



FETAL LOSSES FROM SLAUGHTERING PREGNANT COWS AT LAFENWA ABATTOIR IN ABEOKUTA, SOUTH WESTERN NIGERIA

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Abstract

This study evaluated the fetal losses due to slaughtering of pregnant cows at Lafenwa abattoir in Abeokuta, Ogun State. The ages of the fetuses were determined by measuring body length from head to the hind feet. Structured questionnaires were administered to obtain information on the slaughtered cattle. Data were subjected to descriptive and quantitative analysis. Duncan's Multiple Range Test was used to compare means. The total number of cattle slaughtered during the study period at Lafenwa abattoir was 15, 112 with a monthly average of 3,778 and daily average of 145.91. The White Fulani dominated the population. The total number of cows and pregnant cows slaughtered constituted 76.7% and 10.7% of the cattle slaughtered respectively. Throughout the period of the study, 1,617 fetuses were recovered, out of which 1,056 were recovered in the second and third trimesters. On the average, the percentage of fetal wastage was 10.7%, and one fetus was lost for every seven cows or every nine cattle slaughtered. It was concluded that the law which prohibits the slaughtering of pregnant cows should be enforced and policy efforts must concentrate on instituting routine veterinary checks at control posts and abattoirs.

Key Words: *Cattle slaughtering, fetal wastages .*

1. Introduction

Ruminant animals are important for their social and economic benefit to man (Devendra and Burns, 1983.) Animal protein plays a major role in ensuring good body defense mechanism that its consumption in humans is absolutely necessary (Gillespie, 2003). Livestock are important assets in Africa, contributing to improved nutritional status and the economic growth of their owners. They were reared for several reasons but most importantly for their contributions to animal protein supply. However, a steady growth in demand for meat accompanied by attractive meat price package has led to the common and unhealthy practice of slaughter of breeding and pregnant animals in most Nigerian abattoirs (Craig, 1982; Taiwo *et al.*, 2006). Therefore, in order to increase beef production it is expedient to identify factors militating against beef production in Nigeria, one of which is the common and unhealthy practice of slaughtering pregnant cows in abattoirs. The slaughter of pregnant cows will no doubt worsen the already precarious supply of animal protein to the populace (Abdullahi, 1985).

It is most uneconomical to continue the practice of slaughtering pregnant animals, a situation that greatly threatens the Nigerian livestock industry. Fetal losses through the slaughter of pregnant cows has received increasing attention over the past few years, however, the empirical evidence of the effect of this practice on beef production is limited (Ndi *et al.*, 1993). Control of fetal wastage in abattoirs will go a long way in increasing the population of livestock in Nigeria and the knowledge of the magnitude of bovine fetal wastage in abattoirs is necessary.

It is against this background that this study was designed. The study evaluated the magnitude and significance of fetal wastage caused by slaughtering pregnant cows. It also enumerated the likely implications of the persistence of such practice in Ogun State in particular and Nigeria in general.

2. Materials and Methods

The study was carried out at Lafenwa abattoir in Abeokuta, Ogun State, Nigeria between September and December 2008 (longitude and latitude 3.0°N – 7.5°N.) The abattoir was visited between Mondays and Saturdays and slaughter records taken. The total number of cattle slaughtered, ratio of cows to bulls slaughtered and the number of fetuses with their ages were recorded. After slaughtering, the uterus of any suspected gravid cow was examined and dissected. The ages of the fetuses were determined by measuring fetal body length from the head to the hind feet at the back part. The data were subjected to simple descriptive statistics and a t-test where applicable.

3. Results

Slaughter record of cattle at Lafenwa abattoir between September and December 2008 were shown in Table 1. The total number of cattle slaughtered during the study period was 15,112. The number of cows slaughtered peaked in the month of October, while the number of fetuses wasted was highest in the month of November. The percentage of the cows slaughtered within the period ranged from 74.7 to 78.7%, while the value for pregnant cows ranged from 9.7 to

11.4%. The highest number of pregnant cows was slaughtered in the month of October. 10.7% of all the cattle slaughtered were pregnant. One fetus was wasted for every nine cattle slaughtered or for every seven cow slaughtered.

