

SEASONAL TREND OF SLAUGHTER ANIMALS IN THE SAHELIAN ZONE OF NORTH EASTERN NIGERIA: A CASE STUDY OF BORNO STATE

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ABSTRACT

A study was carried out to assess the seasonal trend of slaughtered animals in the Sahelian zone of Borno State, North Eastern Nigeria. The slaughtered animals include the major animals consumed in the Northern part of Nigeria (cattle, sheep, goat and camels). Slaughtered records from various abattoirs within the study area were collected in the Ministry of Agriculture and Natural Resources (MANR) from (2011 - 2020). Data collected for the study were subjected to analysis of variance (ANOVA) to test the effect of seasonal interaction with years on the number of animals slaughtered over ten years period. The data were for the slaughtered cattle, camels goats and sheep records from Maiduguri abattoir between 2011-2020. The result indicated that a total of 373,417 cattle, 608,199 goats, 221,047 sheep and 84,954 camels were slaughtered in the period under review. The study also revealed that the greatest off-take of animals for either slaughter or trade occur during the long dry season in the Sahelian zones.

Keywords: Seasons, slaughter, Cattle, Camels, Sheep and Goats.

INTRODUCTION

The decision of off-take of animals for sale or slaughter is not made by one individual in the family. This is because livestock ownership among the Fulanis is diffused (with women, head of household, children etc. having specific control on individual animals). Such decisions are usually based on effective demand for non-animal goods. However, studies by (Mboho, (1981); Alaku and Igene (1983) have revealed that the greatest off-take of animals for either slaughter or trade occur during the long dry season of the Sahelian zone. It is possible that in anticipation of the shortfalls in the feed storage availability during the long dry seasons, the decision to sell off livestock is more readily reached among family members.

Livestock are therefore culled so as to reduce the flock to the carrying capacity of the land and also avert losses due to starvation, dehydration and inevitable deaths that prevail for a long period of time. The sheep, not the goats are often moved with cattle when nomads start on their seasonal migration. However, they choose to trim down their flocks sizes at this stage. (October-December) when crop residues are readily available in these areas and animals are in relatively better conditions and could command better prices than later in the dry season, when they must have emaciated considerably. Experience has shown that hunger losses can occur when the long dry season has already advanced, this probably help to swell the off-take of livestock for trade and slaughter. Another peak moment occur in April, animals involved in trade about this time of the year are mostly from neighboring countries of Chad, Niger and Cameroun. At this time also, the Sudan desert sheep are often seen in Maiduguri livestock market. The nomadic pastoralist from the drier areas just south of the Sahara migrate Southwards often to occupy the grazing lands earlier abandoned by the native pastoralist who had migrated southward at the beginning of the dry seasons (Oyenuga, (1967) and Mohammed, (1974) this situation is known to have subjected the grazing lands to perpetual overgrazing (Mohammed, (1974) and this has been identified as one of the process that encourages desertification. Ambient temperatures are highest at this time (April - May) of the year. Trekking by these nomads and their animals is often restricted to early morning and late evenings. By the said period, the soil in these areas is virtually bare and most watering points have dried up. Mortality is so high during this period that one could not go up to one kilometer without seeing a carcass or two especially of cattle. At this time the nomads are compelled to sell off as many of their animal as possible especially the weak ones. The major reason is to avert huge losses that often occur due to exhaustion, Starvation and dehydration. They also sell some animals and use the money to

purchase essential requirements such as salt and other consumer goods. However, it must be noted that seasonal variation in the off-take of livestock either for slaughter or sale is not restricted to the tropical areas (Wilson and Clarke, 1976; Alaku and Igene, 1983). There are records that the volumes of sheep available for sales or slaughter also fluctuate from season to season in the temperate regions (Alaku and Igene, 1983). The aim of this work therefore is to look at how season affects the slaughter of animals in Borno State, the Sahelian zone of North Eastern Nigeria.

MATERIALS AND METHODS

The data used for this study were the slaughtered animal records from the Maiduguri abattoir which also keep the record of all Local Government Areas. This abattoir is the largest in capacity in North east of Nigeria and animals not only from Borno State but from neighboring countries are slaughtered there. It is situated few meters away from the famous Maiduguri cattle market.

The collected data were for the slaughtered cattle, camels, goats and sheep records from Maiduguri abattoir between 2011 -2020. The years were divided into four (4) seasons as described by Alaku and Igene (1983). The first season comprises December, January and February, while the second season comprises March, April and May. The third season is made up of June, July and August, while the fourth season comprises September, October and November. The data were subjected to analysis of variance (ANOVA) to test the effect of season and the interaction with year on the number of animals slaughtered.

