

## **Socio-Economic Benefits of Livestock Rearing In Maiduguri Metropolis, Borno State, Nigeria**

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### **Abstract**

The capital of Borno State is having its shares of increasing number of ruminant livestock. Maiduguri Metropolis has narrow breathing space for livestock rearing; nevertheless, it was practical that quite a lot of families in the city do engage in livestock rearing, with all its associated challenges along major streets. Bolori, Galtimari, Gwange, Maiduwuri Maisandari, Shehuri North and Yerwa are the administrative wards that benefit from variety of species of livestock in the quest of economies and to livelihoods. The scope of the study includes Cattle, sheep and goats. In addition to their output used for home consumption, make considerable cash contributions to household income when their products are sold. It is also a source of revenue to the native council. 64% of livestock rearers use animal wastes, it is a primary occupation to the youth at fattening centres and secondary occupation to the livestock owners. It also plays significant role in the cultural set up among the inhabitants. The predictor level indicates that livestock significantly contributes to the income of the rearers. The regression analysis reveals that 40.8% of the livestock rearers' income is derived from the practice. The ANOVA result has also attested that livestock rearing is significantly contributing to the income of the rearers. Therefore, it worth practising provided it is inconsonant of the master plan of the study area.

**Keywords:** Livelihoods, Employment generation, Livestock products and Maiduguri.

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### **I. INTRODUCTION**

Maiduguri's rapid urban population growth and demand for livestock products has provided a boost to urban and peri-urban livestock rearing. Obviously, urban livestock rearing is a secondary occupation but benefits the practitioners directly. It also provides a way of diversifying livelihood activities that are accessible to vulnerable groups. Livestock also provide locally produced food products for people living near the livestock keepers. Informal food markets can, however, increase the risk of the spread of zoonotic diseases in densely populated cities. There are many other issues such as access to clean drinking water, product safety, environmental contamination and the risk of disease transmission that need to be addressed. Urban domesticated livestock creation is much of the time related with crop cultivating and is regularly a multi-livestock varieties business. Relationship of the two endeavours in a single unit permits domesticated animals keeping families to reuse creature squanders, normally as harvest compost. Unseemly removal or capacity of animals waste, for example, revealed fertilizer piles and slurry pits and unloading in roads are further dangers. Metropolitan animals ranchers for the most part keep more than one sort of animal albeit an "optional" species might be poultry as they are well ready to search for their feed, particularly in the event that they are of the nearby indigenous sort.

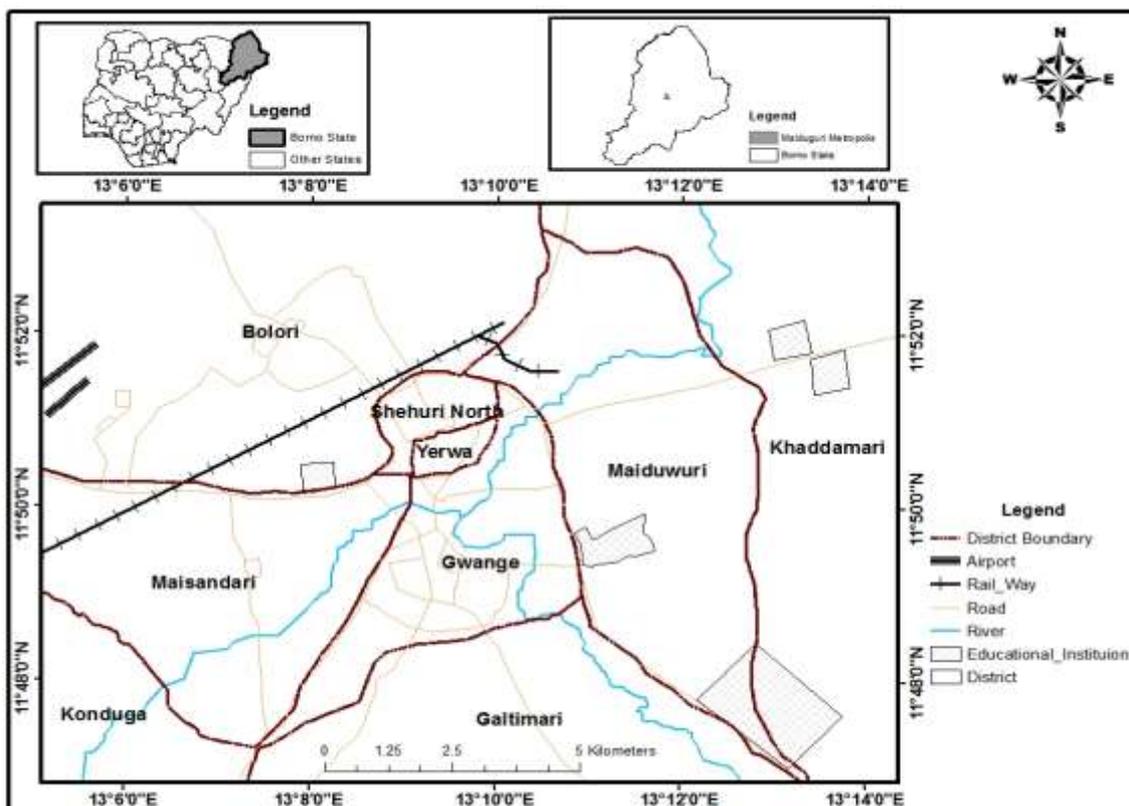
The dominant species in terms of numbers depends to a large extent on the (rural) background of the owners and the market potential. All these animals place great pressure on feed resources. Feed is obtained from a wide variety of sources but often is a major constraint to "intensification". Thus, Groundnut haulms, brans, husks are obtained from peri-urban and nearby rural areas. Crop residues are obtained in a similar manner or derived from the owners' plots if cereals are grown. Various communities have evolved strategies to make maximum use of feed resources.