Table 1: Monthly slaughter record of cattle at Lafenwa abattoir between September and December

Month	NCS	NBS	NCoS	NFR	%CoS	%PCS	TCaS:NFR	TCoS: NFR
September	3858	858	3000	375	77.8	9.7	10.3	8.0
October	3912	835	3077	422	78.7	10.8	9.3	7.3
November	3868	948	2920	440	75.5	11.4	8.8	6.6
December	3474	880	2594	380	74.7	10.9	9.1	6.8
Total	15112	3521	11591	1617	76.7	10.7	9.3	7.1
Mean monthly	3778	880.3	2897.3	404.3	76.7	10.7	9.3	7.1

Keys:

NCS: Number of cattle slaughtered

NBS: Number of bulls slaughtered

NCoS: Number of cows slaughtered

NFR: Number of fetuses recovered

%CoS: Percentage of cows slaughtered

%PCS: Percentage of pregnant cows slaughtered

TCaS: NFR: Ratio of cattle slaughtered to number of fetuses recovered

TCoS: NFR: Ratio of cows slaughtered to number of fetuses recovered

Table 2 shows the age of fetuses recovered between September and December 2008. One thousand six hundred and seventeen fetuses were recovered out of which one thousand and fifty six (65.2%) were recovered in the second and third trimesters. The total number of wasted fetuses recovered in the third trimester of pregnancy was highest in the month of October.

Table 2: Age distribution of fetuses recovered from the slaughter of pregnant cows

	Age of fetuses (months)			Total
	1-3	4-6	7-9	
Sept	128 (34.1%)	127 (33.9%)	120 (32.0%)	375
Oct	125 (29.6%)	152 (36.0%)	145 (34.4%)	422
Nov	158 (35.9%)	148 (33.7%)	138 (31.4%)	440
Dec	153 (40.4%)	138 (36.4%)	88 (23.2%)	380
Total	564 (34.8%)	565 (34.9%)	491 (0.3%)	1617

Proportion of fetuses recovered from cattle slaughtered in a month is shown in parentheses.

Table 3 shows the relationship between the number of cattle and cows slaughtered and the number of fetuses recovered. The number of cattle and cows slaughtered accounted for 16.6% and 12.2% of the causes of increased fetal wastages respectively.

Table 3: Linear regression equation showing the relationship between the number of cattle and cows and fetuses recovered

	r	r ²
Y= 3.14 + 0.0854x	0.407	0.166
Y= 6.49 + 0.0813t	0.349	0.122

Y= Total number of foetus recovered; x= number of cattle slaughtered;

t= number of cows slaughtered; r= correlation coefficient;

r²= coefficient of determination.

4. Discussion

The total number of cattle slaughtered during the study period at Lafenwa abattoir was 15112 with a monthly average of 3,778 and daily average of 145.91. This was higher than a monthly average of 195 (7 per day) recorded at Gboko abattoir in 2006 between July to October (Odoh *et al.*, 2008), 1122 in Gombe between April to June (Muhammed *et al.*, 2008), and 118.3 cattle per day at Kaduna (Muhammed *et al.*, 2008). However the figure obtained in this study is less than a monthly average of 724 in Cameroon (Ndi *et al.*, 1993). The disparities may be due to the differences in the population of the consumers in the city or town where the abattoirs were located.

The percentage of pregnant cows slaughtered in this study (10.7%), is slightly higher than 7.88% reported Oyekunle *et al.* (1992) 8.1% by Fayemi *et al.* (2008), and 7.73% reported by Ndi *et al.* (1993)). The higher figure in this study could be due to lack of enforcement of legislation against slaughtering of pregnant cows since veterinary officers were attached to the abattoir. The percentage of foetal wastage (defined as the total number of fetuses recovered divided by the total number of cattle slaughtered) was 10.7% in this study. This figure is higher than the value (3.0%) obtained by Muhammad *et al.* (2008); (8.2%) Fayemi *et al.* (2008); {9.15%} Nwakpu *et al.* (2007); (7.88%) Oyekunle *et al.* (1992) and {7.73%}. Ndi *et al.* (1993). The high fetal wastages from this study may be due to the higher number of cattle

slaughtered, this is proportional to the number of cows and cattle slaughtered and are expected to have effects on fetal wastage. This study shows that on the average one fetus was wasted for every nine cattle slaughtered. This figure agrees with the findings of Oyekunle *et al.* (1992), who carried out a similar study at Lafenwa abattoir (10:1), but lower than a ratio of 20:1 at Ijebu-Igbo abattoir by the same author. The ratio of cattle slaughtered to foetus wasted in this study was also lower than ratio 19:1 found by Fayemi *et al.* (2008) at Lafenwa abattoir. The reason for this disparity is not clear since the interval between the two studies is just one year, and they were carried out about the same time of the year. Fayemi *et al.* (2008) also found that for every seven cattle slaughtered, at Ayetoro abattoir, one fetus was wasted. The lower ratio than was found in the current study may be due to the difference in the location of the study resulting in differential level of veterinary supervision, as better level of veterinary supervision is expected at Lafenwa, an urban area compared with Ayetoro. Ndi *et al.* (1991) who worked at a municipal abattoir in Cameroon found that for every thirteen cattle slaughtered, one fetus was wasted, a higher ratio than was obtained in the current study.

