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Effects Foetal Wastage and Some Abnormal Conditions in Slaughtered Ovine

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Abstract
The study was conducted on 1,573 pregnant ewes slaughtered at Gwagwalada abattoir between September to October, 2003. The study was conducted to investigate foetal wastages associated with the slaughter of pregnant ewes and to detect some diseases or lesions associated with slaughtered sheep at the abattoir. The results obtained from the investigation revealed overall average foetal recovery rate of about 388 foetuses (24.7 %). The slaughtering of pregnant animals was significantly high in September (26.4 %) than in October (23.3 %). Pathological lesions and diseased conditions found to be associated with slaughtered sheep at the abattoir included: Abscesses 6.5 %, Cirrhosis of the liver 54.0 %, Helminthiasis 5.0 %, Mastitis 0.1 %, Pneumonia 10.8 % and Tuberculosis 0.57 %. Statistical analysis revealed significant differences (P>0.05) between the number of foetuses slaughtered. It is evident from the results of this study that the slaughter of pregnant ewes adversely effects the economics of sheep production in the areas covered by this study. It is therefore required that appropriate government legislation and policy efforts are required for effective monitoring and dissemination of information relevant to prevent unwholesome practices and prevent certain diseases which could be of enormous economic and public health significance in Nigeria.

Keywords: Diseases, Sheep, Foetal wastages, Gwagwalada abattoir.

INTRODUCTION

Nigeria is a country endowed with human population of over 140 million but with relatively low number of food animals. Demographic figures indicate that sheep contribute to about 11 % of the total protein required for our over- increasing populace (Bourn *et al.*, 1994). About 90 % of the 22.1 million sheep in Nigeria are owned by the rural populace, and only the remaining 10 % are owned by the government and research farms (FLD, 1992). These animals

survive in different geographical areas, and are widely distributed, in rural, urban and peri-urban areas of Nigeria (Gefu and Adu, 1982). The distribution is skewed by with over 70 % of the total sheep population concentrated within the Guinea and Sudan savannah zones. In view of the advantages of the sheep been suppliers of milk and meat they also have ease of acquisition, good adaptability, rapid growth and high prolificacy. This makes their management easy and hence are readily available for disposal when quick cash are required especially during dry period. (FLD, 1992).

Several factors contribute to the poor reproductive performance of our indigenous sheep, although undue emphasis has been placed on poor genetic composition, poor genetic composition, poor nutrition, improper management practices and host of others (Garba *et al.*, 1992). Little attention is given to foetal wastages and some diseases of sheep which could be so enormous economic losses and colossal reduction in global protein intake (Bourn *et al.*, 1994; Dusai *et al.*, 2005). Pregnancy wastage and associated pathological conditions or diseases of small ruminants have been documented over the years in Australia, Philippines, Mali and Nigeria (Rogers *et al*., 1972; Dusai *et al*., 2005).

In Nigeria, slaughter of pregnant sheep is partly encouraged by the apparent weight gain of females over males. Prolonged absence of definite government policy or law prohibiting the slaughter of pregnant animals for meat and collapse of ante-mortem inspection facilities of animals before slaughter (Garba *et al*., 1992; Dusai *et al*., 2005). The objective of the present study is to determine foetal wastages in slaughtered sheep in Gwagwalada abattoir and to investigate some diseases of sheep in Gwagwalada, Abuja, Nigeria. This would provide information in developing strategies for the control and for boosting sheep production in the study area.

MATERIALS AND METHODS

Study area

The study was conducted at Gwagwalada abattoir and lasted for about 60 days from September 1st to October 30th, 2003. This period was chosen as most appropriate for this study as most animals are slaughtered during this period. The abattoir is located in the North eastern part of Gwagwalada. It has a land mass of about 65 km^2 and lies between longitude 6^o, 50 E to 7^o, 12 E and latitude 8^o, 55 N to 9^o, 15 N at the Northern part of the Municipal Area Council, in the Guinea savannah zone of Nigeria.

Data collection

The abattoir was visited and the daily slaughters of the ewes were recorded and lesions of some common diseases were obtained from the abattoir between 1st September to 30th October, 2003. The samples were obtained during slaughter peak period between 6.30 am to 9.30 am in the morning from Mondays through Sundays of the week. The diagnoses were confirmed through laboratory tests as described by Umar *et al.*, 2006.

Foetuses

During evisceration at the abattoir, the butchers normally discard the uteri of the slaughtered animals which were collected in plastic buckets and transported to the laboratory for examination. They were examined individually for the presence of fetuses, on the bench incision was made with scalpel blade at the greater curvature of the uterus then medially to the uterine body. The fetuses were removed by gloved hand and recorded appropriately as described by Umar *et al*. (2006).

