



Incidence of foetal wastages of cows slaughtered in Minna abattoir, Niger state, Nigeria

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ABSTRACT

Objective: This study was carried out to observe the incidence of foetal wastages of cows slaughtered in Minna abattoir, Niger State, Nigeria.

Methodology and Results: Data was collected for a period of 3 months (June- August, 2010). The parameters observed included; total number of slaughtered cattle, breed of animals sampled, and number of pregnant cows slaughtered, the number of fetuses encountered, the sex and weight of fetuses encountered. The result showed that more female cattle were slaughtered compared to male cattle representing 62% and 38% for females and males respectively. However, more male fetuses were wasted than the female fetuses representing 56.7% and 43.3% for males and females respectively. There was a significant ($p < 0.05$) difference in the mean weight of male and female fetuses in the months of June and July respectively. However, there was no significant ($P > 0.05$) difference in the mean weight of both sexes in the month of August.

Conclusion and application: It is recommended that livestock farmers be sensitized on how to detect pregnant cows especially at the early stages of pregnancy and that appropriate legislation be put in place by the State Government in order to allow for mounting of effective surveillance in the slaughter houses by inspection personnel to minimize these losses.

Keywords: Incidence, foetal wastages, slaughtered cattle, Nigeria

INTRODUCTION

The livestock base for the world's food production consist of about 1340 million cattle and buffalo, 1140 million sheep, 680 million pigs and 390 million goats while horses account for approximately 74million (Campbell and Lesley, 2003).The foremost reason for maintaining animal population is to provide a nutritious and desirable form of food for people. It has been well established that animal proteins are superior to vegetable proteins for man as a result of the better balance of amino acids in animal protein (Devendra, 2001). Gefu *et al*; (2004) reported that the primary production objectives for livestock in

Nigeria are meat and milk while the skim may be taken as an important by- product and a major export earner. They are also reared for the production of hair, hides and skin, income and provision of job opportunity for the nomadic and semi- nomadic pastoralists. According to Mukasa *et al.*, (2006), herd productivity may be affected by a wide range of disease problems and reproductive wastages. These effects may be manifested through abortions, mortalities as well as resources involved in controlling and overcoming the effect of these diseases. The common slaughtered animals for meat in Nigeria

are cattle, sheep, goat, pig, and poultry. Others include camel, buffaloes, donkeys, horses, rabbits and other game and forest animals that are edible (Alabi, 2003). However, previous findings (Caleb 2003), showed a decrease in annual growth rate of livestock production in Nigeria which led to a decline in the percentage contribution of the livestock subsector to the gross domestic product (GDP) between 1991 and 1995.

According to (Tolumn, 2004), most livestock farmers sell off their animals without confirming the

fertility of the stock before selling them off due to illiteracy, poverty and disease condition of the animals. Similarly, other factors including inadequate meat inspection practices have also been contributory. An undesirable effect of these lapses in veterinary public health duties is the slaughtering of pregnant animals (Garba *et al*; 2002). In the light of the above therefore, it becomes necessary to undertake a case study of the pattern of foetal wastages in slaughtered cows within Minna metropolis.

MATERIALS AND METHODS

Study Area: This study was conducted at Minna abattoir in Niger State, Nigeria. The town has a mean annual precipitation of 1300mm taken from an exceptionally long record of 50 years. The highest mean monthly rainfall is September with almost 300m. The raining season starts on average between 11th-20th April and lasts between 190- 200 days. Temperature rarely falls below 22°C the peaks are 40°C (February-March) and 35°C (November- December) (Student handbook, 2008).

Data Collection: The study covered a period of twelve (12) weeks from June to August, 2010. Ten foetal samples were collected in a week within the 12 weeks of study. The sampling was done twice a week, with a

total of 10 samples per week. Foetuses were determined based on sex and weight using a mechanical weighing scale. Data on the total number of male and female cattle slaughtered were collected from documented records in the abattoir for a period of 12 weeks. Oral interviews were also conducted to determine the sex preference by butchers in the abattoir. The data on weight collected for male and female fetuses was subjected to statistical analysis using student T- test to test the significant differences in mean weights obtained. A descriptive percentage was used to determine the incidence rates of foetal wastages while graphs were plotted using "Microsoft Excel".

RESULTS

Table 1 revealed that more female cattle were slaughtered compared to males in the months of study.

