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FOETAL WASTAGE IN KANO CENTRAL ABATTOIR AND ITS IMPACT ON THE NIGERIAN ECONOMY

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ABSTRACT

The study was designed to determine the incidence of feotal wastage and its economic impacts in Kano central abattoir. Total cattle presented for slaughter, number of bulls and cows slaughtered and number of condemned foetuses were recorded on daily basis for one month. The results revealed that 64.28% and 35.72% of the cattle slaughtered during the study period were cows and bulls respectively. Out of the percentage of cows slaughtered, 7.5% were pregnant and their foetuses were wasted. Furthermore, the study revealed that there was one case of foetal wastage for every thirty three (1:33) cows slaughtered. This wastage may lead huge depletion of future reproductive stock which is disastrous to the future of livestock industry in meeting beef and milk demand of the teaming population. The estimated financial losses accrued were ₦3,944,000.00 monthly translating to annual economic loss of ₦47,280,000.00 which is enormous for the State bear. The finding urges for urgent action to be put in place to checkmate the marketing and slaughter of pregnant cattle in the State. Cattle marketers, rearers, butchers and consumers should be sensitized on the financial and health implications of pregnant cows slaughter and foetus handling in transmitting zoonotic diseases.

Key words: Abattoir, Bovine, Foetus, Wastage,

INTRODUCTION

According to the 2021 world population data sheet statistics (population reference bureau: PRB, 2021), Nigeria's population was 211.4 million (2.7% of the world's and 15.40% of Africa's populations). By 2050 it is projected to reach 401.3 million accounting for 4.14% of the world's and 15.87% of Africa's populations. This will make Nigeria be the 4th most populated in the world. The country's population grow swiftly and transform extensively, the urban dwellers will rise from 94 million to 280 million while GDP/capital will triple. These changes will exponentially raise the demand of animal products. Cattle, sheep and goat are the major animal protein sources for human consumption in the country. From 2019 to 2020, cattle increased by 0.87%, sheep by 2.5% and goat by 1.6% (National Agricultural Extension and Research Liaison Services; NAERLS, 2020). These increase in livestock sector is far less than the human population growth which shows a clear deficit of animal protein for human consumption. Projections suggest that beef and milk consumption alone will grow by 117% and 577% respectively (FAO, 2019). Beef constitutes the most consumed meat in the country, according to Okorie-Kanu *et al.* (2018), more than 50% meat consumption in the country is from cattle. Similarly, the country depends solely on cattle for its milk production (Ahmad, 2017). The country is producing less than 40% of its milk demand, spending ₦570 billion annually importing dairy products. The gap between demand and consumption is on increase due to population increase, urbanization, changes in GDP/capital and dietary habit. Despite these changes, that coincides with low growth rate of livestock in the country, animal production is obstructed by many obstacles among which is the slaughter of pregnant animals which is unethical practice and negatively affects growth and development of national herd, possess a threat in meeting the animal dietary protein requirement of the country and leads to the consumption of more plant protein which is of poor quality (Abraham, 2014). In addition, it is associated with high economic impact that limit the livestock contribution to the country's gross domestic product. For instance, in the Sahelian region of the country, Bokko (2011) reported the loss of ₦63.42 billion annually due to slaughter of gravid bovine and subsequent foetal waste. Similar trend was observed at Minna abattoir with estimated loss of ₦8.3 million (Nma, 2011) while Iliyasu *et al.* (2015) reported 30% foetal destruction in Maiduguri with estimated economic loss of ₦11,502,960.00. In Jos abattoir Plateau State, 4.5% bovine foetal wastage was documented leading to the loss of ₦174,980,000.00 (Dunka *et al.*, (2015) while Ahaji *et al.* (2017) reported the loss of 52,234 foetuses amounting to ₦1,731,557,200.00 from Minna, Suleja, Bida, Kontagora and New Bussa abattoirs of Niger State. Similar cases was reported from the southern part of the country. According to Awoyomi *et al.* (2013) the loss of ₦2,766,432,528.0 was incurred due to bovine

foetal condemnation at Lafenwa Municipal abattoir. In 2014, Uduak and Samuel reported loss of 349 foetuses estimated at ₦29,665,000.00 at Akwa-Ibom. Kano central abattoir is one of the biggest abattoir in Nigeria were large number of ruminants are slaughtered for meat for the teaming population, thus require to investigate the magnitude of foetal destruction due to slaughter of pregnant. Thus, the aim of the study was to investigate the incidence of bovine foetal wastage in Kano central abattoir and its impact on Nigeria's economy.

MATERIALS AND METHODS

Description of the study area

The study was conducted at Kano central abattoir. Kano is situated between latitude 11° 30`N and longitude 8° 30`E at an altitude of 488 meters above sea level. The climate is characterized by a well-defined wet season (May to September) and dry season (October to April). The mean annual rainfall varies from 600 to 1000 mm (Kano Agricultural and Rural Development Authority; KNARDA, 2001). It has a land mass of 20,131 km^2. According to Kano State Population (2021), the State had 20,000,000 inhabitants in 2020.

Data collection and Analysis

The slaughter slab of the abattoir was visited daily between 6:00 to 7:00 am for 30 days (December, 2019). The total number of cattle slaughtered and the ratio of cows to bulls slaughtered were recorded. After slaughtering, the uterus of the cows were examined and recovered foetuses were recorded. The data was managed in excel spreadsheet and analyzed using simple frequency and percentile. The economic losses was estimated at slaughter using the equation; (ELB(₦) = N0 * P0) as described by Babatunde *et al.* (2011; as cited in Bakari, 2016).

