

## Foetal Wastage in Camels Slaughtered (*Camelus dromedaris*) at Maiduguri Abattoir, Borno State, Nigeria

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**Abstract:** The records of slaughtered camels at the Maiduguri abattoir was evaluated over a 10 year period between 2000 and 2009 with the aim of determining foetal wastage due to the slaughter of pregnant camels. Out of the 124,898 camels slaughtered during the study period, 69,603 (55.7%) were females. A total of 2,382 fetuses were recovered which represented a foetal recovery rate of 3.42%. The foetal wastage in deferent seasons of the year, shows that 947 (39.8%) were recovered during rainy season and 1,435 (60.2%) during dry season. Estimated economic loss due to the slaughter of pregnant camels in Maiduguri abattoir stands at N25, 725,600.00 during the period of 10 years. It was concluded that legislative laws against the slaughter of pregnant animals should be enforced. Adequate veterinary ante-mortem inspection, literacy campaign amongst camel's rearers and butchers should be intensified as an effort to improve camel population in Nigeria.

**Key words:** Foetal wastage, camels, abattoir, Maiduguri, enforced, Nigeria

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### INTRODUCTION

In Nigeria and indeed Africa, camels are increasingly gaining economic importance, especially in the northern part of Nigeria due to their increasing value as a source of meat, milk, hides and as draught animals (Abdullahi, 2006).

The camelids have been known to be capable of withstanding harsh conditions characteristic of the Sahel region because of their peculiar morphologic and physiologic features (Bello *et al.*, 2008). Camels as draught animals play a pivotal role in the economy of developing countries especially in Sahel part of Northern Nigeria (Raza, 2000). In spite of this importance, camels have rarely received the attention they merits (Umaru, 2002).

The devastation of cattle population by drought and rinderpest in the Sahelian Zone of the country in 1980s has shifted attention to camels which are known to be less affected by these conditions. Consequently, Nigeria continue to import camels from neighbouring countries such as Niger republic, Shad republic, Sudan, Ethiopia and Somalia in order to supplement the declining source of animal protein. The slaughter of pregnant animal is a major cause of economic loss that could place camels on the list of endangered species. Since it is known that the slaughter of camels for meat is on the increase there is

danger in the continue depletion of the camel population through the slaughter of pregnant camels for meat. In deed, the slaughter of pregnant animals is a well recognized source of wastage in Nigeria, especially by the abattoir personnel, animal scientist and veterinarians (Ojo *et al.*, 1977; Garba *et al.*, 1992; Ataja *et al.*, 1997; Bello *et al.*, 2008).

The destruction of foetuses due to the slaughter of pregnant animal is forbidden by law in nearly all countries of the world (Economic Commission for Africa, 1988). Despite the existence of the law, Bello *et al.* (2008) reported 23.9% in five month period of the year at the Sokoto municipal abattoir, Nigeria. The fact remain that in as much as the demand and consumption of camel meat is on the increase, pregnant camels continue to be slaughtered and little or no effort is made towards improving camel population in the country, then the total population figure for the camel will drastically decline. In view of the important role camels play in supplementing the source of animal proteins in the diet of Nigerians, there is need to arrest the slaughter of pregnant camels in the abattoirs and slaughter houses. This study is a 10 year retrospective study of foetal wastage in order to assess the economic losses due to slaughter of pregnant camels at Maiduguri abattoir, Nigeria.

**MATERIALS AND METHODS**

This study was conducted at Maiduguri abattoir, Maiduguri is located in Borno state Nigeria. The state is located between latitude 9°30 and 12°30'N and longitude 8°45 and 11°45'E and share boundaries with the republic of Niger to the North, Chad Republic to the North-east and Cameroon to the East (Daura, 2001).

**Data collection and analysis:** Camels foetuses recovered during routine meat inspection between 2000 and 2009 were obtained from Maiduguri abattoir and data were compiled and analysed using proportional (percentage) presentation. Economic foetal loss was estimated as described by Ribadu (1988).

**RESULTS AND DISCUSSION**

The annual distribution of camel foetal wastage from 2000-2009 is shown in Table 1. Out of 124,898 camels slaughtered, 69,603 (55.7%) were females. The highest annual camels slaughter was recorded in 2009 (16,915) while the lowest recorded camels slaughter figure was in 2002 (7,293). Of the 69,603 (55.7%) females camels slaughtered during the period, 2,382 (3.42%) had foetuses in various trimester (Table 1).

Table 2 shows that 43,171 (34.6%) were slaughtered during rainy season while 81,727 (41%) were slaughtered during dry season of the year. The total female slaughtered during rainy season was 23,519 (33.8%) while during dry season was 46,084 (66.2%). Within the study period a total of 947 (39.8%) foetal wastage was recorded during rainy season and 1,435 (60.2%) during dry season. Financial loss over a 10 year period due to the slaughter of 238 pregnant camels at the Maiduguri abattoir in a single year was estimated at ₦25,725,600.

