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INCIDENCE OF FOETAL WASTE IN RUMINANT ANIMALS SLAUGHTERED IN BAUCHI STATE ABATTOIR, NIGERIA

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ABSTRACT

The work was aimed at identifying the incidence of fetal wastage in ruminants slaughtered at Bauchi state Abattoir. Five hundred and sixteen ruminants were slaughtered and one hundred and twenty-nine fetuses were recovered. The study was carried out in eight weeks, with the sexes of the fetuses determined by visual observation, after evisceration. Measuring tape was used to measure the crown rump of the fetuses in inches thereby calculating the ages of the fetuses in months with reference to heary's law. Total economic loss due to fetal wastage was estimated as well. In line with the obtained data on the potential hazards associated with fetal wastage, it is advised that there should be veterinary checks, including pregnancy diagnosis at cattle controlled posts and abattoirs. Slaughtering of animals for meat purposes should also be under check, to avoid fetal wastage, which is highly unethical and contrary to the international Standard Rules of slaughter.

Keywords: Foetus, Ruminants, Slaughter, Wastage. Unethical.

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Introduction

In brief, the global livestock population consists of about 1.340 billion cattle, 1.149 billion sheep and 390 million goats [1]. The foremost reason for maintaining animal population is to provide nutritious and desirable levels of protein supply for human beings. It has been well established that animal proteins are more superior to plant proteins due to the presence of some essential amino acids that are lacking in plants derived protein [1, 2]. Livestock husbandry and slaughter have become millenary traditions in every part of the world. Hunting and gathering has been the means of livelihood for humans over many years. However, only in the past 10,000 to 12,000 years has a pattern of settled agriculture emerged [3]. Vast gathering could no longer support the population and settled agriculture evolved as a response to this food crisis. Domestication of animals is associated with three of the oldest civilization; the Nile in NorthEast Africa, the Tigris and Euphrates to Western Asia and the Indus in the Indian Sub-continent respectively. The first animals to be domesticated for agricultural purposes were sheep, goats, pigs and cattle [4, 5]. From these centers of domestications, people migrated in prehistoric times with their sheep and goats along with other animals to many parts of the world. This led to the spread of these domesticated animals to areas where they are hitherto absent.

However, it is not a hear say that humans are at the top of the food chain and hence rely on these animals as their source of protein [6]. This necessitates the need to rear animals in a sustainable

manner. [7]. Although globally, the practice of slaughtering different species of livestock has been sustained, the pregnancy status of the animal being slaughtered for meat still remains an elusive issue in many parts of the world [8, 9]. The scenario of animal slaughter in abattoirs has shown that not only the conventional non-breeding livestock are slaughtered for meat but also the productive pregnant and lactating ones [10-12]. These animals are being slaughtered daily for different purposes such as for food, rituals, religious festivals, ceremonies, drug formulations, disease control or to meet immediate financial needs [13].

The menace of fetal wastage due to the slaughter of pregnant animal's casts serious aspersions on the efficiency of *ante-mortem* (Gradin2004; Addassetal.,2010) and the rationale for converting pregnant animals to beef, mutton, chevron, pork, offal and other meat types. It also challenges the ethical or moral act of slaughtering pregnant animals in situation where there is no law supporting the practice. In Nigeria, there are no modern abattoirs where proper *ante-mortem* examination of slaughtered animals is practiced to eliminate slaughtering of pregnant animals. The greatest setbacks about slaughtering pregnant animals' entails that herd population sizes are reduced and enormous economic wastage abounds, leading to great reduction in the national herd, loss of dairy products as well as supply of poor quality meat product to the general public [6]. This study was carried out to investigate the incidence

of fetal wastage in ruminants slaughtered at Bauchi state Abattoir.

Materials and method

Study area

Bauchi state occupies a land area of about 60,000 square km, approximately

7% of the country's total land area. The state lies between latitude 9° 30N and 12° 30N and longitude 8° 42E. It has an annual rainfall of 1000mm and maximum temperature of 35° C, with 18° C as the minimum temperature.



Figure 1. Sample collection

Sample collection

This study was carried out for a period of eight (8) weeks. The abattoir was visited daily between the hours of 6-7am. During evisceration; fetuses were collected from the slaughtered pregnant animals for subsequent observations Figure 1.

Treatment of samples

The sex of the fetus was determined by visual observation of the genitals. A measuring tape is then used to measure the crown rump in inches. This is then used to estimate the age of the fetus in months with reference to Heary's law. The total economic loss due to fetal wastage was estimated by multiplying the total number of fetus recorded during the

present study by the cost of a matured animal.

Result and Discussion

The table above shows fetal wastage in Bauchi's abattoir. A total number of five hundred and sixteen (516) animals were slaughtered during the study period. These comprises of Ninety-three (93) cattle, one hundred and seventy-seven (177) sheep and Two hundred and forty-six (246) goats as shown in Table 1. The table also showed that fetal wastage is more predominant among the goats, closely followed by sheep and lastly cattle with each having a prevalence of 59 (45%), 48 (37%) and 22 (17.1%) respectively.