The expansion of the practice is propelled by fast demand for livestock products; it is speeds up by population growth, urbanisation and increasing incomes. This has been the case in Africa particularly Sub-Saharan Africa. In the Northern part of Nigeria, environmental factors support a long-standing tradition of pastoral rearing and this practice comes with an attendant problem. The need to promote a culture of urban

livestock rearing is even more imperative as large parts of the population are imbibing the culture of livestock keeping. The case of Maiduguri, the Borno State capital is no less a difference. With a population density of 5,539 persons per square kilometre in 2015, reconnaissance survey for this study found out that Maiduguri Metropolis has limited space for livestock rearing; however, it was observed that several families in the metropolis engage in livestock rearing, with all its associated challenges along major streets. It was also realised that misunderstanding of various types does erupt between livestock owners and adjacent occupants.

## II. RESEARCH METHODOLOGY

The study area is Maiduguri, the capital of Borno State. Present day Maiduguri is derived from the twin settlements of Yerwa and Maiduwuri. Maiduguri is roughly circular urban area of 208 km<sup>2</sup>. The area has 11°46'18" N to 11°53'21" N as its latitudinal spread and 13°03'23" E to 13°14'19" E as its longitudinal extension.



**Figure 1. Maiduguri Metropolis showing the Administrative Districts**  
**Source: Office of Surveyor General of the Federation (OSGOF, 2020).**

Based on a projection of the 2006 population census, the area had a population of 1.2 million people as at 2014 National Population Commission (NPC). (2015). It shares boundary with Konduga Local Government Area in the west, Jere in the east and north respectively. The metropolis is divided into seven (7) administrative districts (Wazir, 2012). These are Bolori, Gwange, Galtimari, Maisandari, Maiduwuri, Shehuri North, and Yerwa. Yerwa and Gwange which are considered as high-density residential area; Shehuri North is a medium density area and Bolori, Galtimari, Maisandari and Maiduwuri are said to be low-density area (Wazir, 2012). New residential quarters are also springing up at all the cardinal points of the metropolis. These include among others settlements like Bakassi, Murumti, Gawo Mai Lalle, Fo'ori, Kuseri and Goni Kachallari.

According to Fannami and Muazu (2012), it is not a prestige to own livestock by urban dwellers and the keeping of goats in particular is loathed and are owned mainly by women. The term *malumshi* (shepherd or herdsman) refers to the downtrodden members in Maiduguri who engage in goat rearing.

