

On-Site investigation of management and marketing strategies of Ruminants at Lafia, Wamba and Doma Markets in Nasarawa State Nigeria

*Idahor K. O¹., H. Yahaya², A. Yakubu¹, & Y. M. Dahiru¹

¹Dept. of Animal Science, Nasarawa State University, Keffi, Shabu-Lafia Campus, Nigeria.

²Dept. of Agricultural Economics and Extension, Nasarawa State University, Keffi, Shabu-Lafia Campus, Nigeria.

*Corresponding author <omokingida@yahoo.com>

ABSTRACT

Manhandling of ruminants, inadequate housing, feeding and inefficient pricing systems are constraints to productivity. Hence, this investigation was conducted to examine the management and marketing strategies of ruminants in Lafia, Wamba and Doma markets. Data were collected in each market for a period of twenty days, through direct interactions and participatory observations. The data were analysed using simple descriptive statistics. The results showed that White Fulani, Red Bororo, Yankasa, Balami, Uoda, Red Sokoto, West African Dwarf and their Crosses were available for sales. They were restrained and manhandled during transactions. It was observed that only sheep and goats were partially housed and animals unsold were herded or transported back home. There were similarities in their feeding regime and there were little or no differential prices among the ruminants in the three markets. However, bulls were priced lower (30.7%) than cows, bucks lower (11.1%) than does whereas, rams were priced higher (20.0%) than ewes. More significantly, more females were supplied (54.6%) and sold (59.5%) compared to the males. Also, the results showed that there were more cattle in stock at Lafia market (87.1%) compared to Wamba market (12.9%) and none (0.0%) at Doma market. Similarly, sheep in stock was observed highest (50.0%) at Lafia market, followed by Doma (26.5%) and Wamba (23.5%) markets. While goats in stock were very close at both Wamba (24.3%) and Doma (24.0%) markets, the values were however, less than that recorded at Lafia market (51.7%). The management and marketing strategies of ruminants observed in this study were unsuitable for optimum productivity.

Keywords: Ruminant, Management, Marketing Strategies, Nasarawa State.

INTRODUCTION

Ruminants comprise cattle, sheep, goats, antelopes and buffaloes. They are characterized by a four chamber stomach (i.e. the rumen, reticulum, omasum and abomasum). There are several breeds of these animals spread across the nation such as Uoda, Maure, Sokoto Red Goat, West African Long legged goats, West African Dwarf sheep and goats, Muturu and N'dama. Others are Bunaji, Rahaji, Kuri, Sokoto Gudali and Keteku.

Housing is provided for these animals to achieve optimum productivity (Komolafe *et al.*, 1980).

Unfortunately, this is seldom in Nigeria particularly in Nasarawa State, due to the prevailing extensive system adopted by the herdsmen.

Ruminants are sources of income to the government and they play important roles in the socio-cultural lives of the rearers. More importantly, they are sources of

animal protein, farm power and raw materials for agro-based industries (William and Trevor, 1999). Feeding management is an essential aspect of ruminant animal production and may be the highest expense incurred during the operation (Benerjee, 1999). Ruminants need high quality feeds and balance diets to achieve maximum profit potentials.

It becomes imperative therefore, to utilize quality forage, browses and food crop residues for optimum productivity (Reddy, 2001). This can be achieved by developing all-year-round forage program allowing for abundant fodder yield throughout the year.

Sad enough, many people still believe that cattle, sheep as well as goats eat and thrive well on anything at their disposal. This notion is very incorrect because to manage and feed these animals with such belief will lead to unsuccessful ventures (Desmond, 1992). Since ruminants require nutrients for body maintenance, growth, reproduction as well as production of milk, meat and wool, Edward *et al.* (2002) suggested that they

should be grouped according to their nutritional need in order to manage them more effectively.

Ruminants are often sold in an open village markets where they are fed fodder, straw and crop residues amongst other palatable feed resources prior to final sales. They are herded or brought in pick-ups/trucks to the market places (Werner, 1997). During transportation, the animals are stressed up. This is worsened by the ways and manners which the dealers manhandle them. Most of the time, this in turn affects the keeping quality of the final products of the animals. Hence, lairage facilities as suggested by Ikeme (1990) would be very necessary to revive the animals prior to sales and slaughtering. Although, Jokthan *et al.* (2006) reported that the factors influencing choice, supply and price of ruminants include physical appearance, body condition, age and visual estimation of weights. Yet, marketing of ruminants is not often times influenced by the forces of demand and supply rather the season, urgent needs of the rearers and the bargaining abilities of the parties involved. This strategy of marketing agricultural produce in Nigeria is not a good approach geared towards enhancing the efficiency of the marketing functions. However, to attain perfect marketing systems for these produce, Umeh *et al.* (2004) opined that there should be restructuring of the present marketing models in Nigeria to involve more strategies for marketing all agricultural produce.

