary school	4	20	6	20.0
Secondary/college school	11	55	15	50.0
Tertiary education	3	15	0	0.0
Average income per month				
Less than ₦7,000	2	10	6	20.0
₦7,000 – 20,000	12	60	12	40.0
₦20,000 –60,000	4	20	9	30.0
Over ₦60,000	2	10	3	10.0
Average household size				
3 – 5 individuals	5	25	9	30.0
6 – 10 individuals	10	50	18	60.0
More than 10 individuals	5	25	3	10.0

Source: From field survey (2015)



Reasons for hunting

The main reason why the hunters engaged in hunting was provide protein for their domestic consumption as well as means of livelihood sustenance through income generation. This is in accordance with studies which conclude that major driver for bush meat hunting is need for protein and household economy (Loibooki *et al.*, 2002; Schmitt, 2010; Nasi *et al.*, 2011; Rentsch, 2011). However, materials for spiritual sacrifice and for traditional medication also contribute significantly. A follow-up interview to this showed that about 75% of the hunters claimed that they hunt mainly as a means of sustaining their livelihood, followed by about 20% who admitted that they hunt for domestic consumption, and the remaining 5% hunt for spiritual offerings and traditional medication.

Sources and availability of the wild animals

All the hunters have uniform response for source of their bushmeat which they claimed to be from the wild. Though, farmers, women and children usually collect small animals from nearby farms or close garden, the main hunters engaged in hunting of big wild games in the wild. Based on availability of animals in the wild, 85% of the hunters complain of decline and local extinction of preferred wild animals consumed as bushmeat. The reason given for the decline was due to pressure on this wild species, hence making the animals so scarce in the wild. Unlike before, the hunters need to move extra mile before they can get a kill.

Processing of the killed wild animals by the hunters

About 55% of the interviewed hunters informed that the major processing method they subject the animal they killed to include removal of fur or scale, opening of the carcass to remove the internal organs, cutting into marketable sizes. About 30% of the hunters subjected their kill to further processing like frying, sun drying and salting, while the remaining 15% said that they usually sell their hunt raw without any processing. Plates 1, 2 and 3 show some local methods of processing of the bushmeat.



Marketing of the Bushmeat

Figure 2 presents the marketing network of bushmeat as identified in the District. Most of the wild animals killed as bushmeat are hunted by professional hunters who specialized in commercial hunting activities. After collection of their quarry in the wild, majority of the hunters sold the kills to local village merchant who either visit the community where the carcass are dressed or visit the hunters' house to buy the bushmeat. The village merchants then sell what they are able to gather to wholesaler in local and major markets. To obtain good bargain profit from the selling price, and also to avoid exploitation of the village merchants, some hunters prefer taking their bushmeat personally to the local markets on market days, or sell directly to neighboring households, and to travelers on highways. The operators of restaurants, palm wine joints and beer parlours, and hotels make their purchase at the local markets or sometimes get supply from the middlemen.



Plates 1: Smoking of the wild animal over firewood



Plate 2: Smoking over improvised metal drum



Plate 3: Processing of the fresh animal purchased by middlemen

Marketing of bushmeat in Igbomina is a very common trade usually dominated by women who are local merchants. Over 90% of the marketers were women (Plate 4). The village merchant, commonly called ‘*Alarobo*’ in the native Yourba dialect moves from village to village or house to house to purchase the bushmeat. These middle men serve as bridge between hunters and other marketers at the village level and collect the quarry which is then subjected to some preservation or taste enhancing processing before they will be sold to their customers. In addition, some of their customers, such as restaurants, hotels and beer parlors, also serve as value addition agents, who usually season the bushmeat for direct consumption with food, drinks and as snack. As bushmeat changes hand from hunters to middlemen, there is also value addition and significant change in price.

The preferred bushmeat usually marketed in Igbomina and their corresponding prices from among the stakeholders is presented in Tables 2 and 3. From the study, it is evident that high price of some species over the other was majorly due to consumer preference for such species due to taste, local extinction of the species in this district and spiritual benefit of some species that have made them more valuable over others. For instance, the indicated animal with highest price before and after dressing was African Civet Cat. The price of the African Civet Cat per kilogram after dressing was ₦1,200 at the producer level, this increased to ₦1,500, ₦2,100 and ₦4,000 at the village merchant, local market and retailer levels. African civet cats in this study



area are probably facing local extinction due to pressure from hunters on them as they are highly sorted for quality meat beside some of their body part are used in herbal medicine and charms (Table 2).

