

Socio-economic characteristics of camel (*Camelus dromedarius*) marketers in Mai'adua livestock market, Katsina State, Nigeria

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Abstract

The study was conducted to assess the socio-economic characteristics of camel marketers at Mai'adua livestock market in Katsina state. Random technique methods were used to select 45 marketers and an interview was used to generate the information. All the correspondents were males and married. Majority (46.67%) were between the age category of 35-40 years and only 11.11% were 55 years and above. Majority (75.56%) attended Qur'anic schools. Niger republic was the major source of the camels as indicated by 68.89% of the respondents while 17.78% and 11.11% indicated Katsina and Jigawa states respectively. Among the animal brought to the market for sales, males out-numbered the females while in the frequency of sales, females out-numbered the males because of variation in prices as indicated by 71.11% and 55.56% of the respondents respectively. Majority of the camels purchased were transported to Kano main abattoir for slaughter. There was variation in prices between males and females, stages of growth and development and physiological status. Camel calf (male) had a high price of N70,000 and above while that of female costs N60,000 and above; bull and heifer are sold at a minimum of N90,000 to N95,000 and N70,000 to N75,000 while old camel bull and cow were sold at medium price of between N160,000-N165,000 and N130,000-N135,000 respectively. However, (53.33%) of the respondents indicated lack of weighing devices as a major constraint and most (46.67%) indicated inconsistency in pricing among others. A seasonal variation was said to determine the demand. During early rainy season, farmers purchased male camel bulls for farming activities as indicated by the respondents (40.00%). Lack of awareness on the importance of camel meat also posed a constraint as camel meat was widely consumed (73.33%) in the area. Cost of camels increased during Eid-El-Kabir as indicated by 44.44%. The study reported information on marketing, sources, uses and destination of camels respectively.

Key words: Camel Marketers, Prices, Destination, Slaughter, Constraints

Introduction

One humped camels (*Camelus dromedarius*) in Nigeria are concentrated in the semi-arid northern part of the country and some few numbers in some parts of central Nigeria used for traction. The introduction of the camels (*Camelus dromedarius*) into the Northern Nigeria can be linked to the caravan trade links between the Sahara and Sokoto, Katsina, Kano, Bauchi and Borno (Bernus, 1990).

However, DRA (2013) estimated the population of camels in Nigeria as 90,000 in which about 60% are found in former Sokoto state. The one-humped camel (*Camelus dromedarius*) plays an important role as a primary source of subsistence agriculture in the arid and semi-arid lands of the tropics (Wilson, 1998). Camels survive in arid and semi-arid areas which are not suitable for crop production and where other livestock species hardly thrive. However, in

spite of the large number of camels in Nigeria, the productivity of camels is generally low and the camel has been given little attention in research and development. Livestock pastoralism remains a viable food production system in Africa's arid lands (Fratkin and Smith, 1994). The use of the dromedary camel as food and revenue should permit the pastoralists and ranchers in arid Africa to reduce their dependence on higher risk livestock enterprises (Raymond, 1984). Camels are extremely important livestock species in the arid and semi-arid zones in Asia and Africa and contribute significantly to the livelihood of the pastoralists and agro-pastoralists living in the fragile environments (Abbas *et al.*, 2000; Tura *et al.*, 2010). Camels play diverse roles in livelihood of the poor pastoralists, including the building of assets, insurance against unexpected events; have spiritual and social values, traction and movement of goods, food supply and income generation to the pastoralists in the northern part of Nigeria (FAO, 2014) and very recently it plays pronounced a little role in the export revenue of the country in both live animal and transportation (Wilson, 1998 and FAO, 2014).