Similarly, slaughter figures were higher in July followed by August and the lowest value was obtained in June.

Table 1: The total number of cattle slaughtered for the months of June, July and August, 2010 in Minna abattoir, Niger State, Nigeria.

Month	Number of Cattle Slaughtered	Male	Female
June	1548	532	1016
July	1800	713	1087
August	1662	659	1003
Total	5010	1904	3106

Source: Minna Modern Abattoir, Ministry of Animal Health, Niger State, Nigeria.

Table 2 and Figure 1 showed incidence rate of foetal wastages for June, July and August, to be 65.5% (25), 34.5% (15); 65% (26), 35% (14);

42.5% (17) and 57.5% (23) for males and females respectively.

Table 2: The incidence rate of fetuses obtained from slaughtered cows between June- August, 2010 in Minna Abattoir, Niger State, Nigeria.

Month	Week	Male	Female	% Male	% Female
June	1	8	2	65.6	34.5
	2	6	4		
	3	5	5		
	4	6	4		
July	5	8	2	65	35
	6	6	4		
	7	7	3		
	8	5	5		
August	9	6	4	42.5	57.5
	10	4	6		
	11	3	7		
	12	4	6		
		68	52		

% male and % female indicate incidence rates

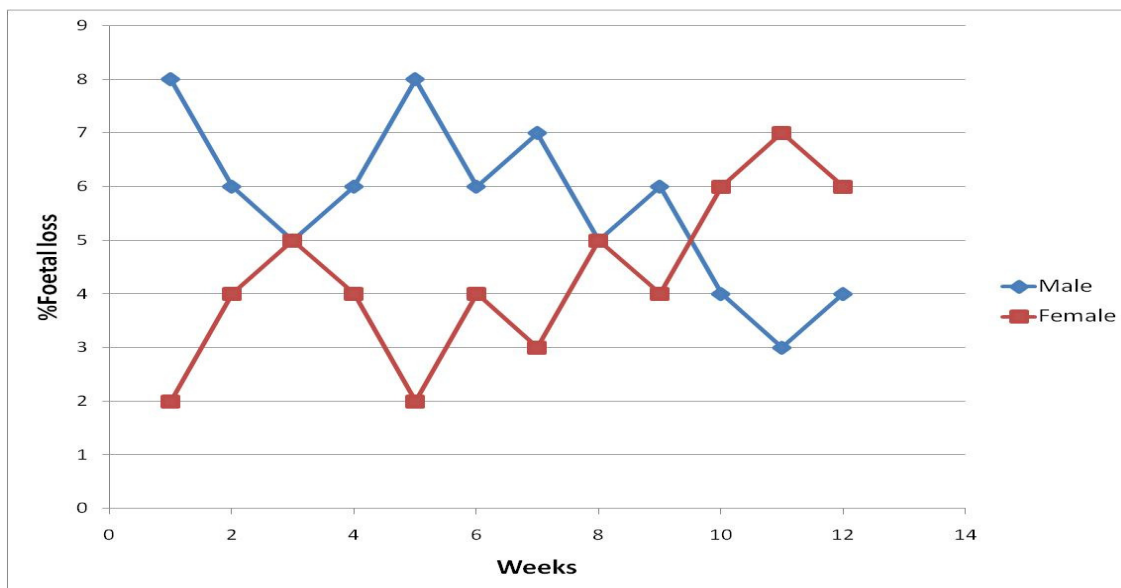


Figure 1: The incidence rate of both male and female fetuses obtained in Minna Abattoir, Niger State, Nigeria between June - August, 2010.