Table 1: Distribution and incidence of foetal wastage in bovine, ovine and caprine species

Ruminants	Number of Examined Ruminants (Female)%	Number of Fetuses Recovered(%)
Cattle (Bovine)	93(18.0%)	22(17.1%)
Sheep(Ovine)	177 (34.3%)	48 (37.2%)
Goats (Caprine)	246 (47.7%)	59 (45.7%)
Total	516	129

Among the fetuses recovered, from the ruminants in the study area, a general trend appears to be visible.

The wastage of male fetuses was observed to be more than the female fetuses as clearly depicted in table 2.

Table 2: sexes of fetuses recovered

Ruminants	No of males%	No of Females%
Cattle (Bovine)	15 (19.2%)	7 (13.7%)
Sheep(Ovine)	31 (39.7%)	17 (33.3%)
Goats (Caprine)	32 (41.0%)	27 (52.9%)
Total	78	51

Table 3 above clearly showed the age distribution of fetuses recovered during the period of study, alongside their monetary value. The total number of ruminants within the first trimester (1-3 month) is one hundred and two (102), second trimester (4-6month) is twenty-two (22) and third trimester (7-9month) respectively, though the gestation period of sheep and goats is within one to six month (1-6 month).As shown on the table, cattle within first trimester are 8 (7.8%),second trimester 9(40.9%) and third trimester 5 (100%). Moreso, sheep within the first trimester are 40 (39.2%),second trimester 8 (36.4%) and third trimester 0 (0%),while goats within the first trimester are 54(52.9%),second trimester 5 (22.7%) and third trimester.

The Findings of this study has clearly shown that fetal wastage is still an ongoing problem in Nigeria as has been

reported by various workers [14-17]. The reason for this menace has been attributed to either ill-health of the animals, poverty and also lack of proper enlightenment of the Farmers. Caprine as seen in (table 1), takes the highest percentage of slaughter in the abattoir, within the period of study, which shows that people residing within the Bauchi's metropolis consumed more of goat meat than other ruminants. Investigation shows that people go for such meat because from the monetary evaluation, they seem to be cheaper than all other ruminants. The goats are also readily available within the reach of even the low earner individual, which grant them easy access to such as food.

Table 3: Ages of fetuses recovered

Ruminants	1 ST Trimester (%) (1-3month)	2 nd Trimester (%) (4-6month)	3 rd Trimester (%) (7-9month)
Cattle (Bovine)	8 (7.8%)	9 (40.9%)	5 (100%)
Sheep(Ovine)	40 (39.2%)	8 (36.4%)	0 (0%)
Goats (Caprine)	54 (52.9)	5 (22.7%)	0 (0%)
Total	102	22	5

Among the ruminants slaughtered during the present study, higher prevalence of fetal wastage was recorded in goats while the least was recorded for cattle (Table 1). This may be because during the period of study, more goats were slaughtered per day than the other ruminants. The findings are consistent with the reports from other researchers in other places like Australia [18], UK [19], New Zealand [20], Tanzania [21], Nigeria [22, 23], but still yet, more of it were also recorded during rainy seasons as well.

Similarly, the ongoing menace of fetal wastes clearly depicted a serious economic loss, as regarding the number of both male and female fetuses wasted. The present study as shown in (table 2) reveals high prevalence of male fetuses' loss, with goats taking the highest number and sheep following, the cattle taking the less respectively. Taking into cognizant, other researchers also shows contrary views in Nigeria [22, 23].

The occurrences of fetal waste in trimesters, as portrayed in (Table 3), reveals that ruminants were mostly slaughtered, with high number of premature fetuses which were within their first trimester. The study also denotes that there were minimal number of fetuses wasted within the second and the third

trimester. [24] brought in a contrary view which reveals more fetal waste in the second trimester. The findings of [22], demonstrated a similar contribution with the present study.

Conclusion

Slaughtering of pregnant animals for meat purposes and wasting the fetuses is actually unethical and is contrary to the international standard rules of slaughter, where pregnant animals are not allowed to enter the food chain. Such practices lead to the high economic losses, considering the cost of a grown animal presently in the international market. The study showed the fetal wastage was quite alarming and efforts should be geared towards instituting routine veterinary checks including pregnancy diagnosis, in other to foresee such reoccurrences. In line with the obtained data on the potential hazards associated with fetal wastage; It is therefore recommended that, There should be veterinary checks including pregnancy diagnosis at cattle control posts and abattoirs. Drastic efforts should be made to increase future domestic meat supply in order to reduce or halt the incidence of slaughtering pregnant cattle. Proper enlightenment should be giving to farmers concerning the implications of

slaughtering pregnant animals. Strict legal backings should be put to play, to avoid unnecessary wastage.

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