Incidence of slaughtering pregnant cows, sheep, goats and camels in a Sahel Region of Nigeria

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Abstract

A total of 480 records of slaughtered pregnant animals (cows, sheep, goats and camels) classified by litter size, season and foetal sex were collected from Maiduguri main abattoir. More pregnant goats (35.96%) were slaughtered compare to cows (29.48%), sheep (29.15%) and camels (26.99%) and there was significant ($P \leq 0.001$) season × specie interaction effect. On foetal loss, sex had significant ($P \leq 0.001$) effect with 46.16% and 54.85% recorded for male and female foetuses, respectively. Although no significant ($P > 0.05$) difference between the two seasons (50.67%, dry; 50.32%, wet season), interaction effects of season × specie and sex × specie were highly significant ($P \leq 0.001$). Equal number of foetal loss was recorded for camel and cows in both seasons but goats exceeded sheep in the dry season while sheep exceeded goats in the rainy season. Among all the specie, goats also had the highest percentage of female foetal loss while sheep had the highest percentage of male foetal loss. In both sheep and goats, more singles were slaughtered than multiples, however, sheep lost more singles and goats lost more multiples. Drought and urgent need of money by farmers (especially during the planting season) are some of the reasons which force the farmers to sell their animals without considering their physiological status. It is therefore, recommended that ante mortem inspection should be intensified to identify more pregnant animals before slaughter and in addition, there may be a need to offer financial assistance to the farmers especially during the cropping season.

Keywords: Season, cow, sheep, goat, foetus, pregnancy

Introduction

Livestock production is an important aspect of agriculture, because the essential constituents of food needed for maintenance and tissue building in the body is limited in plants. With the exception of legumes, plant food do not contain adequate quantities of protein, and therefore animals are chief source of protein to man; hence, the need to give extra encouragement to improve livestock production in Nigeria.

Ruminant livestock distribution in Nigeria is influenced by incidence of diseases and availability of forages. The semi-arid ecological zone with an annual rainfall between 400 mm and 900 mm, it has the lowest forages resource available. Almost all tropical animals carry disease microorganisms of one sort or another or parasites not in sufficient number to cause viable effect (Hall, 1980) but quite sufficient to prevent the animal from growing and producing to its genetic capability or limit that the environment would allow (Hall, 1980).

Apart from lack of adequate feed resources, poor nutrition, pest and disease, inadequate health care deliveries, as well as poor husbandry practices are other factors that affect supply of animals. Another common and unhealthy practice is slaughtering young breeding and pregnant animals due to increasing demand for dietary protein in Nigeria. This poses a great challenge to livestock industry in Nigeria due to wastage of stock animals. Other reasons advanced for the slaughter of breeding and pregnant animals are not plausible. These include ignorance on the part of the farmers and urgent need of income for family (Garba et al., 1997), collapse of proper pre-slaughter inspection of animals and above all, the neglect of legislation prohibiting the slaughter of pregnant animals for meat (Halle et al., 1997). There is need to carry out study in this particular area to know the extent of the damage to the livestock industry and what needs to be done to arrest this ugly practice.

This study therefore aimed to determining the incidence of slaughtering pregnant livestock (cows, camel, sheep and goat.) by species, season, litter size and interactions at Maiduguri main abattoir in a Sahel region of Nigeria.

Materials and Methods

This study was conducted at Maiduguri main abattoir in Maiduguri, Borno state. Borno state is one of the largest states in Nigeria covering an area of 116.56 square kilometers within the North–East corner of the country sharing borders with Adamawa, Gombe and Yobe states. It also shares international boundaries with Cameroun, Chad and Niger Republic. Maiduguri, the capital city of Borno state is situated on latitude 11.51^0 north, longitude 30.05^0 east and an altitude of 354 meters above sea level. The area falls under the Sahel region of West Africa which is noted for its great climate and seasonal variation. It has a very short period (3–4 month) of rainfall (average 645.9mm/ annum) accompanied with long dry season of about 8–9 months. The wet season starts from June and ends in September. Ambient temperature could be as low as 23^oC higher during dry hot season. Relative humidity is 45% in August which usually lowers down to about 5% in the drier season between the months of December and January. Day length varies from 11–12 hours (Alaku and Moruppa, 1983).

The data was collected through daily visit to the Maiduguri main abattoir located near cattle market (Kasuwan Shanu) at Gamboru ward, Maiduguri. During the period of 16 weeks, records were collected on number of female cattle, sheep, goats and camels slaughtered and foetuses recovered from the pregnant animals on the basis of sex, season and litter size. The data on population of pregnant animals and foetuses were expressed as percentages of total number of animals available for slaughter and pregnant slaughtered, respectively. Thereafter, the data were subjected to analysis of variance (ANOVA). The means were separated using LSD all–pair wise comparison test.