RESULT AND DISCUSSION

The result of this study showed that, cattle was slaughtered more in the first season (Dec - Feb) but its slaughter for the remaining three seasons were relatively low. The peak was about 150,000 metric tonnes while the least was 80,000 metric tonnes, but expressing this in metric tonnes (MT), the seasonal trend of slaughtered cattle was not statistically significant at different seasons. This was in agreement with findings of Alaku and Igene (1983).

The seasonal trend of slaughtered goats revealed that more goats were slaughtered in the second and third seasons reaching about 160 and 150 thousands respectively. The decline in the number of goats slaughtered in the first season may be as a result of increase in the number of cattle slaughtered. Also, the increase in the second and third seasons is to compensate the decline in slaughtered cattle during these periods. Processing this in MT (metric tonnes), these seasonal trends of slaughtered goats at different seasons were statistically significant. These findings were similar to those of Mohammed (1974).

The seasonal trend of slaughtered sheep was relatively constant for the four seasons but highest in the third season, probably to compensate the decline in the slaughtered cattle at that period. Expressing this in MT, the seasonal trend of slaughtered sheep at different seasons was statistically insignificant. The seasonal trend of slaughtered camels was highest in the second season reaching about 30,000 and the least was in the fourth season with about 10,000. Cattle slaughtered were at its lowest in the second season when camel was at its peak, this is to compensate for each other. This agrees with the findings of Oyenuga, (1967).

The highest slaughtered of camels at the second season is traceable to the long dry season at that period which usually led to the migration of pastoralists from Niger and Chad to Nigeria as earlier stated. The effect of slaughtered camels was statistically significant at different seasons. As stated earlier, the seasonal variation for the number of slaughtered goats is significant. The second season is highest with the mean of 84.425 ± 3.315

This second season is dry period in which it is difficult for the stock owner to feed their animals in this semi-arid regions, therefore a lot of stock are usually offered for sales at that period to reduce the stock for adverse effect of long dry season. The third (humid time) and fourth seasons were not statistically different. The least was first season (harmattan period) with mean of 66.069 ± 3.960 .

From the result presented, it is clear that the effect of season on slaughtered camels is highly significant in the second season with mean of 327.367 ± 30.928 (Table 5). As stated earlier, the second season (dry period) is characterized with long dry periods in which pastoralist from Chad and Niger migrated to Nigeria (Borno State) in search of pasture. The result of this is that camels were usually sold at that period to meet some immediate domestic needs. The effects of first and third seasons were not statistically different while the least was the fourth season with the mean of 71.728 ± 10.910 . At that period pastures were still available.

Table 1: Total number of Cattles, Goats, Sheep and Camels slaughtered (2011- 2020)

Year	Cattle	Goats	Sheep	Camel
2011	50,712	48,662	10,651	5,318
2012	45,247	44,383	5,151	3,001
2013	48,445	59,667	18,713	14,094
2014	38,568	56,784	27,957	19,284
2015	21,968	45,245	25,506	11,386
2016	28,054	71,332	21,971	6,828
2017	31,572	68,937	30,365	8,597
2018	31,903	61,332	27,971	4,507
2019	36,460	82,570	30,564	5,864
2020	40,448	69,236	22,554	6,080
TOTAL	373,417	608,199	221,047	84,954

Source: Ministry of Agriculture and Natural Resources Borno State
(Abattoir Record 2011).

Table 2: Mean for Goats (MT) by Season.

Seasons	Mean $\pm$ SE
1. (Dec.-Feb)	66.069 $\pm$ 3.960
2. (Mar - May)	84.425 $\pm$ 3515b
3. (Jun-Aug)	81.370 $\pm$ 4.71Vt
4. (Sep-Nov)	72.069 $\pm$ 5.379

ab/Mean $\pm$ SE within the column not followed by the same superscript Letter (s) are significantly different ($P < 0.05$).

Table 3: Means for Camels (MT) by Season

Seasons	Mean $\pm$ SE
1. (Dec.-Feb)	191.025 $\pm$ 26.683 ^{ab}
2. (Mar - May)	327.367 $\pm$ 30.928
3. (Jun-Aug)	199.929 $\pm$ 31.782 ^{ab}
4. (Sep - Nov)	71.728 $\pm$ 10.910 ^c

^{abc}Mean $\pm$ SE within the column followed by the same superscript letter are significantly different (P<0.05).

CONCLUSION AND RECOMMENDATION

From the study carried out it can be concluded that the second season (dry period) poses a great danger and interference from thermal factors to livestock industry in the entire country, which is a national problem that result in migration of pastoralist to the southern part of Nigeria with its attendant communal clashes between pastoralist and crop farmers in Nigeria. This can be ameliorated with better management practices of providing adequate water points and maintenance of pasture range land to reduce such migration and also reduce drastically all those losses recorded in the season as a result of poor or non-availability of pasture and water, that most often results into drought in the area.

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