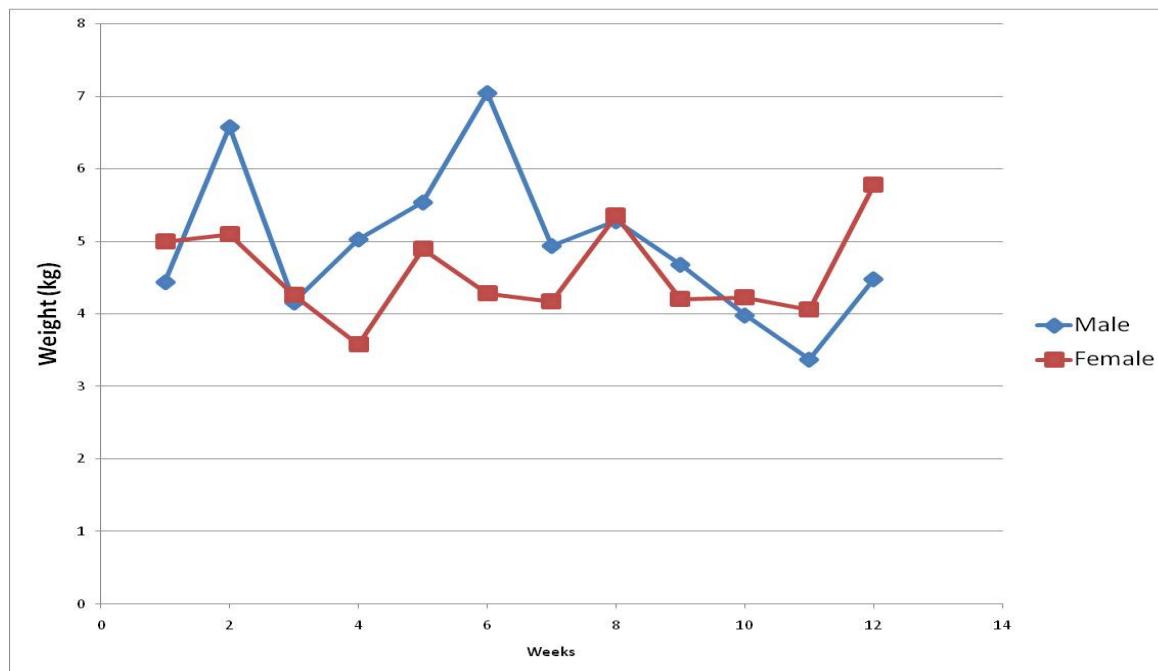
Table 3 and Figure 2 revealed the mean weight of the fetuses obtained in the months of study. There was a remarkable appreciation in mean weight from the fetuses obtained in the month of June and July (Fig. 2). There was a sharp drop in mean weight of male fetuses in the month of August. There was significant ($p < 0.05$)

difference in the mean weight of male and female fetuses in June (Week 4) and July (Week 6) respectively. However, there was no significant ($p > 0.05$) difference observed in the remaining periods of study.

Table.3: The Mean Weight of both Male and Female fetuses obtained between June-August, 2010 in Minna Abattoir, Niger State, Nigeria.

Month	Week	Male	Female	LS
June	1	4.44 ±0.32	5.00±0.00	NS
	2	6.58±3.37	5.10±2.01	NS
	3	4.16±0.81	4.26±0.70	NS
	4	5.03±1.15	3.58±0.43	*
July	5	5.54±1.58	4.90±2.40	NS
	6	7.05±2.57	4.28±0.74	*
	7	4.94±1.34	4.17±0.76	NS
	8	5.28±0.90	5.36±2.11	NS
August	9	4.68±2.01	4.20±0.88	NS
	10	3.98±1.23	4.23±0.54	NS
	11	3.37±0.85	4.06±1.51	NS
	12	4.48±1.85	5.78±0.96	NS

± - standard error of mean, * - Level of significance at 5% ($P < 0.05$), LS – Level of Significance
NS – Not Significant ($P > 0.05$)

**Figure 2:** The mean weight of both male and female fetuses obtained between June – August 2010 in Minna Abattoir, Niger State, Nigeria.

DISCUSSION

Table.2. and Figure.1 revealed the incidence rate of fetal wastages obtained in this study for the months of June, July and August for both male and female fetuses as 65.5% and 34.5%; 65% and 35%; 42.5% and 57.5% respectively. The males clearly had higher incidence rate of fetal wastages throughout the study period. The incidence rate obtained in this study agrees with the

earlier report (Onu *et al*; 2002), that out of the 75% fetuses obtained at Nsukka zonal abattoir in 2002, 50% were males while 25% were females.