Key Informants Interviews (KIIs) were conducted with fourteen (14) ward heads; that is, two ward heads from the seven districts. The KIIs focused on the relationship between livestock rearers, adjacent land users such as traders, crop farmers and the traditional institutions. Participant observation conducted enabled the researcher to gain an insight into the detailed processes of urban livestock practice in the study area. This also affirmed and corroborated some of the data that were generated using the interview schedule. In addition, two KIIs were conducted in each of the wards of the seven districts. The discussions were held with local elites,

opinion leaders who were non-rearers of livestock rearers. It was meant to establish their relationship with livestock rearers living in the same communities with them.

FGDs were held with the members of Al-Hayah Cattle Breeders Association of Nigeria (AHACBAN) and the Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) at their various offices. The discussions were on the role of the association in the welfare of its members as a social organisation. The FGDs were to ascertain the level of peace and understanding amongst the residents. This is in line with the view of Abdulrahim (2004), Adamu (2007), and Kagu (2008) that community members are source of vital information, because such people are knowledgeable of their surroundings and that FGD's greatly assist in learning how people are directly or indirectly involved in managing the resources of the environment. In addition, Kagu (2008) asserted that information gathered through FGDs helps in understanding some historical facts on the subject matter of any study. Each of the FGDs comprised of at least eight persons between the ages of 30 and above. The choice of this category of people was to get a history of livestock rearing in Maiduguri metropolis and its long-standing relationship with adjacent land users. All the respondents were seated in a semicircular pattern while the author sat at the centre and faced all the respondents. The seating arrangement adopted was arrived at in order to capture the response of the entire respondent within shortest possible time.

Ethical permission was sought from wards heads, the Civilian Joint Task Force (CJTF) as well as the military formations in all the districts before the commencement of the fieldwork. However, during data collection, there were reservations by the residents in some areas especially at Bolori District where most of the inhabitants thought the exercise was an attempt to detect mines, or it was a Non-Governmental Organisation (NGO) taking field data for the distribution of relief packages. The community leaders had to intervene to make their subjects understand the motive of the research.

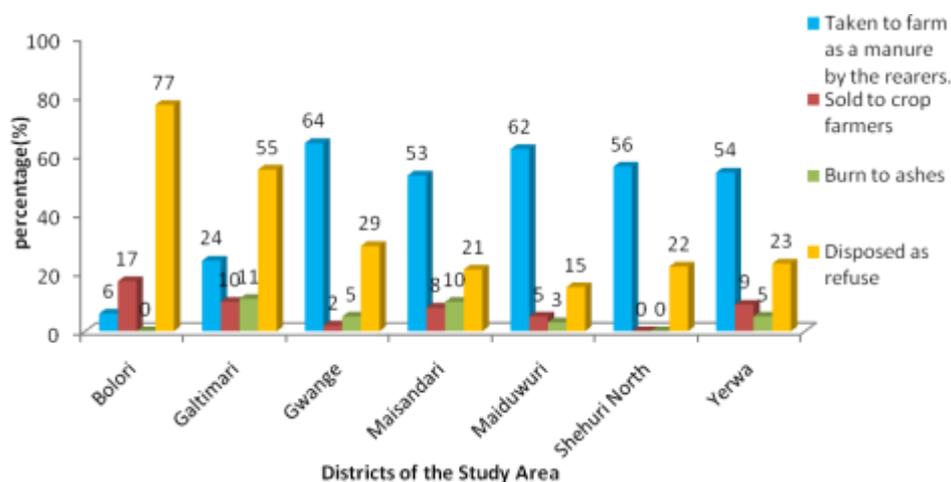
### Social Benefits of Urban Livestock Rearing

Under this subheading, the social benefits of livestock rearing include the following:- source of protein, a sign of prestige, source of manure as well as employment opportunities to the teeming population of the metropolis. They are discussed below.