The increasing human population pressure and declining per capital production of food in Africa precipitated an urgent need to develop previously marginal resources, such as the semi-arid and arid rangelands and to optimize their utilization through appropriate livestock production systems among which camel production is certainly the most suitable (and Schwartz and Dioli, 1992; Getahun and Kassa, 2002; Wardeh, 2004; Mehari *et al.*, 2007). But unfortunately, less attention has been given to camel production improvements for many years when planning national development (FAO, 2014). The potential of

camelids is generally underestimated for different reasons (social, economic and religious). Elsewhere, as the camelids are living most of the time in remote areas (desert or high mountains), their accessibility could be difficult. However, according to some convenient surveys, camelids are essential for animal protein supply of human in these marginal areas, contribute to the maintenance of rural activities and economical development and finally facilitate the integration in the global economy (Khanvilkar *et al.*, 2009). Despite the camel's considerable contribution to food security in semi dry and dry zones and its being a major component of the agro-pastoral systems in vast pastoral areas in Africa and Asia, little is known about its production potential and production systems compared to other domestic animals. Researchers and funding agencies have been very reluctant to act on camel research for improvement of their production. Information on camel production potential, marketing systems and consumption of products in northern Nigeria is still very limited. Therefore, the study was conducted at Mai'adua livestock market with the general objective of characterizing camel marketing systems among others.

Materials and methods

Study area

The study was conducted at Mai'adua livestock market, Mai'adua Local Government Area, Katsina state, Nigeria. Mai'adua town is one of the 10 districts under Daura Emirate of Katsina state. The state covers an estimated land area of 49,895 square kilometers and shares a boundary with the Republic of Niger to the North; Kano and Jigawa to the east; Zamfara to the west and Kaduna to the south respectively. The population of the

state is over five million during the 2006 National Head Count (NPC, 2006). Katsina state has hot and dry climatic conditions for most of the year in the northern parts of the state. The hottest months are March to May with temperatures ranging from 23°C to 42°C. The annual rainfall varies from 700mm to 1000mm and rainy season in northern part of the state is usually from June to September (KTARDA, (2001).

Sampling procedure

Mai'adua livestock market is one of the largest livestock markets of cattle and camel in far northern Nigeria beside Maigatari livestock market in Jigawa state. Mai'adua was purposively selected because of its high population of camels. The market day is Sunday of every week.

Data collection

Data were collected for a period of seven market days from Sunday, June 28th–August, 9th 2015. Data were collected using structured questionnaire and information obtained from the respondents included: Background information was sex, age, marital status and educational background. Marketing information were source of animals, sex of animals, frequency of sales, price and expected destination after purchase while the Constraints of camel marketing included pricing, season and acceptability

Data analysis

Data collected were analyzed using simple descriptive statistics of frequency and percentages using statistical package for social sciences (SPSS) version 16.0.

Results and discussion

Table 1 presents the information of the respondents. All of the correspondents were males. Majority (46.67%) fall between the ages of 35–40 years. Most (35.55%) were between the ages of 45–50 years. However, 11.11% were above the age of 55 years and

only (6.67%) were between 25–30 years. From the reports of Ghude *et al.* (2011), camel marketing is now becoming a practice of the younger generations. All of them were married. It is in the religeo–tradition of the majority of northerners to have more than one wife besides getting marriage at an early age. Majority (75.56%) of the respondents attended Qur'anic schools. Most (17.78%) had primary leaving certificates and 4.44% and 2.22% had secondary leaving and tertiary certificates respectively. It is in the tradition of majority of Northerners to send their children to basic Qur'anic schools at early age.

Table 2 shows the marketing information from the study area. Mai'adua is a Nigeria-Niger boarder town. As such, majority (68.89%) of the camels brought to the market were from Niger republic. Most (17.78%) were from the neighboring areas within Katsina state. However, 11.11% and 2.22% were from northern Jigawa state and other places respectively. From the results, majority (71.11%) of the respondents indicated that majority of the camel population brought to the market for sales were males while 28.89% indicated female camels. The frequency of sales indicated that majority (55.56%) of the respondents were of the opinion that the traders preferred to purchase female camels than the males because of the differences in price. However, most (44.44%) purchased male camels. Majority (62.23%) of the respondents indicated that most of the camels purchased from Mai'adua were transported to Kano main abattoir for slaughtering. Most (28.89%) of the respondents revealed that camels purchased were transported to Katsina abattoir for slaughter. However, 4.44% indicated that crop farmers came from Niger state to purchase male camels for

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farming activities and transportation of goods. The remaining (4.44%) indicated that camels purchased were transported to Jigawa state for continuous trading; to Kaduna for slaughter; purchased by neighboring traders for fattening among

others. This is in agreement with the reports of Ghude *et al.* (2013) who reported that some local traders purchased camels for fattening while others for farming and utility services.

