

Foetal Wastage Through Slaughtering of Pregnant Cows in Zaria, Nigeria

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ABSTRACT

This study was conducted to evaluate the causes and effects of foetal wastage in the Nigerian cattle industry due to indiscriminate slaughter of pregnant cows in Zaria abattoir, Nieria. A total of 7,812 cattle were slaughtered in the abattoir, with a total of 236 (6.78%) fetuses recovered from January to December, 2008. The highest number of foetal recovery was obtained in January and May with the values of 36 and 39 fetuses, respectively. There was no significant difference ($P>0.05$) between the fetuses recovered and the months. The highest number recovered was during the first trimester and it accounted for 43.22% of the total number of foetal recovery during the period while the values obtained at the second and last trimesters accounted for 32.62% and 24.15%, respectively. Reproductive tract of each cow was examined using rectal palpation pre-slaughter for the presence of pregnancy, right and left side containing single, twins or triplets. The results showed that 8.1% of cows slaughtered in the abattoir were at various levels of pregnancy with a single foetus.

Key words: Pregnancy, foetal wastage, slaughtered cattle, abattoir, Zaria, Nigeria

INTRODUCTION

Reproductive wastage is normally considered to cover all losses from mating to the first breeding of the offspring. It is caused by environmental, genetic, disease and management factors which operate with different severities and in different combinations (Wosu, 1988; Abiola, 1996). These factors interfere with ovulation, fertilization or implantation, gestation and parturition (Ogwuegbu *et al.*, 1987; Joseph, 1999). Pregnancy loss has been an overlooked source of reproductive wastage in Nigerian meat industry. Lack of data and detailed analyses of cases and suitable interventions with which to deal with have hampered veterinary involvement in this area of reproductive management (Ataja and Uko, 1994; Wosu, 1988). However, pregnancy loss remains a source of frustration for herd owners and veterinarians given the uncertainty about whether a case is the first of an epidemic or an isolated case. Additionally, due to the poor detection of abortions, it is not always clear how wide spread the problem is until either whole herd pregnancy losses has occurred or subsequent calving period (Abiola, 1996).

Research studies on data from abattoirs have revealed that there was high occurrence of foetal wastage among cows slaughtered in Nigeria (Mathew *et al.*, 1982; Oyekunle *et al.*, 1992; Okoli *et al.*, 2001). This source of wastage is well recognized by abattoir personnel but perhaps over looked by stockowners, animal scientists and veterinarians. The wastage is of great concern to the Federal and State Governments but the incidence of wastage is unknown (Ojo, 1977). The relationship of pregnancy and ovarian status of slaughtered cows to age, season and carcass weight are also known and previously described by Ojo (1977).

Foetal wastage through the slaughter of pregnant animals have received little attention over the years in the northern Nigeria and worst still, the empirical evidence of the effect of this practice on meat production is limited. Wosu (1988) reported that 26% of cattle slaughters at Enugu State abattoir were pregnant. The greatest problems about slaughtering pregnant animals lies in the fact that enormous economic and protein wastes are involved which lead to a colossal losses in total animal production (Garba *et al.*, 1992). Slaughtering of pregnant animals for meat purposes is unethical and contrary to rules of slaughter under which only reproductive disorders such as infertile, sterile, old or accidentally injured animals are allowed to be slaughtered (Wosu, 1988). Slaughtering of pregnant animals frustrate scientists, nutritionists and livestock breeders who are working for the propagation of animals species. It is a drain of breeding animals and thus widens the gap of animal protein between the increasing human

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populations. Most livestock farmers sell off their animals without considering the fertility of the stock before selling due to illiteracy and poverty and or diseased condition of the animal. It is therefore, necessary to study the pattern of foetal wastages with Zaria to ascertain current status.

MATERIALS AND METHODS

Location and time

The study was carried out in Zaria Metropolis, Nigeria. The primary data used for the study were obtained from completed meat inspection forms at the slaughter slabs in Zango-Zaria abattoir, Kaduna State Ministry of Agriculture, Zaria. The data which covered a period of nine months (January 2008 to September, 2008) were collected and analysed. The number of cattle slaughtered annually was calculated and the sex incidence was obtained with the number of fetuses recovered at the time of slaughter and classified according to the trimester of pregnancy using foetal size. This period included the four seasons: pre-dry (October to December), dry (January to March), pre-rain season (April to May) and rain (June to September).