#### Source of Protein

Exploratory discussion with the residents of Maiduguri metropolis revealed that 97% of the livestock rearers and 62% non-rearers in the metropolis indicate that rising incomes and increased urbanisation are among the factors that influence the consumption of meat by residents of the metropolis in order to meet up with the growing demand. This is probably the reasons behind livestock rearers taking up vacant areas around places like Custom, Maiduwuri, and Bulumkutu neighbourhood in Maiduguri metropolis. This finding tallies with that of Henschion, Hayes, Mullen, Fenelon, and Tiwari (2017) that the quantity of meat demanded by consumers in developing countries is expected to double by the year 2020 and as well empty spaces are occupied for the production. Furthermore, the finding is also in tandem with that Mariod and Fadul (2013). Cattle are the main sources of protein in Nigeria. Cows produce milk, hides, and bones, which are used in many firms (Mariod and Fadul, 2013). The fattening of cattle to supply the protein needs of the population results in a large number of specialists being employed.

#### Usage of Manure Produced from Livestock Rearing



**Figure 1 Usage/Management of Manure**

Source: *Field Survey, 2020*

Figure 2 reveals that virtually in all the districts, 64% of livestock rearers use animal wastes, dung and droppings as manure for farmlands and 31.2% out rightly dumped the manure in the streets, into pits, nearby bushes, garbage sites or open space. Few of the respondents reported turning the waste into ashes as a form of management strategy. This findings corroborate Muhammad (2008). Muhammad(2008) asserted that manure is a source of revenue for livestock rearers as it is sold to the crop farmers.

### **Livestock Rearing as a Source of Employment in the Metropolis**

Averill (2017) argued that livestock is an important national resource in most developing countries. More than half of the suburban population of Iran depends largely on livestock as a means of livelihood. Livestock rearing is a source of employment the urban population. Participant observations revealed that the majority of the livestock are kept in pens for fattening. They are managed by a specialist in the rearing of livestock. Few livestock were seen roaming the streets of Maiduguri metropolis with a herdsman or a shepherd. At the specialized centres, youth and agile men were observed rearing several cattle and sheep.

According to interviews conducted at the fattening centres, it was revealed by a key informant that:

..... “the employees of the fattening centres are paid ₦8000:00 per cattle throughout the fattening period. Depending on the quality of cattle, the fattening period ranges from five (5) to eight (8) weeks. In the case of sheep, the service rendered cost between ₦ 1000 and ₦ 2000 per fattening period” (KII. Ibrahim Abba, Maiduguri Cattle market 27<sup>th</sup> -05 - 2020).

Fattening of cattle is mostly done during the dry season while fattening of sheep is mostly done during the month of Ramadan up to Dhul Hajj, after which they are sold off during Id El Kabir. Other livestock rearers keep the stock for the sake of prestige and 'spiritual protection'. In this case, labour for the upkeep is mostly sourced from household members.

The salient roles noticed during the research were drug administration and treatments of minor ailments handled by people that were not trained in veterinary care. This finding corroborates what Lawal-Adebowale and Alarima (2011) who found that most of the livestock rearers considered patronage of trained veterinary services as expensive and thus resorted to ethno or other alternative means of treating their livestock. Complicated ailments and surgical cases are, however taken to Ali Modu Sheriff Ultra Modern Veterinary Hospital (AMSUMVH). The research team headed to the AMSUMVH to ascertain the services rendered by the health care facilities to the livestock rearers. The familiarization tour lasted for an hour. KII session with the Principal Medical Officer (PMO) was conducted by the researcher who disclosed that:

..... “the veterinary hospital came into being in 2006 with the aim of meeting the growing needs of livestock rearers within the metropolis and suburbs. Hitherto to the insurgency, it also handled referral cases from local government areas. It has fully equipped laboratories, outpatient clinic, pharmacy as well as postmortem unit” (KII with PMO, AMSUMVH, Maiduguri).

On the common ailments handled in the hospital, the PMO stated that:

....."all livestock diseases irrespective of complexity are handled in the hospital. The most common diseases that are diagnosed include brucellosis, tuberculosis, and canine distemper for the mammals. In addition, parasites detected and treated from the faeces of the livestock include ringworm, roundworms, among others. New castle, coccidiosis and the common cold are diseases of the birds. These diseases are common to the tropical lands and prospects are bright" (KII with PMO, AMSUMVH, Maiduguri).