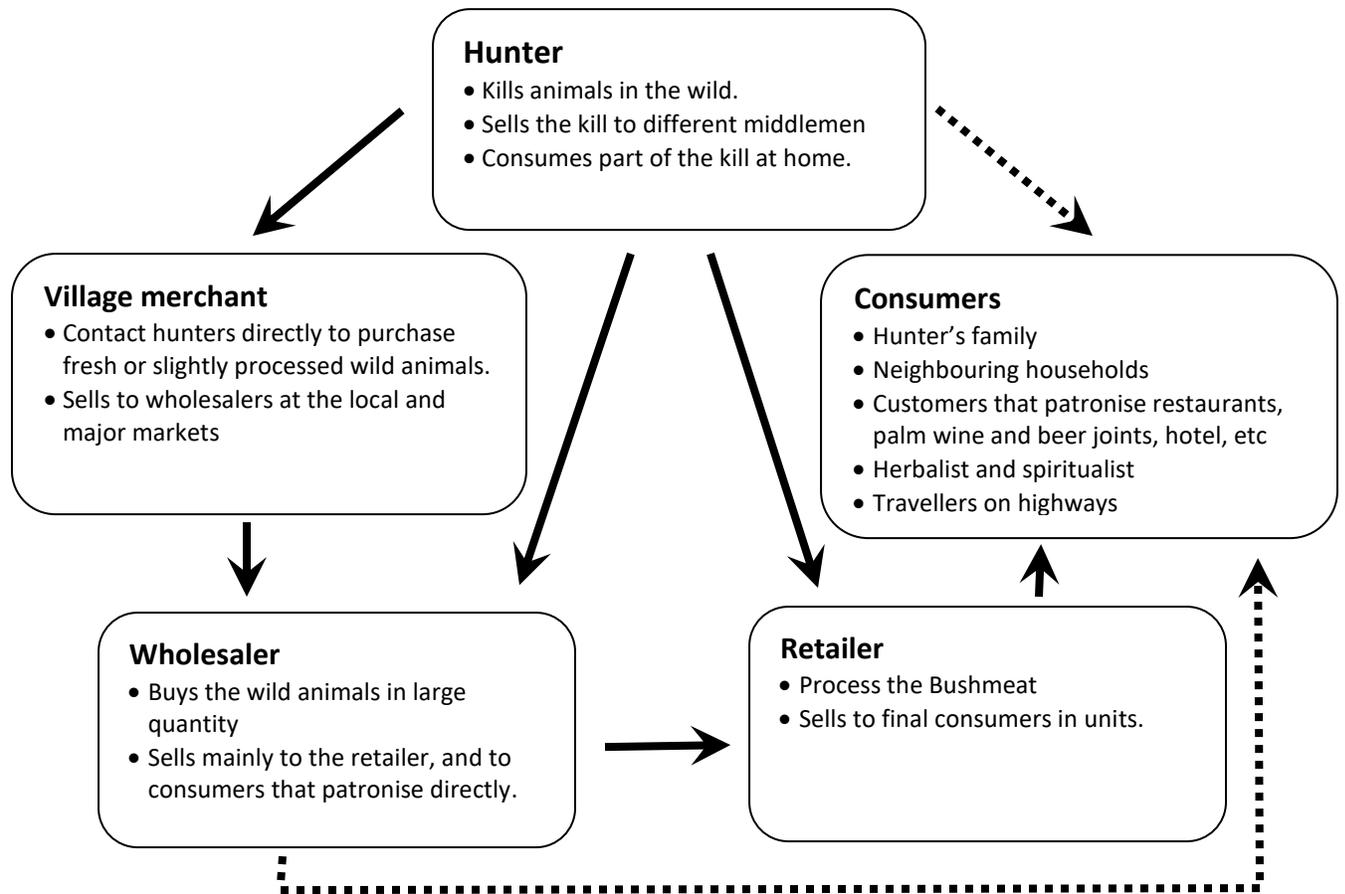


Figure 2: Marketing network of Bushmeat in Igbomina District of Kwara State



Plate 4: Women dominate marketing of Bushmeat (Source:Field survey, 2015)

Table 2: Prices of mostly preferred Bushmeat before and after dressing by hunters

Species of animal usually hunted for sales	Hunter Prices	
	*Whole sales before dressing (₦/whole animal)	Price(₦/kg) after dressing
African civet cat (<i>Civettictis civetta</i>)	9000 – 14000	1200
Crested Porcupine (<i>Hystrix cristata</i>)	2000 – 3500	1100
Snails (<i>Archachatina marginata</i>)	70 – 250	1100
Monitor Lizard (<i>Varanus niloticus</i>)	15000 – 20000	1000
Cane Rat (<i>Thryonomys swindesianus</i>)	1000 – 3000	800
Bush buck (<i>Tragelaphus scriptus</i>)	6000 – 10000	700
African giant rat (<i>Cricetomys gambienus</i>)	500 – 1000	600
Duikers (<i>Cephalophus monticola</i>)	7000 – 11000	500
Bush fowl(<i>Francolinus spp</i>)	1200 – 2000	500
Squirrels (<i>Funisciurus anerythrus</i>)	500 – 1200	400