Diseased conditions

Vital organs such as the liver, heart, kidneys, lungs, trachea, intestines, lymph nodes and spleen were collected examined using visual and clinical examination for enlargement, abscesses, gross- lesions and presence of parasites or tuberculosis lesions. Fecal samples were collected from gastrointestinal contents and examined for the presence of helminthes eggs using zinc sulphate floatation methods which were used in light microscope under oil emersion objective lens (x 40) (Umar *et al.*, 2006) tuberculosis lesions were detected by presence of lesions in the liver and kidney. The mammary glands were examined for hardness, and the milk samples collected and tested for presence of microorganisms by accepted biochemical methods (Baron and Finegold, 1990). The diseases and conditions were recorded for both the fetuses and the dam.

Statistical analysis

The results obtained were subjected to statistical analysis using descriptive statistics involving percentages, averages and means. The data generated were further subjected to students t-tests using computer Special Package for Social Sciences (SPSS) version 9.0 for windows 2002.

RESULTS

The monthly records of fetuses recovered from ewes at the Gwagwalada abattoir were assessed. The major findings obtained in this study were shown in Table 1. The results indicated that more sheep (884) were slaughtered in October than the 689 sheep slaughtered in September. From the total 689 sheep slaughtered in September, 182 (26.41 %) were pregnant, while from the 884 sheep slaughtered in October, 206 (23.30 %) were pregnant. The overall percentage of pregnant sheep slaughtered from the 1,573 sheep was 388 (24.66 %). There was significant differences between the pregnant and non-pregnant ewes slaughtered (P>0.05).

Table 1: Monthly records of foetal wastages at Gwagwalada abattoir

Month	No. of female	No. not pregnant	No pregnant	% pregnant
September	689	507	182	26.41
October	884	678	206	23.30
Total	1,573	1,185	388	24.66
Mean	786.50±137.89	592.50±120.92	1.5±3.87	
SEM	±97.50	±85.50	0.040	
T-Test	8.067	7.677	3.750	(P>0.05)

Table 2 shows the prevalence of diseased conditions encountered in slaughtered ewes at Gwagwalada abattoir. The results indicated that 68 (4.32 %) of animals investigated had abscess. Other diseases and conditions diagnosed includes: liver cirrhosis 103 (6.54 %). Helminthiasis 79 (5.02 %), mastitis 8 (0.05 %), pneumonia 157 (9.98 %) and tuberculosis lesions 9 (0.057 %). There is significant differences between incidences in October than in September (P>0.05) when t-test was used.

Table 2. Prevalence of pathological conditions or disease encountered in slaughtered ewes in Gwagwalada abattoir.

Month	Diseases encountered					
	Abscess	Liver cirrhosis	Helminthiasis	Mastitis	Pneumonia	TB lesions
September	17	37	39	3	80	7
October	51	66	40	5	77	2
Total	68(4.32%)	103(6.54%)	79(5.02%)	8(0.05%)	157(9.98%)	9(0.57%)
Prevalence						
T-Test	2.00	3.55	79.00	4.00	552.33	1.80

P>0.05

DISCUSSION

The results obtained from the present study indicated that foetal wastages in slaughtered sheep in Gwagwalada abattoir were high. This enormous rate of foetal wastages encountered may possess major economic threat to the success of sheep production in Nigeria. The overall foetal recovery rate was 24.66%. This value was higher than that obtained by Dusai *et al*., 2005 and Umar *et al*., 2006 which obtained foetal recovery rate in sheep of 5.05 and 11.06% in Zaria and Sokoto respectively. The high incidence of foetal wastages recorded in this environment could be attributed to ignorance by the farmers. The lack of infrastructures in our abattoirs by to detect pregnant animal before slaughter has contributed immensely to this high rate of slaughter of pregnant sheep. Appropriate government attentions is there by required curb this problem.

It was also indicated that more sheep (884) were presented for slaughter in October than in September (689). This concurs with the works of Mathew et al. (2005) whose study recoded higher incidences of slaughtered sheep during this period. Our study coincided with the festive period of 'sallah' which was in the month of October, this observation may be attributed to greater demand of female due to their apparently increased in their body weight. In most parts of the world, females are more often offered for slaughter. It is a known fact that consumer

demand for meat increases with religious or festive periods and other social ceremonies. Therefore more animals could be presented for slaughter in period to upset the probably pressing urgent pressing financial need of the famers. More so, higher economic gain and profit margin were more frequently realized during these periods. (Umar et al., 2006). The possibility of selling apparently healthier or pregnant animals and this practice is believed to still linger and' hence diminishing sheep population in Nigeria. Several factors, ranging from ignorance on the parts of the farmers, lack of proper ante-mortern inspection and absence of definite government policy could be responsible for the slaughter of pregnant animals.