The model used was:

$Y_{ij}=U+S_i+P_j+SP_{ij}+e_{ijk}$

U= over all mean, S_i= effect of season, P_j= effect of specie, SP_{ij}= specie × season interaction

e_{ijk}= error, Y_{ijk}= observation.

Results and Discussion

The total number of pregnant animals slaughtered according to specie and season are shown in Table1. Significantly high pregnant goats (35.96%) were slaughtered compared to cows (29.48%), sheep (29.13%) and camel (26.99%). This indicates preference for goat meat by most Nigerian culture and the observation corroborates the report of Ikeme (1990). Idahor et al. (2008) also reported that more goats (83.2%) were slaughter compare to sheep (16.8%). The results obtained in this study are however lower than 57.9% (does) and 61.4% (ewes) reported by Sanusi et

al. (2006). However, lower than the present study has also been reported elsewhere such as 26.1% in goats (Muhammad et al., 2007), 6.3–20% in cows (Abiola et al., 1999; Oyekunle et al., 1992) and 24.06% in camel (Ataja et al., 1994). The differences may be attributed to the periods of the year when the studies were conducted.

In the current study, season of the year affected the mean percent pregnant animals slaughtered at the abattoir. Significantly higher numbers of pregnant animals were slaughtered during dry season (246) than wet season (234). This finding is in agreement with Abdullahi et al. (2008) who reported that dry season is characterized by drought and hunger which exposes animals to poor nutrition and disease. It therefore encourages farmers to sell their animals regardless of their condition in this period. This finding, however, disagrees with Halle et al. (1997) and Sanusi et al. (2006) who opined that slaughtering of pregnant small ruminant was more prominent during the early wet season; perhaps due to the urgent financial need of the owners for crop farming (Sanusi et al., 2006) or ill– health which is more common in the wet season (Wekhe and Yahaya, 1999).

Table 1: Least squares means of pregnancy wastage according to specie and season

		Number	Mean ± S.E
Specie			
	Sheep	120	29.13±0.85[bc]
	Goat	121	35.96±0.84[a]
	Cows	122	29.48±0.84[b]
	Camel	117	26.99±0.86[c]
Season			
	Dry	246	38.40±0.59[a]
	Wet	243	28.38±0.61[b]

[a-c] different superscript in a column differ significantly at P≤0.05

Table 2: Effect of season and specie interaction on percentage pregnant livestock slaughtered

	No	Dry season	No	Wet season
Specie				
Sheep	61	30.38±1.19[bc]	59	27.88±1.21[cd]
Goat	62	35.15±1.18[a]	59	36.78±1.21[a]
Cow	61	33.62±1.90[ab]	61	25.33±1.90[de]
Camel	62	30.44±1.18[bc]	55	23.55±1.25[e]

[a-d] Different superscript in a column differ significantly at P≤0.001

The effect of season and specie interaction on percentage of pregnant animals slaughtered is shown in Table 2. There was significant (P<0.001) season specie interaction effect. In dry season more goats (35.15%) were slaughtered followed by cows (33.62%) although sheep and camel had similar values of 30.38% and

30.44%, respectively. However, in wet season largest number of pregnant goats slaughtered was followed by sheep, cow and camel. This indicates that though, regardless of season, highest percentage of pregnant goats were slaughtered with the least percentage of camels. The percentage of pregnant camel slaughtered in the dry season exceeded that of sheep, while it was the reverse in the wet season. Generally, for all the specie, more pregnant animals were slaughtered in the dry season than wet season. Farmers are forced to dispose their animals with or without pregnancy because the dry season is characterized by drought, hunger and high cost of supplemented feed as a result of scarcity and competition by man (Abdullahi et al., 2008).

Table 3 shows the least squares means of the foetal losses based on season, specie and sex. Significant differences ($P \leq 0.0001$) were recorded among the sexes (males, 46.16%; females, 54.85%), although no significant ($P > 0.05$) difference between the two seasons (dry season; 50.67%; wet season, 50.32%) and specie was found. Since, numerically, the number of male foetuses is less than that of the female foetuses, the differences in the percentage of the foetuses is an indication that pregnant animals were carrying more number of female foetuses than males. However, similarity in the means of percentage foetuses counted for different seasons despite disparities in the number of foetuses is an indication that more animals were available for slaughter in the dry season than rainy season. Similarities in the mean of foetuses among species despite differences in the numerical figures of foetuses could also be attributed to differences in the number of animals of different species available for slaughter. In this case we can infer that highest number of goats were available for slaughter followed by sheep, cows and camels. Higher female foetal losses compare to male foetuses is a great loss, because these could have been the dams of large number of off springs.