### **Cultural Significance of Livestock Rearing in Maiduguri Metropolis**

KII conducted with the livestock rearers and the non- rearers reveal that livestock rearing is culturally defined. Interview held at various wards of the metropolis. The most insightful revealed that:

.....”there are Kanuri clans that are strongly affiliated to the rearing of livestock. These clans include Bodawi and the Kwoyam. It is a norm among the aforementioned clans to keep livestock wherever they find themselves. It is a culture and tradition that binds ancestors with their living lineages. There is a proverbial statement that “one is not a true Bodawi or Kwoyam if he or she dies without leaving single livestock to the heirs”. Even crawling kids own livestock. In addition, the Fulani's consider livestock as life support. They love livestock and depend on them for daily milk. Although the Fulani are also bound to their livestock, the relationship is not as strong as that of Kanuri” (KII, Maisandari wards, 14<sup>th</sup> -05 to 22<sup>nd</sup> -07-2020.).

During discussions with the ward heads, it was discovered that they do offer sheep and cattle to their superiors (district heads) during celebrations to strengthen and foster their relationship with them. In return, the superiors give them traditional gowns. Such gifts are seen as symbols of building a strong relationship with their ward heads and are termed as 'the scent of life'.

### **Economic Challenges of Urban Livestock Rearing**

Due to population growth and rising demand for animal produce livestock rearers are expected to intensify production. This is done carefully by managing inputs such as feeds and drugs so as to minimize wastes. Water and livestock feeds are discussed in the following sub-sections.

#### **i. Access to Water for Livestock Rearing**

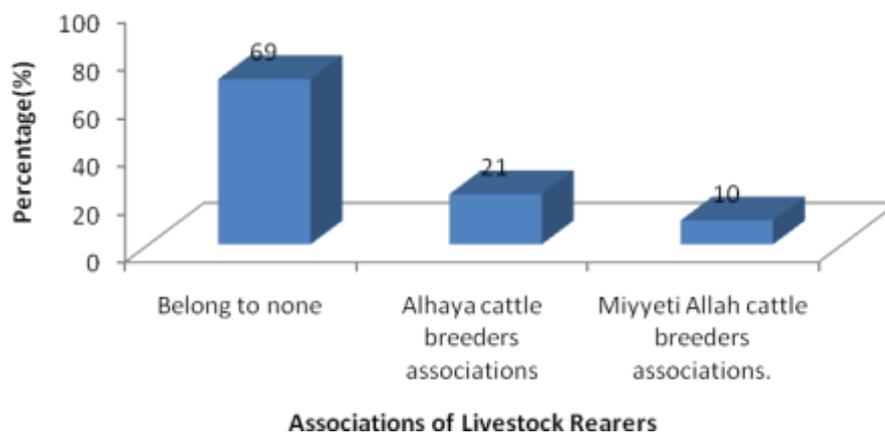
As explained in Chapter Three, the metropolis is located within an area that records low rainfall (Iloeje, 2009). The water scarcity situation worsens during the dry season when public water-supply can hardly keep up with demand. Discussions with livestock rearers reveal that where public water supply is inadequate, residents have sunk wash boreholes in order to meet in the water requirement. Boreholes have been sunk through joint a venture arrangement by those concerns in order to meet the water demand of their livestock as seen in Maiduwuri and Fariya areas of the metropolis. At some locations, reservoirs have been constructed, and water is purchased from water vendors. According to those engaged in livestock rearing on a small scale, the supply of drinking water is guaranteed through local water sellers as purchasing water for the purpose of rearing livestock from distant sources is not economical. This finding conforms with the assertion by Drechsel and Dongus (2010) who concluded that livestock rearing sites in Sub-Saharan face constraints of water supply during dry season, thereby making the operators operate at low profits.

#### **ii. Access to Feed for Urban Livestock Rearers**

Discussions with the rearers revealed that prices of livestock feed are within reach but vary with distance. Those closer to Maiduguri Flour Mills purchase feed (wheat offal) at a relatively cheaper price than those coming further away. Likewise, those living close to Maiduguri cattle or Bolori stores purchase groundnut haulms, beans husk and maize bran at prices lesser than those from far locations. Feeds needed for the upkeep of livestock reared in the metropolis is available throughout the year. However, it appreciates as the harvest period fades.