Ikeme (1990) stated that in practice, there is no clear line between production and marketing of ruminants and that the rearers are not fully involved in the marketing process. More so, they have little concern for the marketing of their stock and since they do not consciously produce for the markets, marketing systems will remain relatively underdeveloped.

According to Ahmed (2002), Agricultural marketing involves the performance of all business activities in the movement of goods and services from the point of initial production to the ultimate consumers.

Movement of these animals, inadequate feeding, lack of shelter, manhandling as well as inefficient pricing is a constraint to livestock productivity in Nigeria. Yet, there are little or no studies on the welfare of ruminants at market places in Nigeria. It becomes very necessary now to commence such studies with 'on-site investigation of management and marketing strategies of ruminants in Nasarawa State'.

MATERIALS AND METHODS

This study was conducted in the months of April, May and June. It covered Lafia, Wamba and Doma markets in Nasarawa State (latitudes 8° 35' N; longitudes 8° 32' E; mean temperature of 32°C and altitude of 181.53m) Data/information were collected everyday between 08:00hr and 17:00hr GMT for a period of 20days each in the market places. They were obtained on types vis-à-vis sex of the animals, restraining techniques, handling, housing, feeding regime, prices and sales

pattern at the markets. These were achieved through direct interactions/interview with the marketers and some other persons found in the market places by asking them relevant questions and through participatory observations by the investigators. Mean while, breeds of the animals were identified using the features described by Williams and Trevor (1999) as well as Komolafe *et al.*(1980).

Although there were some limitations to the study such as lack of record keeping by the dealers, inability of the investigators to capture every scene at the market places and the nature of data derived that could not be subjected to a well standardized statistical tool. However, the data so collected were analyzed using simple descriptive statistics where applicable as prescribed by Alika (1997).

RESULTS AND DISCUSSIONS

Types, Breeds and Management Strategies of the Animals

The types of animals found in these markets were cattle, sheep and goats. The breeds of cattle available for sales at Lafia market were White Fulani, Red Bororo and their Crosses. Sheep were predominantly Yankasa, Balami as well as Uoda, while goats were Red Sokoto, West African Dwarf and their Crosses. In Wamba market, the breeds of cattle in stock were basically White Fulani and Red Bororo and sheep as well as goats were same as found in Lafia market. Whereas in Doma market, there were no cattle in stock and the breeds of sheep were Yankasa and Balami while, that of goats were the same as found in Lafia market. These breeds were among the ones reported by Komolafe *et al.* (1980) to be available across the country. The observed prevalence of these breeds in these markets could be largely due to their ability to thrive well on any feed resource, their resistance to adverse conditions and partially due to their prolificacy. Also, it could be probably due to the geographical location of Nasarawa State.

In all the markets, it was observed that the animals were restrained by stying, tethering and were all carrying individual trade identification marks. However in some cases, a few were allowed to roam freely probably due to their ill-health and inadequate feeding resources. The handling methods observed in this study were very inhumane as animals were often times found excited, beaten up with stick and dragged carelessly with ropes during transactions at the market places. This may eventually affect the meat quality as described by Ikeme (1990). This unwholesome practice could be attributed largely to the inefficient marketing structure and models in use presently in Nigeria and probably due to the handlers' impressions about "animals".

As at the time of this investigation, it was discovered that only Lafia market out of the three provided housing

for sheep and goats. Although, the houses were constructed with wood in such a way that will allow cross ventilations, cattle were kept in an open place regardless of the prevailing weather conditions. In any case, at the end of each market day, unsold animals were herded or transported back home.

The feeding regimes of ruminants at Lafia, Wamba and Doma markets are presented in Table 1. In Lafia market, the animals were fed maize offal, millet offal, beans husk and stovers. In Wamba market, they were fed maize offal, millet offal and Gmelina fodder. While in Doma market, they were fed yam peels, maize and millet offals. The observed kinds of feed resources utilized at these markets could be largely due to the predominant crops produced in the vicinity and partially due to the beliefs of the dealers as reported by Desmond (1992).

