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CAUSES OF PRE AND POST-NATAL MORTALITY IN SHEEP AND GOATS IN KANO STATE

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Abstract
A survey of cause of pre natal and post natal mortality in sheep and goats was conducted in three local government are of Kano state (Wudil, Gaya and Sumaila) .One Hundred and Twenty (120) structure questionnaires were used to elicit information from the respondents. Target audience were farmers, veterinary health workers, butchers and small ruminant sales points. All of the respondents interviewed were educated and their main (59.20%) occupation was both crop and livestock production. From the data obtained, it showed that extensive system is the major (56.70%) management practice whereby majority (69.20%) of the stock owner have recorded mortality, even though only few (7.50%) of the respondents ever carryout post mortem inspection. Diseases (26.00%) and poor nutrition (25.00%) are regarded as the major causes of mortality especially during the rainy season with diarrhea (27.90%) and gastro intestinal parasite (24.20%) being the most common diseases.

Key words: Pre-natal, post-natal, mortality, sheep and goats

Introduction
Sheep and goat production is an important economic activity in Africa contributing 10.9% and 8.4% respectively of total meat output (Amin and Mohammed, 1994). However, Charray *et al.,* (1992) observed that small ruminants are distributed all over Nigeria, showing their ability to adapt to varieties of environmental condition.
In Nigeria however, the production is known to be characterized by the extensive system of management and low productivity (Otchere *et al.,* 1987).
A survey by the Federal Livestock Department (FDLPCS, 1992) put the population of sheep and goats in Nigeria as 22.09 and 34.5 million respectively. The socio economic important of small ruminants in rural communities of Nigeria among others includes usage as a source of ready cash and meat for household consumption, meat of exchange for ready and usage during ceremonies festivities, religions rites have long been recognized and unfortunately, very little attempt has been made to improve their productivity under the traditional management system.
The traditional management of flock is low and characterized by long lambing and kidding intervals, low birth weight gain, high pre-natal mortality and slow maturity. Several factors have been reported to affect mortality in small ruminant, viz; season and type of birth, length of previous parturition intervals (parity), birth weight, dystokia and udder circumference of dam and also disease (Amin and Mohammad 1994).
In raising sheep and goats, kids/lamb losses in early and later stages is a major factor adversely affecting small ruminant production enterprises in the tropical and sub-tropical regions and is thus a major factor reducing profitability of that production.

Materials and Method Study Area
The study was conducted in three (3) Local Government Areas of Kano State, which are Wudil, Gaya and Sumaila Local Government Areas of Kano State. Kano State is located between latitude 11^0N 14^0N in the semi arid zone of Nigeria where there is drought and associated weather conditions. The range annual temperature and relative humidity is about 38-43^{0}C and 40-51 percent respectively. It has a mean annual rainfall range of 850-870 mm from May-October with a peak in August. Three (3) distinct seasons are however recognized which are; Dry cold (October - January). Dry hot (February – May) and wet season (June-September). The environment is conducive to different species of livestock production including sheep and goat (Olofin *et al.,* 2008).

Data Collection

The data used in the study was collected from primary sources through structured questionnaires. A total of one hundred and twenty (120) questionnaires were administrated to the farmers, veterinary officers, butchers and small ruminants' marketers. Information collected were bio-data of the respondents which include age group, sex, marital status, educational status, system of husbandry, causes of mortality (pre and post natal). The questionnaires were distributed among those who could read and write while verbal interview was conducted to those respondents that could not read and write.

Sampling Technique and Size

Random sampling procedure was used to select 120 respondents which made up of 30 butchers, 30 veterinary health workers, 30 small ruminant marketers and 30 individual farmers (rearers) this comprises of forty (40) respondents from each of three selected local government areas (Wudil, Gaya and Sumaila).

Data Analysis

The questionnaires received were analyzed using simple descriptive statistics (Frequency and percentage). It involves organizing, summarizing, presenting data in a meaningful forms, it is also used to analyze data of socio – economic characteristics of the respondents

Results and Discussion

Respondent perception on causes of mortality in sheep and goats.

The respondents' reception on causes of mortality in sheep and goats was presented in Table 1 which revealed that the major causes of mortality in sheep and goats is diseases accounting for 26.3% of the respondent followed by poor nutrition with (25%) which in turns limit productivity of the animals. Diarrhea and gastro intestinal parasite are the common signs of disease in the area with 27.9% and 24.2% respectively. This is live with findings of Kusiluka *et al.,* (1998) who reported that the prevalence of diarrhea and gastro intestinal parasitism is higher, foot rot dermotophilosis and mange are also encountered in pastoral sheep and goats and may be common during the rainy season.

Higher mortality was recorded (62.5%) with first parity followed by second parity (23.3%) while the third and the least were recorded during fourth and subsequent parity. This finding was in agreement with work earlier reported by Hussain *et al.,* (1995) that the survival rate is higher in the fifth parity for the period of 1-2 month of age with a trend toward increased survival from first to fifth parity. Most of the respondents recorded lower birth weight (67.5%).. The author reported that the deviation from mean birth weight which also revealed that kids and goats with birth weight lower than the population mean experience higher mortality than kid and lambs with weight higher or equal to their population mean (Rattner *et al.,* 1994).

General diseases and poor nutrition, especially in the rainy season, are regarded as the biggest problem that causes mortality in small ruminants and possibly limiting their productivity. The problem of diseases is more prevalent during the rainy season because mortality is most occuring in early and late wet season with 34.2% and 25% respectively. The major diseases which cause death in small ruminant were gastro intestinal parasite, pneumonia and *peste de petit ruminants* (PPR), and the major sign of disease is diarrhea. The incidence of diseases could be attributed to lack of preventive and adequate curative measures coupled with poor management practices. It was observed that most of the respondents used ethno-veterinary medicine in the treatment in which it rarely helped. They seldom used the services of veterinarians.

Table 1: Respondents perception on causes of mortality in sheep and goats

Respondents characteristics	Frequency	Percentage
Causes of mortality		
Injury	7	4.50
Accident	11	7.10
Disease	41	26.00
Predation	2	1.30
Poor nutrition	39	25.00

Poor management	23	14.70
Parity	18	11.50
Season	15	9.60
Total	***156**	**100**
Diseases encounter		
Pneumonia	27	16.40
Bloat	9	5.50
Diarrhoea	46	27.90
PPR	20	12.10
Foot and mouth diseases	18	10.90
Gastro-intestinal parasites	40	24.20
Others	65	3.00
Total	***165**	**100**
Record of mortality based on parity		
First parity	25	62.50
Second parity	28	23.30
Third parity	14	4.70
Fourth parity	3	2.50
Total	**120**	**100**
Birth weight		
Higher	39	32.50
Lower	81	67.50
Total	**120**	**100**

Source: Field survey, 2016 *Multiple responses

Conclusion

It can be concluded that the problem is attributed to lack of preventive and adequate veterinary care as well as poor management practices. Therefore to make the production of small ruminants to be more effective in its contribution, the existing constraints in the study areas need to be addressed.

Recommendations

Based on the results, the interaction of multiple factors responsible for pre-natal mortality should be properly identified and a strategy should be for reducing them.

However, The following recommendations could reduce mortality:-

- Regular vaccination against diseases in addition to constant dipping and deworming.
- Provision of adequate qualitative feeds throughout the year
- Stock owners should be educated about the existence and relevant of agencies concerned with animal production and health, through extension officers.

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