

CATTLE FEEDING MANAGEMENT OF PASTORALISTS AND CONFLICT RESOLUTION STRATEGIES IN THE TROPICAL HUMID RAIN FOREST ZONE OF SOUTH EASTERN NIGERIA

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Abstract

This study investigated feeding management of pastoralist cattle and conflict frequencies and resolution strategies in the rainforest zone of Nigeria using primary data generated through questionnaires, interviews and observations. About 77% of cattle holdings were White Fulani breed produced for dual purposes. The pastoralists allowed calves to start suckling from 0 - 8 weeks and for six to nine months. Mature animals depended only on natural pastures for nutrient needs, salt lick was supplemented and water obtained directly from streams, rivers and stagnant ponds. The diversity of ever green forages made all year round feed supply possible. About, 81% of pastoralists had conflicts with indigenous crop farmers because of animals straying to destroy crops during herding. Another 13.60% had cases of animal theft, with conflicts being resolved through village heads, town authorities and the army. Conflicts threaten pastoral access to resources, thus, impacting negatively on sustainability of pastoralism in this forest zones.

Key words: Forest Zone, South Eastern Nigeria, Tropical Humid Rain Forest Zone

INTRODUCTION

Pastoralist cattle production is based on grazing natural pastures in synchrony to the rain fall regimes that drive biomass availability (Okoli *et al.*, 2012). This transhumance has been practiced in northern zones of Nigeria for centuries and is commonly constrained by threats of animal diseases; insecurity, shortage of forages and water resources for livestock (Muhammad and Ardo, 2010). To the south of this pastoralist zone is the guinea savannah to humid rain forest zones that have more abundant biomass resources and permanent water sources. These southern zones are home to major crop production activities in the country.

Recent prolonged droughts; resulting in shortage of forage and water resources, in the northern zones, more efficient control of tsetse fly down south; the widespread availability of veterinary medicines and the increasing use of crossbred cattle have led to increased migration of the pastoralists and their animals into the rain forest zones of Nigeria (Bassett and Turner, 2006), where they share land and vegetal resources with indigenous crop producers resulting in conflicts of various degrees (Blench, 2010). Such conflicts with crop farmers threaten pastoral access to shared material resources, thus, impacting negatively on the sustainability of pastoralism in the rain forest zones of Nigeria (Ofuoku, and Isife, 2009).

The objective of this study is to investigate the feeding management practices, conflict frequencies and resolution strategies among pastoralists' livestock stakeholders in the tropical humid rain forest zone of Nigeria.

MATERIALS AND METHODS

This study was carried out in Imo state, located in the south eastern part of the country within the tropical rain-forest zone. The zone is characterized by varieties of densely populated grasses, legumes, shrubs, herbages and trees, which are not only of nutritional value to both humans and animals, but are also exploited for economic and health purposes. Imo state lies at an altitude of about 90m above sea level and the mean annual rainfall, temperature and humidity data are 2500 mm, 26.5-27.5°C and 70 - 80%, respectively (Agbola, 1979).

Data used in this study were generated with the aid of structured questionnaires, which were distributed amongst Fulani pastoralists in the state, targeting some grazing areas in Okigwe, Orlu and Owerri agro ecological zones of

the state. Personal interviews, field measurements and observations were also employed in data collection. Out of 50 questionnaires distributed, 22 were completed and returned, while farm measurements and observations lasted for 2 weeks.

RESULTS AND DISCUSSION

The results in table 1 showed that 77.3% of pastoralists' cattle holdings were White Fulani (Bunaji) followed by 13.6% of Sokoto Gudali and 9.1% N'dama breeds of cattle Table 1 also showed that all the pastoralists produced cattle for breeding and dual purposes.