Pregnancy status

The pregnancy was assessed by palpation of the exposed uterus after slaughter. Cows were recorded as pregnant or non-pregnant in first, second or third trimester using foetal size. Uteri were dissected to confirm early pregnancies. The stage of pregnancy was estimated by fetal crown to rump (nose to tip of the tail) and fetuses recovered post mortem (Ojo, 1977).

Data processing and statistical analysis

Results were analysed using a chi-square test. Analysis of variance (ANOVA) was also employed to test the significant difference between the numbers of foetuses with the number of months. Graphs were plotted using Microsoft excel window XP.

RESULTS

Of the 7,429 cows examined, 3,480 (39.38%) were pregnant at slaughter. The incidence, stage of pregnancies and seasonal relationships are shown in Table 1. The months of January, February March and May have the highest number of pregnant cows slaughtered and fetuses during the period of study. Relationship between age and pregnancy in Table 2 was highly significant between young, matured and aged cows ($p < 0.005$). The fetuses that were recovered from this study were more during the first trimester which accounted for 43.22%, while second and last trimester accounted for 32.62% and 24.15%, respectively. The season and stage of pregnancy the percentage of cows slaughtered did not vary significantly with season. The highest percentages of foetal losses were observed in the first trimester during pre rainy and dry session.

Table 1. The monthly distribution of cattle slaughtered in Zaria abattoir, Nigeria

Month	Number of cattle slaughtered	Number of bulls slaughtered	Number of cows slaughtered	Pregnant cows slaughtered	Percentage of pregnant cows
January	1,022	800	222	36	3.52
February	988	588	400	35	3.54
March	1,022	660	362	28	2.74
April	1,001	301	700	25	2.50
May	1,001	301	700	39	3.90
June	1,023	965	58	27	2.64
July	927	566	361	25	2.70
August	957	607	350	9	0.94
September	896	569	327	12	1.34
Total	8,837	5,357 (60.62%)	3,480 (39.38%)	236(6.78%)	23.5%

DISCUSSION

The season of the year under review also showed that the rains just about to begin in the month of May and June. These periods are characterized by drought and hunger which exposed animals to poor nutrition, diseases, and as such to forestall losses due to natural death or diseases farmers prefer to sell their animals. Also the problem

of antihelmintics occurs at onset of rains and the ends of rains and cost of treating the animals may also be another reason why the farmers sold their animals.

The reports of Beckm *et al.* (1974) showed that 70% of the cattle slaughtered during the extreme dry periods were females, compared to 30% during the normal periods of the year. Germen (1975) also observed this same phenomenon that most of the cattle sold for slaughter during the dry season were females. The rise in wastage in September of the year may be as a result of emerging festivities ceremonies during this period.

Table 2. Monthly distribution of foetuses and their sizes and ages

Month	Foetal size 1-3cm Age = >1month	Foetal size 3-6cm Age = 1-2month	Foetal size 9cm Age = 2-3month	Total fatal recovered
January	14	12	10	36
February	16	10	9	35
March	12	10	6	28
April	14	2	9	25
May	18	12	9	39
June	9	16	2	27
July	10	9	6	25
August	3	4	2	9
September	6	2	4	12
Total	102 (43.22%)	77(32.62%)	57(24.15%)	236

Daily collection of foetuses quickly confirmed a problem of pregnancy wastage in cattle. The number of professional and technical staff working in an abattoir should be increased so that antemortem examination of each animal, particularly rectal palpation for pregnancy diagnosis is performed. It is also recommended that this source of wastage of urgently needed meat be reduced by pregnancy diagnosis being made available by the appropriate authorities. The magnitude of the problem of pregnancy wastage in cattle in Nigeria may be extrapolated from this study. The total number of cattle slaughtered annually at the slaughtered slab 2000. Allowing for half being female then half of these or 30 would be pregnant. The finding that the maximum 8.38% of cows pregnant in the first second trimester occurred during Oct-Dec, Jan-March, June-September respectively is in general agreement with previous findings in the northern states of Nigeria, that conceptions are highest during July to August (Osori, 1976). Jochie (1972) found that most zebu cows in the Mexican Gulf coast tended to conceive during the rainy season (June to October). That fewer pregnant cows were slaughtered during the third trimester suggests that owners and buyers were able to detect heavily pregnant cows by visual observation. In conclusion detection and retention of pregnant cows by the owners would contribute considerably toward meeting the meat production target for Nigeria. There is therefore, an urgent need to salvage these useful animals from slaughtering by adopting the following measures (Oyekunle *et al.*, 1992).

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