Table 1: Feeding Regime of Ruminants Prior to Sales at Lafia, Wamba and Doma Markets

Type of Animals	Type of Feed Fed	Type of Feeder Used	No. of Times Fed
Lafia Cattle	Maize offal, millet offal, beans husk and stovers	Long wooden feeder of about 15cm deep, 20cm wide and 150cm long.	Once daily
Sheep	Maize offal, millet offal, beans husk	Improvised feeder made from metal drum	Once daily
Goats	Maize offal, millet offal, beans husk	Improvised feeder made from metal drum	Once daily
Wamba Cattle	Gmelina fodder, maize offal and millet offal	Head pans	Once daily
Sheep	Gmelina fodder, maize offal and millet offal	Head pans	Once daily
Goats	Gmelina fodder, maize offal and millet offal	Head pans	Once daily
Doma Sheep	Yam peels, maize offal and millet offal	Big basins	Once daily
Goat	Yam peels, maize offal and millet offal	Big basins	Once daily

Source: Field Survey, 2008.

In Lafia market, the cattle were fed using wooden feed trough of about 15cm deep, 20cm wide and 150cm long. Sheep and goats were fed using improvised feed troughs made from metal drums. In Wamba market, cattle, sheep and goats were fed using head pans and in

Doma market, the animals were fed using basins. In each case, the feed troughs were provided for 3-7 animals. This was grossly inadequate according to the recommendations of Ray (1978). However, this observation could be a market strategy to maximize profit since; conventional feed troughs are very expensive and not readily available unless ordered for. In Lafia, Wamba and Doma markets, the animals were served feed once daily though with plenty of clean water. It was observed that if the animals were all sold before noon, there would be much left over of feed and water. But if sold in the late evening or not sold at all, there were always no left over which is an indication of inadequate feeding regime. The level of left over however, contributed to the poor hygiene conditions in the various markets except in Doma market where there were adequate provision for waste disposal. This condition could possibly cause ill-health of the animals resulting in administration of veterinary drugs that may not be fully metabolized before sales. This unwholesome practice could lead to food poisoning when such animal products are consumed.

Marketing Strategies

Lafia market popularly known as “Shinge market” normally holds three times in a week (Tuesday, Thursday, and Sunday.). This market deals with cattle, sheep and goats. On the other hand, Wamba market holds every Friday. Although the market was mainly for sheep and goats, few cattle were also in stock. While Doma market normally holds every Wednesday and only sheep and goats were sold. The marketing of ruminants at Lafia, Wamba and Doma markets are shown in table 2. There were more cattle in stock at Lafia market (87.1%) compared to Wamba market (12.9%) and none (0.0%) was at Doma market. Sheep in stock was observed highest (50.0%) at Lafia market and was slightly followed by Doma (26.5%) and Wamba (23.5%) markets. Whereas, goats in stock were very close at both Wamba (24.3%) and Doma (24.0%) markets, but were less than those in stock at Lafia market (51.7%). These variations observed among the markets could be largely due to the population of the surrounding communities, strategic locations of the markets, economic status of the dealers and partly due to the season of the year as reported by Gefu (1992).

In all the market places, more female animals were supplied (representing 54.6%) and sold (representing 59.5%). This could be adduced to the predominant prevailing prices over the males as discovered in this study. Unfortunately, it was observed that some of these females were pregnant and few even parturited while awaiting sales. This ugly scenario would impair the growth of livestock industry in Nigeria (Oyekunle *et al.*, 1992). This is because the pregnant ones would end up being slaughtered resulting in foetal losses (Idahor, *et al.*, 2008). Although there were little or no differential

Table 2: Marketing of Ruminants at Lafia, Wamba and Doma markets

Type of Animals	No. of Animals Supplied/day	No. of Males and Females Supplied/day		No. of Animals sold/day		Price/Animal (₦)	
		Male	Female	Male	Female	Male	Female
Lafia							
Cattle	419	199	220	115	208	40,000	55,000
Sheep	437	208	229	122	169	11,000	9,000
Goats	375	165	210	93	135	8,500	9,500
Wamba							
Cattle	62	25	37	13	20	40,000	54,000
Sheep	205	90	115	61	110	10,800	8,900
Goats	176	71	105	57	98	8,000	9,000
Doma							
Sheep	232	108	124	89	97	11,000	9,000
Goats	173	77	96	68	71	8,000	9,000

Source: Field Survey, 2008.

prices among cattle, sheep, and goats in the three markets, it was observed that bulls were priced lower (30.7%) than cows, bucks lower (11.1%) than does whereas, rams were priced higher (20%) than ewes. This could be attributed to the characteristic odours associated with the males and probably due to the accumulation of excess fats in the castrates. Above all, it could be probably due to the rams' tendency to be larger than the ewes and the religious attributes. Also, it could be due to the round looking nature of the females and possibly because the females could still be re-bred to increase one's stock.