*Price of undressed animal vary based on its size, sex and season availability

Source: field survey (2015)

It would be observed that there was progressive change in price of bushmeat from the hunters to various stakeholders along the marketing chain of the bushmeat. This is due to value addition to the meat as it changes from hands to hands and moves toward the final consumer from one marketer to the other. Some of the bushmeat show extremely wide change in price from the hunter to the retailers mainly due to consumer's preference for such meat and their relative



scarcity in the wild. More importantly, there is gradual change in price from the hunters to the retailers because of the value addition that the retailers normally subject the meat to enhance its taste, aroma, colour, texture, among others.

Table 3: Prices of Bushmeat from marketers and intermediaries

Species of Bushmeat usually sold	Village merchant price (₦/kg)	Price in local market (₦/kg)	Retailer (e.g. restaurants, drink joints, etc)	
			Price (₦)/piece (approx. 100g)	Price (₦/kg)
African Civet Cat (<i>Civettictis civetta</i>)	1500	2100	400	4000
Monitor Lizard (<i>Varanus niloticus</i>)	1400	1800	400	4000
Bush buck (<i>Tragelaphus scriptus</i>)	1000	1400	350	3500
Crested Porcupine (<i>Hystrix criatata</i>)	1500	1900	300	3000
Snails (<i>Archachatina marginata</i>)	1600	2000	300	3000
Cane Rat (<i>Thryonomys swindesianus</i>)	900	1300	200	2000
Duikers (<i>Cephalopus monticola</i>)	700	1200	200	2000
Bush Fowl (<i>Francolinus spp</i>)	800	1200	200	2000
Squirrels (<i>Funiscuirusan erythrus</i>)	700	1100	200	2000
African Giant Rat (<i>Cricetomys gambienus</i>)	800	1000	200	2000

Source: Field survey (2015)

Issues on production and marketing of Bushmeat

Bushmeat is usually seen as in-exhaustible natural resources by hunters, thereby paying little or no attention to its production in the wild. Majority of the hunters claim that seasonality, urbanization, deforestation, local extinction of desired species and lack of sophisticated hunting implement are the major barriers to supply of bushmeat. Figure 3 presents responses of the cross section of the hunters, marketers and other intermediaries of the factors affecting marketing of bushmeat at the study site.

From Figure 4, topmost (with average response of 79%) of the indicated major factor affecting both the hunters (93%) and sellers (65%) of bushmeat is health implication of eating bushmeat. Though majority of the populace in the study area like eating Bushmeat, however they are scared of zoonotic diseases that can be contacted through eating of meat obtained from wild games. Specifically heavy loss was recorded during the last outbreak of Ebola disease that occurred in 2015. The massive public awareness created in the country and other part of the world during the



outbreak by connecting contamination of Ebola virus with consumption of bushmeat generated widespread fear, hence drastic drop in the level of patronage and consumption of bushmeat.

