

## **Current beef production characteristics in Mubi, Adamawa State, Nigeria**

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**Target Audience:** Beef Producers, Animal Breeders, Animal Protein Consumers

### **Abstract**

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*The objective of the study was to survey the current beef production characteristics in Mubi, Adamawa State, Nigeria in order to adopt new modern technologies for quality output. One hundred (100) beef producers were randomly selected for interviews and discussion on beef production characteristics. Data generated were subjected to descriptive statistics to explain the trend of beef production characteristics in the study area. Beef are produced in the area majorly by pastoralism (75%), home fattening (15%) and government institutions (10%). Therefore, beef production in the study area and Nigeria, in general, is predominantly controlled by pastoralists who still use traditional methods with little or no modern technologies. As such the producers and the end consumers do not get the desired value for their efforts. It is recommended that, since beef production is not isolated from national and international political and socio-economic policies, the interactions between the producers and broader sectors should be taken into consideration in order to generate holistic and reliable data that would inform effective interventions.*

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**Keywords:** Cattle, Fattening, Characteristics, Mubi, Nigeria

### **Description of Problem**

Beef production in Africa and Nigeria, in particular, has been linked to pastoralism with only few entrepreneurs doing cattle fattening as an additional source of income. The world has 1.468 billion head of cattle, many of which are used for dairy and draft with beef production being only by-the-way (1). All dairy and draft cattle end up as beef but not all beef cattle end up as dairy and draft cattle. There is no specific type of cattle produced mainly for beef in Africa particularly Nigeria unlike the veal and baby beef produced in countries like North and South America, Australia and New Zealand (1). Most of the cattle produced in Africa are dual-purpose with no stratification and speciality in the industry.

All the cattle produced in Africa attain maturity age of two and above years before they are slaughtered and considered good beef for human consumption. Consumption of veal or baby beef is not common and sometimes, considered abnormal in the African society. Most of the carcasses of calves recovered from the abattoirs or as a result of mortality after few months of calving are either thrown away or processed for feeding pet animals. Africans especially, Nigerians prefer meat of the matured cattle with good fats cover that is tough enough for chewing than soft and juicy beef from veal or calves.

In 2008, Nigeria had over 14.73 million cattle consisting of 1.47 million milking cows and 13.26 million beef cattle. Less than 1% of

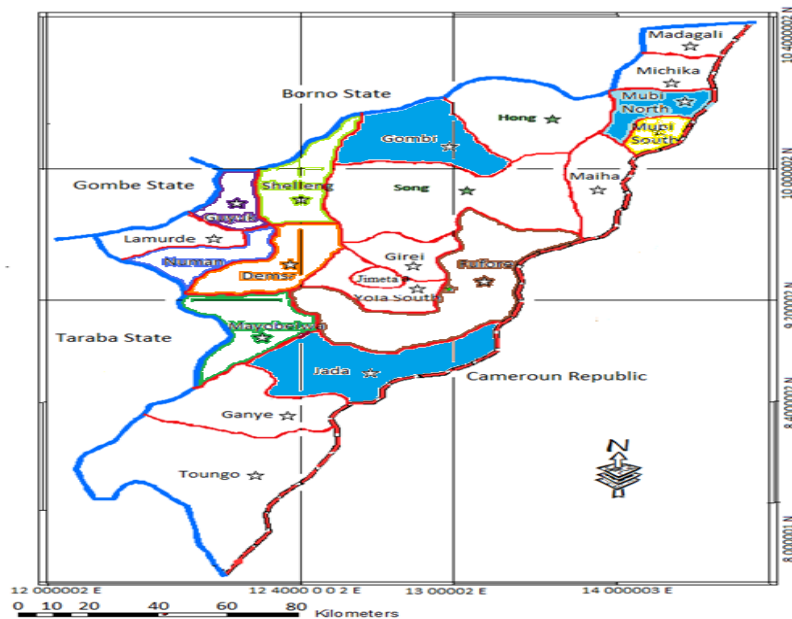
this population is managed commercially while the remaining ones are managed traditionally (2). Under this system, there is the use of indigenous methods in all aspects of cattle production including marketing and health management (3). This tilt towards the traditional management will have grave implications on beef production, commercialization of cattle products and price determination. The objective of this study was to survey the current beef production characteristics in Mubi, Adamawa State, Nigeria in order to adopt new modern technologies for quality output.