Table 1: Background information of the respondents from the study area

Parameters	Frequency	Percentage
Sex		
Male	45	100
Female	0	0.00
Total	45	100.00
Age		
25 – 30	3	6.67
35 – 40	21	46.67
45 – 50	16	35.55
55 and above	5	11.11
Total	45	100.00
Marital status		
Single	0	0.00
Married	45	100.00
Total	45	100.00
Educational status		
Qur'anic education	34	75.56
No formal education	0	0.00
Primary education	8	17.78
Secondary education	2	4.44
Tertiary education	1	2.22
Total	45	100.00

Source: Field survey 2015

Table 3 presented the pricing of camels. Camel pricing varied between stage of development, physiological status, utility services, body conformation, and season of breeding among others. Majority (73.33%) of the respondents revealed that the price of camel calf (male) ranged between N60,000–N65,000 while (15.56%) and (11.11%) of the respondents reported N50,000–N55,000 and N70,000 and above respectively. Camel calf (heifer) had a range of price between N50,000–N55,000 (57.77%); N40,000–N45,000 (24.45%) and N60,000 and above (17.78%) as revealed by the respondents. Camel bulls are used for breeding, farming activities,

transportation among others. Majority (68.89%) of the respondents were of the opinion that the price were N110,000 and above while (20.00%) and (11.11%) of the respondents reported N90,000–N95,000 and N100,000–N105,000 respectively. Camel heifers are used for breeding and the price normally appreciates in the months of November to March which is the breeding season. This is in harmony with reports Mahmoud, (2010) and Hulsebusch and Kaufman, (2002). However, majority (64.45%) indicated the price from N90,000 and above. Most (22.22%) reported between N80,000 and N85,000 while only (13.33%) revealed N70,000 to N75,000. Butchers on daily basis prefer the old camel

Table 2: Marketing information from the study area

Parameters	Frequency	Percentage
Source of the camels		
Niger Republic	31	68.89
Katsina	8	17.78
Jigawa	5	11.11
Others	1	2.22
Total	45	100.00
Sex of the animals		
Males	32	71.11
Females	13	28.89
Total	45	100.00
Frequency of sales by sex		
Male	20	44.44
Female	25	55.56
Total	45	100.00
Expected destination of camels from Mai'adua market		
Katsina	13	28.89
Kano	28	62.23
Niger	2	4.44
Others	2	4.44
Total	45	100.00

Source: Field survey 2015

Table 3: Price of camels at Mai'adua livestock market

Parameters	Frequency	Percentage
Price (N)		
Camel calf (male)		
N50,000 – N55,000	7	15.56
N60,000 – N65,000	33	73.33
N70,000 and above	5	11.11
Total	45	100.00
Camel calf (female)		
N40,000 – N45,000	11	24.45
N50,000 – N55,000	26	57.77
N60,000 and above	8	17.78
Total	45	100.00
Camel bull		
N90,000 – N95,000	9	20.00
N100,000 – N105,000	5	11.11
N110,000 and above	31	68.89
Total	45	100.00
Camel heifer		
N70,000 – N75,000	6	13.33
N80,000 – N85,000	10	22.22
N90,000 and above	29	64.45
Total	45	100.00
Old camel bull		
N150,000 – N155,000	10	22.22
N160,000 – N165,000	23	51.11
N170,000 and above	12	26.67
Total	45	100.00
Old camel cow		
N120,000 – N125,000	7	15.56
N130,000 – N135,000	9	20.00
N140,000 and above	29	64.44
Total	45	100.00