Table 1 revealed that more females were slaughtered than males during the three months study period. This is in conformity with Tolumn, (2004), who reported that in Cameroon most of the cattle slaughtered in

Bamenda municipal abattoir were female. The result portends great danger to the reproductive efficiency of the cattle population, as more females are required in reproductive processes than males. This agrees with the assertion of Ayodele *et al*; 2003, who reported that the act of slaughtering female animals is a deterrent to animal production. Throughout the study period, the white Fulani breeds of cattle were the breed encountered with foetal wastages in the study area. This might be a confirmation of earlier study (Payne, 1990), who reported that white Fulani dominates the Nigerian cattle population and that 75% is concentrated in Northern states with only 25% in the South.

Table.3 and Fig. 2 revealed that fetuses had higher mean weight gains and significant ($P<0.05$) difference between the male and female fetuses were observed in the months of June and July. This marks the early part of raining season with abundant pasture for consumption which might have translated to the weight gains obtained during this period, this is further supported by the views of Abiola *et al*; (2004), that quality pasture fed to pregnant animals could be translated into weight gain of the fetuses.

Table 1 showed the total number of cattle slaughtered in the months of study which marks the period of

CONCLUSION

It could be concluded from this study that there is high incidence of foetal wastages in slaughtered cows at Minna Abattoir within the study period. The wastages might be due to the fact that there are no appropriate

increased farming activities within the study area as financial resources are needed for the purchase of farm inputs like fertilizer and herbicides by Agro-pastoralists as highlighted in earlier studies (Glatze, 2004). Glatze, 2004 reported that most of the animals slaughtered at abattoir are from Agro- pastoralists who depend on the money realized from the sales of the animals to fulfill several obligations irrespective of the productive status of the animals.

Negligence on the part of the inspectors in the abattoir could also be responsible for the foetal wastages observed among the slaughtered animal as there is no existing legislation in place by the State Government that prohibits slaughter of pregnant animals. However, from the views collated from the butchers through oral interviews, majority of them prefer to purchase male animals for slaughter because of the advantage on their body conformation and carcass characteristics. However, the purchase largely depends on what the livestock farmers put forward for sale to the public. Similarly, Ayodele *et al*; 2003 showed that foetal wastages could be due to human negligence in slaughtering pregnant animals.

laws in place in the state prohibiting the slaughter of pregnant animals. As such, this provides room for negligence by inspection personnel in enforcing prohibition of slaughter of pregnant animals.

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APPENDIX

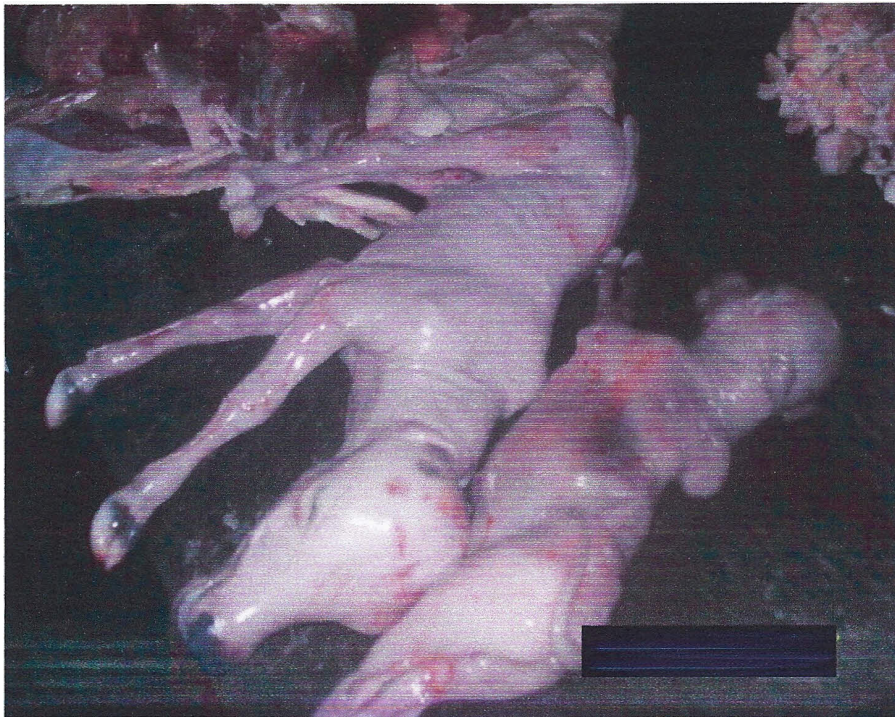


Plate 1: Dead foetuses removed from two different cows slaughtered in the abattoir.