## Materials and Method

### The Study Area

Mubi is located at the Northern part of old Saradauna Province, which now forms Adamawa North Senatorial district as defined by (7) as shown in Figure 1. The region lies between latitude  $9^{\circ} 30''$  and  $11^{\circ}$  North of the Equator and longitude  $13^{\circ}$  and  $13^{\circ} 45''$  East of

Greenwich Meridian. It has an altitude of 696 meters above sea level with an annual mean rainfall of 1,220mm and a mean temperature of  $15.2^{\circ}\text{C}$  during harmattan periods from November to February and  $39.7^{\circ}\text{C}$  in April (11). The town essentially has a mountainous landscape transversed by River Yedzaram and many tributaries. Mandara and Adamawa Mountains form part of this undulating landscape (12). The Gude, Fali, Fulani and other tribes dominate the area which has a lot of pasture land. Mubi region is bordered in the North by Borno State, in the West by Hong and Song LGAs and in the South and East by the Republic of Cameroon. It has a land area of about 4,728.77  $\text{km}^2$  and human population of about 759,045 (8, 13). It has an international cattle market linking neighbouring countries such as Cameroon, Chad, Central Africa, Niger, Mali and Senegal to Southern Nigeria where cattle are consumed.



**Figure 1:** The Map of Adamawa State Showing the Study Location in Blue and Yellow Color

### **Selection of Respondents and Sampling Design**

The research covered a period of 22 months (January, 2017 to December, 2018), during the survey, visits were paid to beef fattening sites, government institutions and Mubi international livestock market where respondents were identified. The objective of the study was explained to them and their permission obtained to participate in the study. Actual participation in the study was based on the willingness of respondents.

### **Data Collection**

One hundred (100) beef producers were randomly selected for oral interviews, discussion and physical observations on beef production characteristics. Structured questionnaire were developed in English Language and used to collect information on beef production systems, socio-cultural characteristics of all the stakeholders. Where a producer did not understand English, vernacular languages were used.

### **Data Analysis**

Data generated from the survey were subjected to descriptive statistics using manual computation such as frequency distribution, percentages and means to explain the socio-cultural characteristics of all the stakeholders in the study area.

## **Results and Discussion**

### **Socio- Cultural Characteristics of Beef Producers in Mubi**

Table 1 highlights the socio-cultural characteristics of beef producers in Mubi, Adamawa State, Nigeria.

#### **(a) Age Distribution of Beef Producers**

Table 1 presents the results of beef producers based on age group which indicates

that, seventy five percent (75%) are between the ages of 20 and 50 years, while twenty five percent (25%) fall within the age group of 51 years and above. This implies that, youths are more engaged in the business beef production in the study area. This is, also, possible because of the hectic and tasking nature of the business which requires enough strength characterized by a lot of brain work from the production to the end consumers.

However, the aged (51 years old and above) can also, successfully participate in beef production to earn a legitimate living with a little assistance from the young people. The results of this study agreed with the report of (14) which stated that, younger people are more actively involved in the cattle business in Africa.

The results, also, corroborated that of (15), who reported similar findings of 41 to 50 years old as major ages of beef producers in Akure, Ondo State, Nigeria. This means that, majority of the beef cattle producers in Nigeria are still young and are within the active working class. This is, however, expected to influence their productivity and efficiency in the rigorous and energy sapping beef production business.

#### **(b) Sex Distribution of Beef Producers**

Table 1 revealed that, about ninety five percent (95%) of beef producers in the study area are male, while only five percent (5%) are female. This was, also, possible because beef production business in Africa and Nigeria in particular involves physical activities like struggling and wrestling to control the cattle using sticks and robes. The business is full of risk and hazards as some animals are wild and dangerous. In addition, the Northern Muslims, which form the largest population of the beef producers, do not allow their wives to go out for such hard business, as reported by (16).