### **Membership of Livestock Rearers Association**

Voluntary associations represent one of the main arenas for the interaction of people with like minds or common a goal. Associations create networks that allow social trust to spread throughout society. They are expected to generate civic engagement and to further the ability of their members to influence public affairs by being a member. Livestock rearers in the study area were also asked whether or not they belong to any social organization and the responses are presented in Figure 7.3.



**Figure 2 Membership of Associations**

Source: *Field Survey, 2020*

Figure 3 reveals that 69% of the livestock rearers are not members of any livestock rearing associations. This might be linked to the heterogeneous nature of the study population, coupled with their educational status. The study revealed that 88% of the respondent had attained either secondary or tertiary education; their level of awareness is considerably good and can to resist any attempt to impose association they are not interested on

them. Livestock rearing association is recognized as voluntary by most rearers. Some 31 % of the respondents are members of a social network aimed at unifying people belonging to the same or similar trade group. There are two major voluntary livestock associations. They are the Alhaya Cattle Breeders and Miyetti Allah Cattle Breeders. According to the executive officers of the two associations, both are meant to foster unity among members with no religious, or ethnic affiliation. The study revealed that 75% of the 31% of respondents who are members of associations opted to be because of social security. On the advantage of being a member of the livestock rearers association, Mallam Ibrahim Abba of Maiduguri Cattle Market disclosed the following as the positive role the organisations play to its members:

..... "belonging to the association provides social security to eventualities such as harassment by law enforcement agents, theft of livestock at rearing sites that are mostly unexpectedly experienced by members. From the above statement, the association adequately intervenes to free or bail its innocent members from law enforcement agents especially at this period of insurgency when cattle rustling or other livestock theft are rampant at the outskirt of the metropolis and other remote areas. As a conclusive statement, Abba said, is it beneficial" (KII. Ibrahim Abba, Maiduguri Cattle market 27<sup>th</sup> -05 -2020).

The above statement shows that being of member of either Miyetti Allah Cattle Breeders or Al-Hayah Cattle Breeders is beneficial and it gave the researcher clues on FGD questions to the executive member of the association.

The FGD session for the Miyetti Allah Cattle Breeders was made up of ten (10) executive members. Information generated from the discussions also corroborated the statement made by one of the key informants. FGD with MACBAN revealed that:

..... "the Borno State Branch in general and Maiduguri branch in particular are affiliated to the mother association. It is a voluntary organisation which was formed in 1984 and registered with corporate Affairs Commission in 1986 with the aim of fostering unity among its members irrespective of religious or ethnic consideration but has a large percentage of its member from the Fulani ethnic group who are engaged in livestock rearing. In total it has more than five thousand members in Borno State" (FGD at MACBAN, Borno State Office, Bulumkutu Airport Junction, Maiduguri, 18th-08- 2020, 3:30 p.m).

On what members stand to gain logistically, supports, as well as the practical significance of proven successes or achievement, were provided. The group maintains that:

..... "among other things the association had succeeded in freeing its innocent members from the hand of security. Of recent three members of the association were freed from the hands of the security personnel during the heat of the Boko Haram. They were arrested during a mopping exercise by the Crack Division of the Nigeria Police as Boko Haram suspects but they were found to be non-members of the sect. Psychosocial support was given to the victims of such incidence" (FGD at Miyetti Allah Cattle Breeders Borno State Office, Bulumkutu Airport Junction, Maiduguri, 24th-07- 2020, 3:30 p.m).

The Al-Hayah Cattle Breeders disclosed that the local branch of the association came into existence about twenty (20) years ago. Just like the sister organisation, the association is also an umbrella body providing shade to people of like minds that are into livestock rearing. The Focus Group states that:

..... "the association stood in as a guarantor for 15 members which enabled them to secure a loan from the Borno Renaissance Microfinance LTD. This loan has gone a long way in alleviating the suffering of the distressed members that were affected by the insurgency. In addition, technical advice and assistance were handed down to new members by the experienced ones. They provide guidance on new feeding mechanism and how to manage stock during outbreaks of diseases. This is notwithstanding the fact that government intervenes whenever there is an outbreak of rinderpest, scabies, and foot and mouth diseases". (FGD, Alhaya Cattle Breeders Borno State Office, Depot Area, Maiduguri, 28th-07- 2020, 10:00 a.m).