CONCLUSION

The types of ruminants found in Lafia, Wamba and Doma markets were cattle, sheep and goats. The breeds discovered in this study were White Fulani, Red Bororo, Yankasa, Balami, Uoda, Red Sokoto, West African Dwarf and their Crosses. They were mixtures of both sexes, although females were more in each case. Meanwhile, there were no cattle in stock at Doma market.

It was discovered that all animals were restrained except a few that were looking unhealthy. Their handling methods as revealed in this study were inhumane and only the sheep and goats were provided with partial housing. It was observed that the animals unsold were herded or transported back home.

There were similarities in their feeding regime as offals, peels, fodders, husks and stovers were fed once daily using substandard feed troughs. Although there were more cattle, sheep and goats in stock at Lafia market, there were little or no disparities in their prices among the three markets. However, it was observed that the male animals were priced inferior to the females except in sheep where the rams were priced superior to the ewes.

The ruminants handling techniques, housing, feeding regime and the pricing strategies discovered in this study were unsuitable for optimum production. Therefore, there should be organized agencies of the Nigerian Institute of Animal Science vis-à-vis Animal

Science Association of Nigeria, to monitor the welfare of livestock at market places across the country.

REFERENCES

- Ahmed B. 2002. Marketing of Small Ruminants in Nigeria. In: C.A.M. Lakpini, A.M.
- Alika J.E. 1997. Statistics and Research Methods. Ambik Press, Benin City.
- Benerjee G.C. 1990. Feeds and Principles of Animal Nutrition. (3rd Edn.), Oxford Press Publishers USA.
- Desmond H. 1992. Cattle and Buffalo Meat Production in the Tropics (Low Priced Edn.), Longman Singapore Publishers (PTE) Ltd Singapore
- Edward R.A. Greenahlg J.F.D. and Morgan C.A. 2002. Animal Nutrition (6th Edn.), Tan Print Ltd. India.
- Gefu J. 1992. Pastoral Perspective in Nigeria. The Fulbe of Udubo Grazing Reserve. Uppsala. Sweden: Scandinavian Institute of African Studies.
- Idahor K.O., Omeje J.N., and Ibrahim H. 2008. Frequency of Foetal Losses Emanating from Unintentional Slaughtering of Pregnant Ewes and Does at Lafia Abattoir. *Proceeding of the 13th Ann. Conf. ASAN, ABU, Zaria* Pp. 128-130.
- Ikeme A.I. 1990. Meat Science and Technology. A Comprehensive Approach AFP, Onitsha.
- Jokthan G.E., Akpa G.N., Danbatta G.A. and Abdu S.B. 2006. Survey of Marketing Operations in Major Cattle Markets of Kano State of Nigeria. *Trop. J. Anim. Sci.* 9(2): 21-27.
- Komolafe M.F. Adegbola A.A., Ave L.A. and Ashaye T.I. 1980. Agricultural Science for West African Schools and Colleges (2nd Edn.). Oxford University Press, Ibadan.
- Oyekunle M.A., Olubanjo O.O., and Fasina O.E. 1992. Foetal Wastage in Abattoir and its Implication. Situation Report from Ogun State, Nigeria. *Nig., J. Anim. Prod.* Vol.19 No.1 and 2 Pp57-63.
- Ray S.N. 1978. Livestock Feeding (1st Edn). San Francis Company Ltd., London.
- Reddy D.V. 2001. Principles of Animal Nutrition and Feed Technology. Oxford and IBH Publishing Co. (PVT) Ltd., New Delhi.
- Umeh J.C., Lawal W.L. and Ater P.I. 2004. Strategies for Marketing Agricultural Produce in Nigeria. *Proceedings of the 38th Ann. Conf. ASN*. Pp53-58.
- Werner F. 1997. Cattle Husbandry in Nigeria. A case study of its Ecological and Socio-geological differentiation (2nd Edn.), Ebic Akwa Ventures Ltd. Aba.
- William J.A., and Trevor W. 1999. Introduction to Animal Husbandry in the Tropics (5th Edn.), Thompson Press Ltd., India.