Table 1: Distribution of Cattle Breeds and Production Purposes

<i>Breeds of cattle</i>	<i>Frequency</i>	<i>Percentage (%)</i>
White Fulani	17	77.3
Sokoto Gudali	3	13.6
N'dama	2	9.1
Total	20	100
Production Purposes		
<i>Purpose</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Meat	0	0
Dual purpose	22	100
Traction	0	0
Total	22	100

Table 2 shows that, 100% of pastoralists allowed calves between the ages of 0 - 8 weeks to suckle enough milk from their dams without interruption since the production purpose is not purely for dairy. The results also showed that, no special feed was offered to the cattle during breeding seasons. The animals virtually depend on the natural available pastures for nutrient requirements. The results are in agreement with the findings of (Nweze et al., 2012) that feed resources of pastoralist cattle consists mainly of grasses, legumes, browses, and cereal crop residues indigenous to the production zones. All the pastoralists however offered salt lick to their cattle to supplement for minerals obtained from forages. Streams and rivers to drink water were the only sources of drinking water.

The common grasses, fodder and legumes grazed by cattle in the study area are listed in table 3. The diversity and ever green forages and fodder because of high humidity in the zone make it possible for year round feed supply to the cattle.

Table 2: Distribution of feeding management and water source

<i>Feed Offered</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Calf Breast feeding	22	100
No special feed at breeding	22	100
No special feed at parturition	22	100
No feeding regime for beef cattle	22	100
No feeding regime for dairy cattle	22	100
Mineral offered to cattle	22	100
Water Source		

Source of water	Frequency	Percentage (%)
Rivers and streams	22	100
Borehole	0	0
Surface wells	0	0
Surface wells	0	0
Total	22	100

Table 3: Commonly Grazed Forage Plants

Grasses	Legumes
<i>Axonopus compressus</i>	<i>Colopnium mucunoid</i>
<i>Panicum maximum</i>	<i>Centrocema pubescence</i>
<i>Eluesine indica</i>	<i>Fiscus capensis</i>
<i>Cyperus difformis</i>	<i>Leucenna leucefolia</i>
<i>Cyperus rotundus</i>	<i>Leucenna bateri</i>
<i>Cyperus esculenta</i>	<i>Alchornea cordifolia</i>
<i>Cyno boletillum</i>	<i>Fiscus thoningil</i>
<i>Pennisetum pedicellatum</i>	<i>Euphorbia hetrophyllia</i>
<i>Pennisetum perperum</i>	<i>Perperomia pellucid</i>
<i>Imperata cylindrica</i>	
<i>Sporobolus pyramidedia</i>	
<i>Kyllinga Monocephala</i>	

The results shown in Table 4 revealed that, 81.8% of pastoralists have had conflicts with indigenous crop farmers because of animals straying to destroy farm crops during herding in the study area. The results agree with similar findings which state that, conflicts between farmers and nomadic cattle herders have become a common feature of agricultural livelihood in Nigeria (Ofuoku, and Isife, 2009). Another 13.60% of pastoralists have had cases of animal theft, while 4.60% did not experience any case of animal theft. However 81.80% of the pastoralists were not very specific.

Table 4: Distribution of causes of conflicts, cases of stealing and conflict resolution strategies

Causes	Frequency	Percentage (%)
Eating of crops	22	100
Varied Behavior	22	100
Total	22	100
Cases of stealing animals		
Cases of stealing	Frequency	Percentage (%)
Yes	3	13.6
No	1	4.6
Sometimes	18	81.6

Total	22	100
Loss of lives, complaints to authorities		
Loss of lives	Frequency	Percentage (%)
Animals	22	100
Total	22	100
Complaints to authorities		
Village authorities	5	22.7
Army	17	77.3
Total	22	100
Intervention by Authorities		
Village authorities	2	9.1
Army	20	90.9

On conflict resolution strategies 22.70% of the pastoralists forwarded their complaints to the village and town authorities, while 77.30% complained to Army officers. The lodging of these complaints to the Army officers and not to the police and community heads could mean that, they have limited confidence in the police and community leaders to provide solutions to the conflicts.

CONCLUSION

The diversity and ever green forages and fodder make it possible for year round feed supply to the cattle. However, pastoralists have had conflicts with indigenous crop farmers because of access to shared material resources, thus, impacting negatively on the sustainability of pastoralism in the forest zones.

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