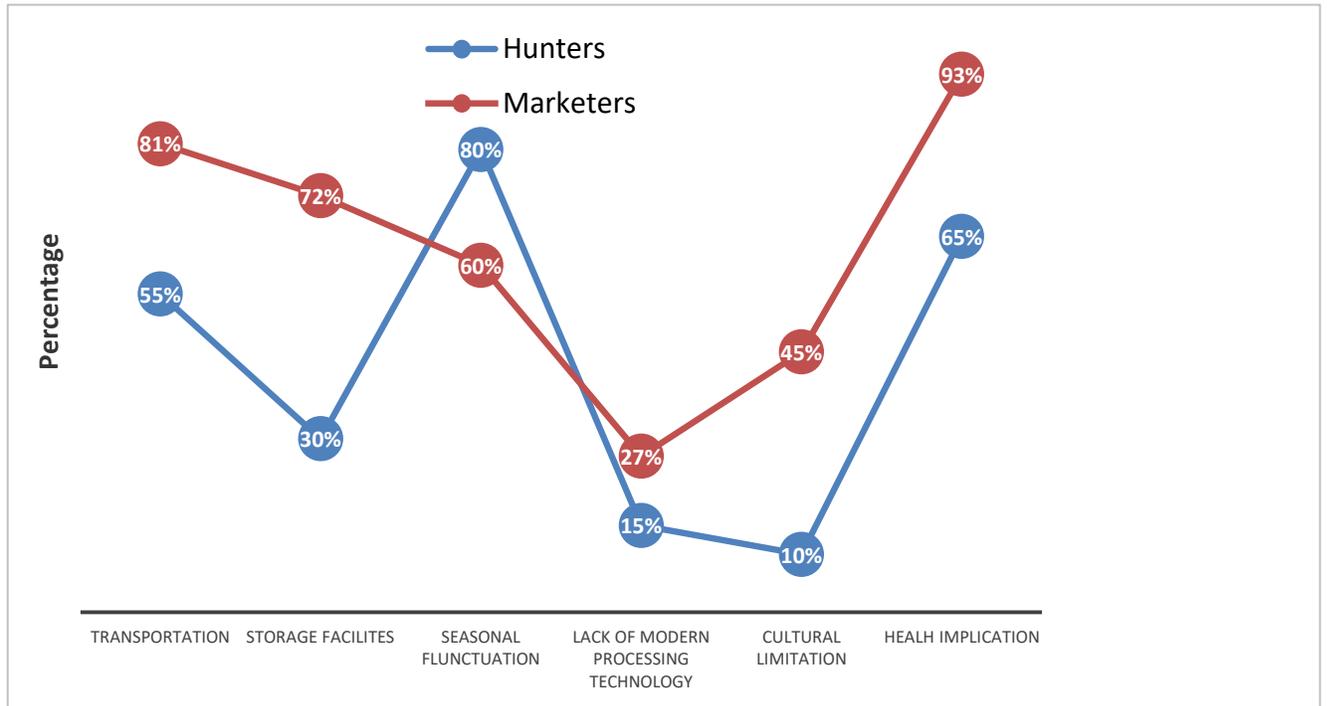


Figure 3: Factors affecting Marketing of Bushmeat in Igbomina District of Kwara State

Source: Field survey (2015)

Another factor affecting availability and supply of the bushmeat to the marketers was seasonality nature of bushmeat. Many of the wild animals are seasonal in their breeding as well as their rate of encountering in the wild. This made their supply inconsistent throughout the year, hence affecting supply to the final consumers. Poor transportation resulting from deplorable rural road networks, and lack of appropriate storage facilities also contribute immensely to the problem encountered in marketing of bushmeat. Sometimes, lack of transport to convey the animal killed in the wild has led to their eventual decay. Moreover, lack of appropriate good storage facilities further complicated the issue of transportation and quick conveyance of the bushmeat to the market. Coupled with the issue of storage facility is lack of modern processing technology. Though this factor can be relatively insignificant enough but it still poses limitation to the sales



of bushmeat especially in the modern age where people are getting conscious and mindful of the method of processing the food they consume.

Cultural limitation is another vital factor that affects sales and patronage of some wild species. Different cultural group in Africa have various taboo preventing killing and eating of some species of wild animals. For example, majority of the indigenes of Igbomina do not eat Giant rat. This usually affect sale of bushmeat obtained from giant rat, or any bushmeat that resemble such species.

CONCLUSION AND RECOMMENDATION

The study analyses the marketing of bushmeat and other associated factors affecting the trade in Igbomina District of Kwara State. Major stakeholders identified in the production and marketing network of bushmeat are local hunters, village merchants, local market sellers, and retailers such as restaurants, hoteliers, beer-parlour operators, and pepper-soup and palm-wine joints.

In addition to provision of protein for domestic consumption, another major reason why the hunters involve in hunting of wild animals was for income generation. This made the business lucrative and majority of the marketers are able to make livelihood from the business in the study area. Marketing of the processed bushmeat is more profitable than selling of the raw kill. Therefore engaging in processing activities like dressing, roasting, frying and seasoning to enhance taste and odour of the bushmeat are very important value addition measures that not only increase the shelf life of the bushmeat but also increase the selling prices along the marketing chain. The identified factors affecting marketing of the bushmeat were seasonality, lack of appropriate processing and storage facilities, deplorable rural road network, and cultural limitation on consumption of some wild animals. .

In accordance with the findings of the study, there is need for empowerment and training on domestication of the wild animals consumed as bushmeat. The domestication will reduce pressure on the wild population of the wild games. There is also the need for proper coordination and monitoring of processing and marketing of the bushmeat by wildlife and health professionals to regulate the quality and hygiene of the bushmeat put up for sale and consumed by the



populace. Concerned government agency should assist in constructing of rural road networks to facilitate quick transportation of the bushmeat to prevent decay and spoilage. Good road will also facilitate transportation of the bushmeat to the urban areas where the hunters and other marketers can get good bargain and financial return.

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