The findings in this study also showed that one fetus was wasted for every seven (7) cows slaughtered. This ratio is higher than the findings of Muhammad *et al.* (2008) {1:33} at Gombe abattoir, Sanusi *et al.* (2006) {1:15} at Jos abattoir, Fayemi *et al.* (2008) {1:14} at four abattoirs in Ogun State, and Nwakpu *et al.* (2007) {1:11} in Ebonyi State. As stated earlier, poor enforcement of existing legislation may account for the degree of fetal wastage in this study. On the other hand, Ndi *et al.* (1991) who carried out a similar study at Cameroon observed a higher fetal wastage (one fetus for every four cows slaughtered) than was found in this study. Analysis of fetuses recovered in each month showed that the least number as well as the percentage of fetuses lost was in December, (30.3%). This may be due to the fact that the least number of cattle and cows slaughtered was in December. Similarly, the average number of cattle and cows slaughtered in December was less than those slaughtered in the other months slaughtered. The low number may in turn be due to the fact that people opted for poultry products rather than beef during the festive season.

Overall, the high fetal wastage in this study may be due to the emergence of dry season. Toulmin (1986) reported that during extreme dry periods, herders increased the sales of aged cows and less productive females in order to meet household needs. Most of the fetuses recovered in this study were recovered in the second and third trimesters (75.2%), a finding which is consistent with reports by earlier studies. Wosu (1988), Ndi *et al.* (1993), and Fayemi *et al.* (2008) found that 74%, 64.1%, and 75.7% of the fetuses recovered respectively were in the second and third trimesters. Similarly, Muhammad *et al.* (2008) who worked at Kaduna abattoir between April and June recovered 64.3% of the fetuses in the third trimester. This observation is surprising given the fact that pregnancy in the second and third trimesters are relatively easy to diagnose than those of the first trimester. Though the number of parity can also affect the enlargement of the uterus, it was difficult to know the ages of the cows from the respondents therefore, multiparous cows were not easily identified. Moreover, veterinary officers were attached to Lafenwa abattoir, excluding the role of ignorance as the cause of slaughtering gravid cows.

There was a positive but weak correlation between the number of cattle and cows slaughtered with the number of fetuses wasted. The number of cattle and cows slaughtered accounted for 16.6% and 12.2% of the causes of increased fetal wastages respectively. This conforms to the findings of Fayemi *et al.* (2008), who found that the number of cattle and cows slaughtered accounted for 14% and 16% of the causes of increased reproductive wastages respectively. However, Oyekunle *et al.* (1992) documented a stronger relationship between the number of cattle and cows slaughtered with fetal recovery (0.38 and 0.51 respectively). The difference was probably due to increased veterinary presence at the abattoir over the years, although as stated earlier this is yet to translate to a reduced fetal wastage. The number of cows slaughtered in highly correlated with the number of cattle slaughtered. High percentage of cattle slaughtered is cow, while the rest are bulls. The total fetal losses are weakly correlated with the number of cattle slaughtered and number of cow slaughtered. Less than half of the cows slaughtered are pregnant at the time of slaughter.

5. Conclusion

One fetus was lost for every nine cattle and seven cows slaughtered respectively. Furthermore the percentage of fetal wastage was high, and most of the fetuses were recovered in the second and third trimesters. The reasons for slaughtering pregnant cows ranged from diseases and poverty to ceremonies. Most respondents slaughtered pregnant cows because of festivals and ceremonies (89.1%), while only few slaughtered the animals because of disease (4.3%) and poverty (6.5%). Policy efforts must concentrate on instituting routine veterinary checks at control posts and abattoirs. Producers need to be better informed about the seasonal breeding patterns of food animals in order to avoid disposing of them during the calving season as well as the implications of slaughtering pregnant cows.

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