

OBSERVATION ON THE CHARACTERISTICS OF SMALL HOLDER SHEEP AND GOAT MANAGEMENT PRACTICES IN OLD BAUCHI STATE

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Target Audience: Sheep and goat producers.

ABSTRACT

The study examines the characteristics of small holder sheep and goat management practices under traditional system of production in the old Bauchi state (now Bauchi and Gombe States). The sampled areas fell within the northern Guinea Savannah. A total of 450 households spread over the states from 30 villages were drawn. The study was restricted to only livestock owners that kept goats or/and sheep at the time of sampling. The ownership distribution skewed in favour of goats and the mean flock sizes per household were 6.9% and 14.2% for sheep and goats respectively. About 60.2% of the stock owners kept goats alone, another 29.3% kept sheep and the remaining 10.5% kept both sheep and goats. Over 75 % of the respondents acquired their foundation stock from the open market. Most of the respondents expressed their desire and willingness to increase their herd size with more farmers wishing to expand sheep herd than goats. Feeds (69.3%) and ill-health (89.6 %) were the most frequent mentioned as the main limiting factors affecting livestock production. PPR is the most devastating disease of sheep and goats. Agricultural by-products like groundnuts haulms, cowpea hay and husk, cereal offal, cut forages and browses were the main sources of feeds. The results indicate that domestic small ruminant production could be greatly improved by making available supplementary feeds and drugs at subsidized rate by the government in conjunction with sound livestock extension services.

Key words: Small holders, sheep, goat, management

DESCRIPTION OF PROBLEM

Sheep and goats are important sources of meat, milk, skin, hair and income to many people. Sheep (rams) play an important role in religious festivities and goats in traditional sacrifice to many Nigerian societies. They supply about 30% of the total lean meat in Nigeria (1).

Small ruminants particularly goats are known to be hardy which accounts for their wide geographical distribution in the country. It has been found that only 8.4 g of the 53.8 g of the total protein consumption level of Nigerians is obtained from animal sources as compared to 69% for developed countries like U.S.A (2). This showed that animal protein contribute only about 16 % to the protein intake of average Nigerian. Goat milk is another good quality

protein which has high proportion of protein and small fat globules facilitating easy digestion and with an anti-allergy property. Also goat milk has low tubercule bacilli content suggesting less risk of tuberculosis (3).

Small ruminant production in Northern Nigeria is characterised by the extensive system of management which entails little or no supplementary feeds during the non-cropping season to tethering with zero-grazing during the cropping period and consequently low productivity (4).

Under traditional system, the performance of sheep and goats has, thus remained generally low due to poor management, low plane of nutrition, uncontrolled breeding and poor health care.

The rapid human population growth in Bauchi State and Nigeria at large coupled with increased demand and pressure on cultivable land and also the Federal Government campaign for nomadic education which is aimed at settling the pastoralist will compel partial or total confinement of grazing animals. There is therefore, the need to evolve suitable production and management strategies, so as to improve the performance of small ruminants. The study was designed to examine the structure and system of domestic small ruminant management practices with the aim suggesting areas of improvement in an effort to increase the contribution of these species of animals to meat supply in Nigeria.

MATERIALS AND METHODS

The old Bauchi State occupies an area of 66,000km with a cultivable of 56,345km. The population of the state stood at over 4 million people at 1991 national Head count. The vegetation varied from Sudan Savannah in the north to Guinea Savannah in the Southern parts. There is variation in quality and quantity of animal feeds with season (5)

A total of 450 households was randomly sample from 30 villages in three local government areas of old Bauchi State. The local government areas are Kaltungo, Alkaleri and Katagun. In each local government, 10 villages were randomly selected and structured questionnaires were administered. In most households animal feeds and management facilities were observed. The sample population comprised respondents that kept sheep and/or goats at the time of study.

The parameters studied include species and number of animals kept, sources of foundation stock, sources of feed, livestock diseases prevalent in the study areas and problems facing the respondents. Data generated were analysed using simple descriptive analysis.

RESULTS AND DISCUSSION

The ownership distribution pattern (Table 1) skewed in favour of goats. The mean flock sizes per household were 14.2 and 6.9 for goats and sheep respectively. About 60.2 % of the stock owners kept goats alone, another 29.3 % kept sheep and the remaining 10.5 % kept both sheep and goats. This

observation was in agreement with the report of Gefu *et al.* (6) in the South Eastern Nigeria . The higher population of goats may be attributed to the fact that they are more hardy, have better survival rate during transit and are preferred by the Southerners as compared to sheep. However it was observed that more sheep were kept in the urban areas. This could be due to high demand for sheep by muslims for religious sacrifices. Thus sheep tend to command higher price than goats.