The interaction effects of specie × season and sex × species on percentage of foetal loss are shown in Table 4. Interaction between sex and species was very highly significant ($P < 0.0001$). In goats, cows and camels, the percentage of female foetus was higher than those of male, while the reverse was observed in sheep. Among specie, highest number of males (52.04) was recorded for sheep while goats had the highest number of females (60.14). Furthermore, the interaction effect of season × specie was also highly significant ($P \leq 0.001$). Among the specie, sheep had the highest percentage of foetuses in the wet season while goat had the highest in the dry season, although cow and camel had similar percentages foetal loss in both seasons.

The effect of season × sex interaction is shown in table 5. Season × sex interaction effect was very significant ($P < 0.001$). Although, regardless of season,

higher percentage of female foetuses was recorded than male foetuses in both seasons. In male sex higher percentage rate was recorded in dry season (50.34) than wet season (41.97) while, within female, higher percentage was recorded in wet season (58.68) than dry season (51.02). It can be deduced that wet season encourages production of more females than males while the reverse is for the dry season.

The total percentage foetal losses decreased with increase in litter size irrespective of season (Table 6). However, among singles, while more foetal losses were recorded in dry season than wet season, the reverse was the case among twins, though, in triplets similar foetal losses were recorded for dry season and wet season. More of pregnant animals with single foetuses were brought for slaughter perhaps, because the farmers could easily detect those carrying multiple foetuses. No significant change was observed in these values.

In Table 7, losses of foetus among the specie were also affected by litter size. Increased litter size was accompanied by reduction in percentage foetal loss in all the specie. Although within singles, sheep had higher percentage of foetal loss, within twins and triplets goats had the higher percentage of foetal loss.

Table 3: Least squares means effect of specie, season and sex on the percentage fetuses

Parameters	Variable	No	Mean ± S.E
Specie		Ns	
	Sheep	331	50.96±0.91
	Goat	159	51.05±1.33
	Cow	242	50.00±1.04
	Camel	244	50.00±1.04
Season		ns	
	Dry	492	50.68±0.79
	Wet	488	50.33±0.76
Sex			
	Male	488	46.16±0.75[a]
	Female	488	54.85±0.75[b]

[a,b] Different superscript in a column differ significantly at $P \leq 0.001$

Table 4: Least squares means effects of interactions of specie × season and sex × specie on percentage fetuses

		Specie			
		Sheep	Goat	Cattle	Camel
Season					
	Dry	48.79[a]	53.99[a]	50.00[ab]	50.00[ab]
	Wet	53.20[a]	48.10[b]	50.00[ab]	50.00[ab]
Sex					
	Male	52.04[ab]	41.16[f]	45.25[ef]	46.16[de]
	Female	49.88[cd]	60.94[a]	54.74[b]	53.84[b]

[a,b] Different superscript in a column/row differ significantly at $P \leq 0.001$; [a-f] Different superscript in a column/row differ significantly at $P < 0.01$

Table 5: Least squares means effect of season × sex interaction on percentage fetuses

Season	Sex	No	Mean	S.E	P
Dry	Male	246	50.34	1.09	0.001
Dry	Female	246	51.02	1.10	
Wet	Male	242	41.97	1.04	
Wet	Female	242	58.68	1.09	

Table 6: Least squares means effect of litter size × season on percentage of fetuses

Litter size	Season	Mean	P value
Single	Dry season	58.427	0.707
Single	Wet season	48.273	
Double/twins	Wet season	39.134	
Double/twins	Dry season	29.226	
Triplet	Wet season	12.649	
Triplet	Dry season	12.491	

Table 7: Least squares means effects of percent for litter × specie on percentage of fetuses

Litter size	Specie	Mean	P value
Single	Sheep	65.343[a]	0.05
Single	Goat	41.367[b]	
Double/twins	Sheep	37.624[b]	
Double/twins	Goat	30.726[b]	
Triplet	Sheep	21.009[b]	
Triplet	Goat	4.134[c]	

[a,c] Different superscript in a column differ significantly at P≤0.001

This is an indication that goats are more prolific than sheep in reproduction.

Conclusion

This study investigated the slaughtering of pregnant animals as affected by specie, litter sizes, sex of fetus and season. The survey clearly showed that more goats and cattle are slaughtered than sheep and camel. It also showed that more pregnant animals were slaughtered during dry season than rainy season. Fetal loss data in this abattoir indicated that a larger number of fetal losses were recorded in sheep than goat in rainy season, while reverse was observed in the dry season; though equal number of fetuses of camel and cows were recorded during dry season and rainy season. More multiple litters were wasted in goats than sheep, though as the litter size increased, percentage of fetal losses decreased in both specie. The incessant slaughtering of pregnant animals at the abattoir should be stopped in order to save the life of mothers of future offsprings. This can be done through serious anti mortem and provision of financial assistance to the farmers especially during the cropping season or subsidizing agricultural inputs. There is also the need

for awareness campaign by the agricultural extension workers to educate the farmers on how to detect pregnant animals and also sensitize them on protecting the lives of pregnant animals.

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