The study indicate that foetal wastage may be occurring on a massive scale in the abattoirs and slaughter houses where camels are being slaughtered on a daily basis (especially in Sahel part of Northern Nigeria). The number of females slaughtered within the study period was 69,603 with percentage foetal wastage of 34.2%. This is slightly higher than 23.9% that was reported by Bello *et al.* (2008) at Sokoto municipal abattoir.

However, the result of this study varies greatly from the observations of Ojo *et al.* (1977) who reported 50.9% foetal wastage in camels. This variation may be due to the fact that few or no camels were considered for meat in the past. But the current increase in the contribution of camel meat to daily animal protein requirement will consequently lead to slaughter of more female camels thereby causing increase in camel's foetal wastage (Agaie *et al.*, 1997).

The high demand of male camels for traction, races, festival ceremonies and transportation of goods for a long distance in the desert make the male camels expensive which make butchers to prefer females in order to maximize profits.

Williamson and Payne (1978) stated that male camels are undoubtedly best workers. One of the possible factors contributing to the high rate of foetal wastage is the season or period of the year. More camels were slaughtered during the peak of the dry season (November-March). Bello *et al.* (2008) reported that during extreme dry period, camel's herders increase the sale of aged and less productive females in order to meet household cash needs.

The progressive annual foetal wastage rate evident in the study may be attributed to on the part of the camel rearers (who in most cases can not diagnose pregnancy in the early stages) on one hand, the prolonged absence of pregnancy diagnosis as a major component of ante-mortem examination of animal prior to slaughter at most abattoirs and slaughter houses nation-wide. There is an urgent need to reactivate this major veterinary professional activity at the Nigerian abattoirs and slaughter houses.

Table 1: Foetal wastage in slaughtered camels at Maiduguri abattoir (2000-2009)

Years	Total Camels Slaughtered		Total females slaughtered		Foetuses recovered	
	(TCS)	Number	Percentage of TCS	Number	Percentage of females	Number
2000	9670	5137	53.1	171	3.33	
2001	7458	4029	54.0	135	3.35	
2002	7293	3963	54.3	129	3.26	
2003	9976	5388	54.0	185	3.43	
2004	12422	7011	56.4	225	3.21	
2005	13619	7517	55.2	251	3.34	
2006	15231	8459	55.5	292	3.45	
2007	15887	8911	56.9	303	3.40	
2008	16427	9475	57.7	332	3.50	
2009	16915	9715	57.4	357	3.67	
Total	124,898	69,603	55.7	2,382	3.42	

Table 2: Comparison between camels slaughtered and foetuses recovered during different season of the year (2000-2009)

Camels	Rainy season April-October	Dry season November-March	Total
Total Camels Slaughtered (TCS, %)	43,171 (34.6%)	81,727 (65.4%)	124,898
Total Females Slaughtered (TFS, %)	23,519 (33.8%)	46,084 (66.2%)	69,603
Total Foetuses Recovered (TFC, %)	947 (39.8%)	1,435 (60.2%)	2,382

The economic implication of foetal wastage is indeed enormous. From the result obtained in this study, the economic loss over a 10 years period from the slaughter of 238 pregnant camels at Maiduguri abattoir in a single year may be as high as twenty million and 8800 ₦ (₦ 25,725,600).

Bello *et al.* (2008) reported an annual loss of ₦ 24, 960, 000.00 from Sokoto abattoir (North western Nigeria) Similar projections of about ₦ 6, 000,000.00 were made by Ribadu (1988) from the slaughter of 4500 pregnant camels at Kano abattoir.

More so, Economic Commission for Africa (1988) reported that the slaughter of pregnant cows in Nigeria averages 17,000 per year resulting in an estimated financial loss of at least 14 million US dollars (×14,000,000.00) in over 10 years.

### CONCLUSION

The daily financial loss resulting from the slaughter of pregnant camels nation-wide is enormous and this seems to continue in as much as the demand and consumption of camels meat is in the increase. Law against the slaughter of pregnant animals should be enforced and the Government also need to re-introduce the pregnant-animal recovery project which was suspended in 1980. Adequate ante-mortem inspection, literacy campaign amongst camels rearers and butchers on proper method of pregnancy diagnosis through rectal palpation should be intensified.

Veterinarians should adopt such modern equipment as ultrasonography for faster and more accurate in pregnancy diagnosis. The large-scale production of alternative source of animal protein such as fish and poultry will go a long way in decreasing the existing pressure on cattle/camels as the main source of meat as effort to improve camel population in this country.

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