Where: ELB = Economic loss at birth,
N0 = Number of foetus at slaughter
P0 = Average price of calf at birth

RESULTS

Daily record of bovine slaughter, frequency of bulls and cows and condemned foetuses in Kano central abattoir is presented in Table 1. The result revealed that 11,930 cattle were slaughtered during the study period. Out of the total slaughter, 64.28% (7,722) were cows and 35.72% (4,262) bulls. Averagely, the daily slaughter figures was three hundred and eighty five (385) bovine, 249 (64.8%) cows and 137 (35.2%) bulls. Two hundred and thirty two (7.5%) cows were discovered pregnant and their foetuses condemned. On average, 8 pregnant cows were slaughtered on daily basis and one out of every thirty three cows slaughtered were pregnant (1:33). Average calf price in Kano State during the study period was ₦17,000. Thus, the estimated economic loss is ₦127,500.00 daily and ₦3,944,000.00 monthly.

DISCUSSION

The finding of the present study revealed that the slaughter of pregnant animals in the Nigeria's abattoir is still persistent at an alarming rate. The slaughter of pregnant animals particularly cattle if not tackled will further negatively affect the animal protein consumption especially meat and milk which is already far below the World Health Organization recommendations (for example, Nigeria's average milk consumption is 8 liters yearly against WHO recommended consumption of 210 liters per person/year; WHO, 2021) as well as meeting the projected meat and milk production in the country. The number of bovine slaughtered depends on the consumers which varied between locations. However, the percentage foetal wastage recorded in the present study is consistence with the previous reports of Anyaku *et al.* (2019) and Usman *et al.* (2021). The finding is however, higher than 5.2% recorded at Kano old abattoir (Bakari, 2016), 4.5% at Jos abattoir (Dunka *et al.* 2017), 6.67% at Birnin Kebbi abattoir (Garba *et al.,* 2019) and 3.2% at Sokoto modern abattoir (Sanusi *et al.* 2020). This disparities could be attributed to time of conducting (three years interval) study of Bakari (2016), a similar abattoir with the present study which can be explained to increase beef consumers in the State while others could be due to variation in locations and human population in various States. Higher number of cows slaughtered compared to bulls is in agreement with several reports such as that of Oduguwa *et al* (2013), Adeyemi *et al.* (2016), Raimi *et al.* (2017) and Usman *et al.* (2021) though the reason was unexplained. The higher number cows slaughtered compared to bulls depicts a great danger to the future of livestock industry as reproductive females were not spared from slaughter. This act is against the law that prohibit the slaughter of breeding cow (Khan and Khan, 1989) unless sick, accidently injured, old or non-breeding. The ratio of fetus to cow slaughter recorded in the present study is in agreement with the report of Muhammad *et al* (2008) at Gombe State abattoir but higher than 1:15 at Jos abattoir (Sanusi *et al.,* 2006), 1:11 at Ebonyi State (Nwakpu *et al.* 2007) and 1:14 at four abattoirs in Ogun State (Fayemi *et al.* 2008). The disparities could be due to number of cattle slaughtered which is related to human population, season of the year and duration of the study. Foetal wastage is associated with economic implication apart from reducing animal protein available for human consumption. These losses are mainly due to inadequate antemortem inspection of animal before slaughter in the country's abattoirs. The economic impact of foetal condemnation within a December, 2019 revealed that ₦127,500.00 daily and ₦3,944,000.00 monthly were lost. This translate the

annual loss of ₦47,280,000.00 due to slaughter of pregnant cattle and subsequent foetal loss in Kano central abattoir. If this is to be extrapolated to central abattoirs in the 36 States and FCT Abuja, 103,008 foetuses were lost annually amounting to ₦1,751,136,000 which is very huge loss for any country to withstand.

CONCLUSION

The finding revealed that Nigeria may be losing up to 0.50% of its national cattle herd annually through slaughter of gravid bovine and subsequent foetal wastage alone. This act will further worsen the current precarious animal protein consumption available for the populace which is necessary for proper growth and mental development. Conscious efforts by the Government and non-Governmental Organizations towards reducing the foetal wastage in the abattoirs through public awareness and law enforcement will lead to reduction in meat deficit in the country, monetary wastages and improve animal production potentials in meeting the future milk and beef demand for the teeming population. Government intervention is indispensable in the enforcement of policies in relation to marketing and or slaughter of pregnant and healthy animals. Abattoirs should be equipped with adequate veterinarians and meat inspectors as well as modern pregnancy testing equipment to ensure no pregnant animals were passed for slaughter except those with unavoidable reasons. Public enlightment should be put in-place to educate the rearers, butchers and general public on the impact of slaughter of pregnant animals and foetal wastages as well as risk of transmitting zoonotic diseases like brucellosis through foetal handling.

TABLE 1: DAILY BOVINE SLAUGHTER AND FEOTAL DESTRUCTION IN KANO CENTRAL ABATTOIR

Day	TCS	NCS	NBS	NFR
1	350	200	150	7
2	360	240	120	8
3	410	270	140	7
4	400	240	160	10
5	450	300	150	10
6	420	280	140	5
7	360	240	120	7
8	410	250	160	4
9	370	230	140	8
10	350	200	150	5
11	430	290	140	6
12	390	260	130	10
13	360	240	126	7
14	318	212	166	13
15	360	240	120	10
16	332	221	111	7
17	360	240	120	9
18	390	260	130	12
19	360	240	120	9
20	396	260	130	3
21	360	240	120	10
22	354	236	118	2
23	357	238	119	6
24	338	222	116	3
25	616	360	250	10
26	496	296	200	4
27	358	239	119	9
28	356	238	118	10
29	360	240	120	7
30	390	260	130	8
31	369	240	129	6
Total	11,930	7,722	4,262	232
Daily average	385	249		7.5

TCS= total cattle slaughter
NCS = no of cow slaughter
NBS = number of bull slaughter
NFR = number of foetus recovered

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