**Table 1: Socio - Cultural Characteristics of beef producers in Mubi**

Parameter	Frequency	Percentage (%)
<b>(a) Age distribution (in years)</b>		
20-50	75	75
51- above	25	25
<b>(b) Sex distribution</b>		
Male	95	95
Female	5	5
<b>(c) Marital status</b>		
Married	85	85
Single	10	10
Divorced	5	5
<b>(d) Qualifications</b>		
W/Education	10	10
Nomadic/Arabic	90	90
<b>(e) Experience</b>		
5 -15	85	85
16 – above	15	15
<b>(f) Tribal distribution</b>		
Hausa/Fulani	95	95
Others	5	5
<b>(g) Religious affiliations</b>		
Islam	85	85
Christianity	10	10
Traditional	5	5

**Source:** Author’s data analysis

**(c) Marital Status of Beef Producers**

Table 1 shows that, eighty five percent (85%) of the beef producers in the study area are married, ten percent (10%) single, while five percent (5%) divorced. This shows that, majority of the beef producers are responsible Nigerians doing their lawful business to earn a living and support families.

**(d) Educational Qualifications of Beef Producers**

Table 1 presents the educational qualifications of beef producers in the study area. The results indicate that, ninety percent (90%) had Nomadic/Arabic education, while only ten percent (10%) had Western education. This implies that, majority of the producers lack formal education because of their tribal and religion affiliations which do not encourage Western education.

The results were in agreement with the report of (20) who reported similar findings in Mubi South L.G.A., Adamawa State Nigeria. However, the results are in contrast with (21), who reported more beef producers with Western education than those with Qur’anic education in Gombe State, Nigeria.

**(e) Experience of Beef Producers**

Table 1 shows that, all the producers had enough experiences in the business with eighty five percent (85%) having 5 - 15 years, while fifteen percent (15%) had 16 years and above. This also implies that, many of the producers have been in the business for a long period of time and it is a true reflection of their ages as majorities are youths. The results corroborated that of (20), who reported similar findings in Mubi South L.G.A., Adamawa State Nigeria.

**(f) Tribal Distribution of Beef Producers**

The results show that, ninety five percent (95%) of beef producers in the study area are from Hausa/Fulani and Zuwa Arab tribes, while only five percent (5%) formed the other tribes, as shown in Table 1. This is because in the time past, people from other tribes considered beef production as a lazy man's business and that it is only relevant to those who herd and produce cattle. It was also observed that, Hausa-Fulani and Zuwa Arab men always try to block other tribes from knowing the secret and joining the business.

The few beef producers recorded by other tribes in this study are those categories of people who do not have alternative business; otherwise they would have opted for other businesses. Most of them serve under their masters as apprentices with little or no capital of their own.

**(g) Religious Affiliations of Beef Producers**

The results as shown in Table 1 depict that, eighty five percent (85%) of the beef

producers are Muslims, while ten (10%) and five percent (5%) are Christians and traditionalist, respectively. This is quite possible because of their tribal status which indicated that, most of them are Hausa-Fulani and Zuwa Arab by tribe and are well known for Islamic religion.

**Beef Production Dynamics**

The commonly practiced systems of beef production in Nigeria include: pastoralism, grass and concentrate fattening at homes and government owned institutions. Cattle ranching are usually practiced by government owned institutions and big time politicians who consider keeping cattle as a hobby and sign of economic status in the society. Most of the ranches in Nigeria are for dairy production and to some extent increasing the number of stock in the herds. Animals are culled or slaughtered for beef under ranching when they are only too old or sick to manage.

**Table 2 Beef production systems in the study area**

	<b>Production Systems</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>A</b>	Pastoral	75	75
<b>B</b>	Institutions	10	10
<b>C</b>	Home fattening	15	15

Source: Author's data analysis

**a. Pastoralism**

The results in table 2a show that, seventy five percent (75%) of the beef cattle in Mubi are produced by pastoralists in a traditional way. This implies that, pastoralists constitute a major socio-economic group in the country

(22). These nomads own more than 93% of the country's estimated 15.3 million cattle population (2). Pastoralist livestock industry is therefore, the country's reservoir of animals for slaughter, milk, manure production as well as draft power as shown in Figure 2 (23; 24).