Source: Field survey 2015

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bulls with good body conformation for slaughtering. They were of the opinion that the quality and quantity of the carcass and offal were more than that of younger ones in terms of quality of storage and shelf life. From the reports, majority (51.11%) of the respondents revealed that the price was between N160,000–N165,000 and most (26.67%) and only (22.22%) reported N170,000 and above and N150,000–N155,000 respectively. The old camel cow had a price range between N140,000 and above; N130,000–N135,000 and N120,000–N125,000 as revealed by 64.44%, 20.00% and 15.56% respectively. According to the reports of Guliye *et al.* (2007), camels serve as source of food, cash income, transports means and have significant cultural functions to pastoral communities dominating the semi-arid and arid lands.

Table 4 shows the constraints of camel marketing in the study area. Lack of weighing devices in our livestock markets

is a major constraint as indicated by the majority (53.33%). FAO, (2002) reported that livestock marketing in most of the tropical countries is still practiced in a traditional ways. Physical outlook of an animal is the major point of consideration other than weight among others. Most (46.67%) indicated inconsistency in the pricing. An animal purchased on the same market day may drop in price within an interval of hours. They equally indicated that interests from the dealers and middlemen as a serious constraint. Dealers and middlemen determine the price of animals. Seasonal variations were also proved to be one of the constraints in camel marketing. During early rainy season, there was a high demand for matured male camels by crop farmers to be used during rainy season for crop production as revealed by the majority (40.00%). In the late rainy season, a demand for camel heifers was high because of the breeding season which is normally between

Table 4: Constraints of camel marketing in the study area

Parameters	Frequency	Percentage
Pricing		
Inconsistency	21	46.67
Weighing devices	24	53.33
Total	45	100.00
Season		
Early rainy season	18	40.00
Late rainy season	10	22.22
Early dry season	11	24.45
Late dry season	6	13.33
Total	45	100.00
Acceptability		
Locally consumed	12	26.67
Widely consumed	33	73.33
Total	45	100.00
Festivities		
Eid-El-Fitr	11	24.45
Eid-El-Kabir	29	64.44
Others	5	11.11
Total	45	100

Source: Field survey 2015

November to March (Aichoni and Jeblawi, 2007) as indicated by (22.22%) of the respondents. In the early dry season, most of the females that did not conceive during the breeding season and the older males and females were culled as indicated by 24.45% of the respondents and it is in agreement with the Mahmud (2010) who reported that camel herders have a strategic ways of culling-out their animals for sales on seasonal basis. However, in the late dry season, 13.33% revealed that camel herders normally reduce the number of their camels in order to arrest the situation of feed shortage. Karachi *et al.* (1992) and Neumann (1999) reported that one of the major constraints of camel production in the arid lands is feed especially during the hot dry seasons. Camel meat is not widely accepted or consumed. Cattle are transported from north to the south on daily basis for human consumption while camel consumption is restricted within northern region as revealed by the respondents for 26.27% and 73.33% respectively. In the southern part of Nigeria, camel meat is not widely accepted probably because of unavailability, adaptability or lack of awareness Ghude *et al.* (2012). During Eid-El-Kabir, animals, most preferably rams are slaughtered for sacrifice followed camels and cattle in order of preferences. Majority (64.44%) of the respondents indicated a high demand during Eid-El-Kabir with 24.45% and 11.11% indicating Eid-El-Fitr and other festivities respectively.

Conclusion

The study shows camels' major source to Mai'adua livestock market was from Ternout, Niger Republic and the major destination was Kano main abattoir for slaughtering. There is a widely acceptance of camel beef consumption in far northern states of Nigeria. Camel pricing resemble

that of sheep, goat and cattle. There was no provision of using weighing scales to determine the price using weight. Seasonal variations determine the demand of the camels' categories by various costumers except that butchers purchased both male and females depending on the availability of camels in the market. The study further revealed the inconsistency of price and price variations according to the status of the camels. Little intervention by expertise and government will positively bring about change in the system.

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