From the various diseases encountered, the highest prevalence was that pneumonia (9.98%) which is a very common disease encountered in small ruminants in Nigeria (Umar *et al*., 2006). The other diseases and condition encountered with various prevalence include: liver cirrhosis, helminthosis, abscesses and mastitis. These diseases and endemic in our country and could be of both economic and public health significance and man therefore stands getting infected with virulent strains of these diseases. The prevalence rates were highest than that obtained by (Wilson, 1960). The increasing rise in patterns of the number of diseased cases recorded in this study is likely to be a reflection of a rise in the patterns of occurrence of diseases of sheep. This could be likely associated with lack of strategic medications, neglect of management practices as well as prompt prophylactic and therapeutic measures which were grossly inadequate.

CONCLUSION AND RECOMMENDATIONS

The objectives of this research have been greatly achieved. We were able to determine the rate of prevalence of foetal wastages in slaughtered sheep at Gwagwalada abattoir, determine the common post mortem diseases in sheep.

Recommendations

Further studies is recommended to estimate foetal losses in other animals such as goats, cattle, camel, pigs rabbits or other animals and to determine the economic losses associated with foetal wastage. This will go a long way in educating the populace and institution of appropriate legislation to curb this unwholesome practice in Nigeria.

REFERENCES

1. Alaku, S.O. and Orinjide, B.A (1991). "Slaughter of pregnant animals for meat in sub-Saharan Environment of West Africa" Tropical Veterinary Journal, 9: 171-176.
2. Bourn, D., Wint, W., Blench, R. and Wooley, E. (1994). Nigeria livestock survey. World Animal Review. 78:49-58.
3. Dusai, D.H.M., Sekoni, Z.O and Abu, A.H. (2005). Foetal Wastage in Slaughtered Food Animals at Bauchi abattoir, Nigeria. Proceedings of the 42nd Nigerian Veterinary Medical Association, Maiduguri, Nigeria: 73-75

4. Federal Department of Livestock (1992). Nigeria Livestock Resources survey. Federal Department of livestock and Pest Control Services, Resources Inventory and Management Limited, Abuja, 1: 56-59.
5. Garba, H.S., Hassan, W.A and Akingbemi, B.T. (1992). Foetal Wastage through Slaughtering of Pregnant Cattle at Sokoto Abattoir. Tropical Veterinary Journal, 10:123-127.
6. Gafu, J.O and Adu, I.O (1982). Socio-economic characteristic of goats producers and their husbandry practices in Nigeria. Proceedings of the 3rd International Conference on goat production and diseases, Tucson, Arizona. USA, pp. 422-427.
7. Hale, D. (1956). System of Productivity of goats in three communal areas of Zimbabwe. In: Proceedings of the workshop on the Improvement of Small Ruminant in Eastern and Southern Africa. Joint OAU/IBAR/IDRC workshop, Nairobi Kenya. pp. 181-193.
8. Mathew, I.O Gefu, U.J.O and Sanusi, J.M (2005). A Slaughtering pregnant goats for meat in Nigeria. Tropical Veterinarian, 10: 121-136
9. Ojo, S.A., Dannis, S.M and Leipold, H.W (1978). Pregnancy wastage in cows in Zaria.
10. Relationship to age- season and stage of gestation. Nigeria Veterinary Journal, 23 (1):7-9.
11. Osori, D.I.K. (1976). Seasonal variation in reproductive activity of indigenous cattle of Northern Nigeria,Unpublished Ph.D. Thesis, A.B.U. Zaria.
12. Rogers, R.T., Flanagan, M. and Hill, M.W.M. (1972). A survey of infectious causes of reproductive failure in beef cattle in North Eastern Australia. Australian Journal of Veterinary Medicine. 3:23-25.
13. Umar, A.A., Kwal, H.D. and Garba, H.S. (2006). Foetal loss due to slaughter of pregnant red Sokoto Does at Local Government Abattoir, Dange – Shuni, Sokoto State, Nigeria. Proceedings of the 43rd Annual Veterinary Congress, pp. 97-98.
14. Wilson, R.T (1986). Livestock production in central Mali: Long-term studies on cattle and small ruminants in the agro-pastoral system. ILCA Research report. No.1:23-26.