The FGD also discussed the preference of species and why the choice in the following:

..... "they do rear different types of livestock, but the most preferred among the cattle is the *Bokoloji* because of its endurance to hardship and resistance to diseases. The *Abbore* is second in the preference list of the members. It is preferred because such species is easily fattened compared to other species. The *Ouda* is the most preferred from the sheep class. It is preferred because of its non-selectivity in consumption pattern. This non-selection to us helps in building a

strong immunity system". (FGD, MACBAN, Borno State Office, Bulumkutu Airport Junction, Maiduguri, 24th-07- 2020, 3:30 p.m).

The choice of species varies with the Al-Haya Cattle Breeders, and hold a contrary view to that of Miyetti Allah as follows:

.....“the Al-Haya Cattle Breeders group who are mostly Shuwa Arabs prefer the *Ambala* specie to other species. The specie is considered because it is considered as the trademark of the Shuwa Arabs. The *Bokoloji* is also important specie for this group of rearers’ .The *Bornoji* and *Koroji* sheep species are first and second on the preference list of our members. This association maintains close ties with the traditional ruling class and elites. The ruling class and elites mostly prefer the *Bornoji* or *Koroji*. Our adherence to the two is a strategy of maintaining our customer” (FGD, Alhaya Cattle Breeders Borno State Office, Depot Area, Maiduguri, 28th-07- 2020, 10:00 a.m)”.

From the assertions of the livestock rearers association, the conclusive statement one can make is that livestock response to the environment in terms of feeding habits are the prime reasons behind the preference of such species.

**Table 1 Model Summary of Regression**

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.714 <sup>a</sup>	.409	.408	251723.05472

a. Predictors: (Constant), X

40.8 % of their income is dependent on livestock rearing.

**Table 2 Model Summary ANOVA<sup>a</sup>**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	22635656390236.320	1	22635656390236.320	357.229	.000
Residual	21797386719590.055	344	63364496277.878		
Total	44433043109826.375	345			

**Source: Field Survey, 2020.**

- a. Dependent Variable: Y
- b. Predictors: (Constant), X

The instrumental percentage of the livestock rearing to the overall income of the livestock rearers is predicted at 0.05% confidence level. The predictor level indicates that livestock significantly contributes to the income of the rearers. The analysis reveals that 40.8% of the livestock rearers' income is derived from the practice (Table 1). The ANOVA result (Table 2) has also attested that livestock rearing is significantly contributing to the income of the rearers in all the districts of the study area. Therefore, it worth practising provided it is inconsonant of the master plan of the study area.

### III. CONCLUSION

Livestock rearing offers a wide range of socio-economic benefits to the inhabitants of Maiduguri Metropolis, Borno State, Nigeria. Livestock rearing is a primary occupation to the youth and a secondary occupation to the aged population and those engaged in other means of livelihood. Voluntarily membership of livestock rearers to association offers a social security to the youth who are mostly accused by the law enforcement agents as members of the dreaded Boko Haram Sect. The predictor level indicates that livestock significantly contributes to the income of the rearers. The analysis reveals that 40.8% (Table 1) of the livestock rearers' income is derived from the practice. The ANOVA result (Table 2) has also attested that livestock rearing is significantly contributing to the income of the rearers in all the districts of the study area. Therefore, it worth practising provided it is in consonant of the master plan of the study area.

#### The following recommendations are offered

- As large numbers of the productive age are involved in the practice, there is the need to train youth in modern livestock methods. This could be achieved by enrolling them into schemes such as N-Agric which

is a component of N-power. This will require a robust framework of testable ideas within which to collect information about the livestock rearing/environment.

- The study area should adopt programmes and policies that will encourage improved livestock rearing and animal production techniques. Ranching is a suitable method that needs to be adopted. This will halt straying or flying herding on open streets and refuse dumps. It will further control free traffic flow and the spread of zoonotic diseases.
- As the metropolis is predominantly a non-agricultural settlement, there is the need to review the obsolete 1943 Native Authority Ordinance Act to suit the present-day requirement. Bills are expected to be sponsored by the residents against urban livestock rearing in the core areas of the metropolis.

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