Table 1. Sheep and goats ownership distribution pattern

	<u>% Owning household</u>	<u>Mean flocksize/household</u>
Sheep	29.3	6.9
Goat	60.2	14.2
Sheep and Goats	10.5	10.0

Table 2 shows that over 75 % of the livestock owners acquired their foundation from the open market, mainly in the neighbouring states particularly Kano, Jigawa, Yobe, Borno and Adamawa states. The farmers that obtained their foundation stock from inherited flock were observed to have animals with low productivity. This may be attributed to inbreeding problems.

Table 2. Sources of foundation stock

<u>Source</u>	<u>Frequency</u>	<u>Percent</u>
Inherited	68	15.0
Market	338	75.0
Neighbour	149	33.0
Borrowed	24	16.4
Government	11	2.4
Bred	23	5.0
Others	29	6.4

Total observation is greater than 100 % due to multiple response.

Most of the farmers expressed their desire and willingness (Table 3) to increase their flock sizes with more respondents wishing to increase sheep flock sizes (91.0 %) than goats (71.6 %). This could be due to the fact that sheep tends to command higher prices especially during festivities. The major problems of sheep and goats production (Table 4) include health (89.6%) feeds (69.3%) and housing (71.3%) . Due to high cost of conventional supplementary feeds such as cotton seed cake, soya beans meal, groundnut cake and mineral/vitamin premixes, very few respondents claimed to provide such feeds to their animals

Table 3. Desire to increase flock size

	Sheep		Goat	
	Frequency	%	Frequency	%
Yes	410	91.0	340	75.6
No	23	5.2	38	8.4
Not decided	17	3.8	72	16.0

Total observation is greater than 100 % due to multiple responses.

Table 4 Major problem facing livestock owners

Problem	Frequency	Percent
Health	402	89.6
Feed	372	69.3
Housing	321	71.3
Labour	217	48.2
Theft/Accident	65	14.4
Others	55	12.2

Total observation is greater than 100 % due to multiple responses.

Coupled with feed problem is the high cost of veterinary drugs. It was observed that worm infestation was more in sheep than goats (Table 5), futher confirms the findings that sheep are more susceptible to worm infestation than goats (7). Similarly , the health status of an animal depends of a large extend on the type of housing. Poor housing predisposes the animal to various pathogenic organisms and facilitates the spread of contagious diseases like PPR particularly where animals are overcrowded (8). *Acacia spp* (pods and leaves), *Ficus spp* (Fruits and leaves). *Pterocarpus erinaceus* (leaves) and *Khaya senegalensis* (leaves) are some of the browses, that are cut and fed to sheep and goats to supplement the low quality straw. Some respondents claimed that the bark of *Khaya senegalensis* is used to deworm ruminant.

Table 5. Incidence of diseases

Diseases/ Causes of loss	Sheep	Goat
PPR	43.1	44.0
Helmithiasis	36.2	23.0
Pneumonia	28.7	36.3
Diarrhoea	14.4	11.2
Footrot	15.3	4.6
Bloat	8.1	9.0
Tuberculosis	2.3	1.0
Black leg	2.3	1.0
Poison	2.9	1.1
Snake bite	1.4	3.00
Others	3.6	4.0

Total observation is greater than 100 % due to multiple responses.

On the other hand during the rainy season, animals were confined, tethered or grazed to prevent them from damaging fields crops. Cut forages other sources of feed include cereals offals, kitchen waste and driving the animals on uncultivated lands to graze. The fact that animals are confined or grazed during the wet season called for an increase demand for more labour. This may limit the number of animals kept by households.

Table 6 Seasonal sources of feed

Sources	Dry season		Wet season	
	Frequency	%	Frequency	%
Cereal offals	243	76.2	227	50.4
Legume hays	321	71.3	169	37.7
Roaming	265	58.9	8	1.8
Cut forage	140	31.1	360	80.0
Grazing	70	15.6	115	25.6
Supplements	50	11.1	41	9.0
Others	20	4.4	25	5.5

Total observation is greater than 100 % due to multiple responses.

CONCLUSION

The results indicate that sheep and goats production and management in the study areas could be greatly improved, if adequate provision of supplementary feeds, vaccines and drugs are available to farmers and at subsidized rate in conjunction with sound livestock extension services.

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