Figure 2: Beef production by Pastoralism  
(Source: gjournal.org)

**b. Institutions**

The results show that, ten percent (10%) of the beef cattle managed/reared in Mubi are from institutions of higher learning who keep animals for research and teaching purposes. The animals from this group are usually

healthier and eye catching because of their shining looks and good body conformation compared to the ones produced under pastoralism as shown in Figure 3. The results agreed with the report of (24).



Figure 3: Beef production in the Federal Polytechnic Mubi, Adamawa State, Nigeria (Source: gjournal.org)

**c. Home Fattening (Grass and Concentrate Fattening)**

However, fifteen percent (15%) of the beef cattle found in Mubi are produced through grass and concentrate fattening at homes and fattening sites. In grass fattening beef production programme, producers in northern Nigeria usually buy adult bulls that have good characteristics of gaining weights within three to four months of grazing. The animals are usually bought during the early raining season between April and June. At this period, the animals are cheaper because of the lost weights and body conformation due to the critical period of forage and water scarcity during the dry season. The animals are bought with the aim of grass fattening them during the late raining season (July to September) when forage and water resources are in abundant. They are dewormed; administered multivitamins to boost their appetite and utilize forages better to gain weights between three to four months. This also corroborated the report of (24).

This operation is usually done to target the festive periods of the year (Christmas and New Year) celebrations. Animals that are bought for example fifty thousand (N50, 000) naira each after just three to four months of grass fattening, are taken to the northern livestock markets and sold at about one hundred and twenty thousand (N120, 000) naira each. The

animals are fed basically forages with few cases of supplementary feeding. The animals are then collated and assembled for shipment by cattle dealers to southern livestock markets where they are sold between one hundred and fifty (N150, 000) and two hundred thousand (N200, 000) naira each.

Concentrate fattening of beef cattle is basically done by the big time business men in northern Nigeria. The producers buy mostly adult young bulls of 2 to 4 years that have good characteristics of gaining weights within three to four months of feedlot operation. The animals are confined or tethered under the sun and fed concentrates such as cotton seed cake meal, groundnut cake meal, palm kernel meal, cowpea husk, groundnut straws, corn chaffs, corn brans and other crop residues, molasses, by-products and mineral resources. They are also given antihelminthes, multivitamins and plenty of water. They are kept for three to four months under good management and are sold especially to cattle dealers who ship them down to the southern markets. This type of production is worthwhile considering the inputs and the return at the end of the operation. It is a business worth trying with less space requirements and risk as shown in Figure 4. These findings are in agreement with that of (24).



Figure 4: Concentrate Fattening of Beef Cattle in Mubi, Adamawa State, Nigeria (source: field survey)

### Conclusion and Applications

1. Beef production in Mubi, Adamawa State is predominated by experienced, married, male Hausa-Fulani/ Zuwa Arab Muslims aged, mostly, 20 – 50 years.
2. The producers have limited western education, indicating limited change in the socio-cultural status of actors in the face of a rapidly changing production environment, exemplified by the shrinking facilities and capital resources.
3. Beef production dynamics involves pastoralism, institutions and home fattening.
4. It is, therefore, concluded that, beef production in the study area is a profitable venture if special consideration is given to tackle the bottlenecks militating against the smooth production, transactions and efficient marketing processes.
5. The following recommendations were made to aid in improving the beef production dynamics in Mubi, Adamawa State, Nigeria.
6. Government should intensify efforts to encourage cattle production by providing modern breeding facilities such as artificial insemination (AI) stations, loan or credit incentives through commercial banks.
7. There should be improved security in the production zone. Government should encourage the herdsmen to settle in one place by establishing grazing reserves, range land or pasture lands.
8. There is need for the provision of modern cattle marketing facilities like standard weighing scales, loading spaces, and grades in the markets to help in transforming the market from the current traditional system.
9. Government should provide more veterinary facilities to minimize incidence of diseases and parasites.

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