

Impact of Boko haram insurgency on feedlot cattle production activities in Borno State, Nigeria

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Target Audience: Cattle fatteners, Researchers, NGOs

Abstract

This study was conducted to access the impact of the insurgency on cattle feedlot in Borno State. Fifty four (54) respondents were randomly selected from four (4) local government areas in Borno State, making 216 respondents. Structured questionnaires were used to collect the data. Most of the respondents were married male (87 %), attained Qur'anic education (59%). Before insurgency period, the most common breed used for fattening is the Ambala (64%) which was usually imported from Chad republic; they attained substantial market size at two months. Most of the respondents (56%) transport their fattened animals to the Southern part of Nigeria because of better market value with profit margin of over 20 % and above per herd. During the insurgency, 56% of the respondents resorted to the fattening of Azawak breed, which attained market value after three to four months with 11 to 15 % profit per herd. Most of the problems encountered by cattle fatteners were threats from the insurgents, market closure (curfew), and poor access to the feedlot as a result of multiple road blocks. In conclusion, Boko Haram insurgency has negatively affected cattle feedlot production in Borno state. This negative effect is especially seen in the breeds of cattle used, target market, number of animals kept, price of cattle and threats from the insurgents.

Key words: Boko haram, feedlot, cattle, insurgency, Borno state, Nigeria

Description of Problem

Nigeria as a country since independence has experienced several ethnic and religious crises of various degrees and magnitude (1). Recently, Boko Haram insurgency has claimed lives and properties worth billions of Naira in Northeastern Nigeria since 2009, which resulted in displacement of people from their various communities (2). Livestock sub-sector is an important component of the socio-economic activities of people in the North east (Borno, Yobe and Adamawa States) which are the most affected states (3) and (4). This crisis has drastically reduced livestock production which resulted to serious economic losses

(5). Cattle fattening is a vital agricultural sub-sector in Nigeria with specific economic importance due to its high contribution to the small holder farmers through wealth generation (6). In the Northeastern Nigeria particularly Borno state, insurgency has seriously affected the livelihoods of cattle fatteners such that many people are fleeing to more peaceful settlements in other parts of the country and the prices of cattle rises due to drastic fall in supply from other areas (7).

However, for cattle production to be economically viable, the animals must be provided with the conditions to exteriorize their maximum genetic potential through the supply of a balanced, and low-cost diet (8)

and (9). The modern beef feedlot has evolved into a complex system that is very dependent upon technology. They are organized into departments, including the office, cattle yard, feed departments comprising of feed milling that allow for improvements in production efficiency through the specialization of management and labor (10).

Animal feeding are intensely managed production systems geared towards improving efficiency and allowing better care of the animals (11). Feedlot cattle management have a deleterious impact on the environment, consisting of a complex soil and manure mixture resulting to chemical, physical, and biological reactions that result in the release of a variety of compounds such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ammonia (NH₃), hydrogen sulfide (H₂S) and other sulfides, alcohols, amides, aromatics, and volatile fatty acids (12).

The use of open outdoor feedlots for housing large number of cattle is increasing in many parts of the world, where cattle are kept in large outdoor pens. One major benefit associated with this type of management is the clean shaded environment in which the animals are kept, thus preventing muddy conditions (13). Cattle fattening in particular has received less attention than crop and vegetable cultivation in the study area. It is in view of the importance of feedlot cattle production on agricultural enterprises that this paper tries to examined the socio-economic characteristics of cattle fatteners as well as to identify the common problems facing feedlot cattle production before and during the insurgency in Borno state.

Materials and Methods

Study Area

The study was conducted in some

selected Local Government Areas (LGAs) of Borno state, Nigeria), namely: Maiduguri metropolitan council (MMC), Jere, Mafa and Konduga. Borno State comprises of 27 local governments, located within a latitude 11.85^oN and longitude 13.16^oE. The climatic condition of the state oscillates between dry, rainy and harmattan and the dry season is known to be longer than other seasons. The major occupation of the natives in the study area is crop and livestock production, which serves as their chief source of livelihood.

The areas selected for this study was based on the high concentration of cattle fatteners. Most of the farmers in the local government areas of Borno state fattened and trade their cattle in these areas.

Data Collection and Analysis

This study is a cross sectional survey. The population frame of the respondents was identified with the help of Cattle Fatteners Association of Borno State with 483 registered members. The questionnaire was self-administered with the help of some cattle marketers in the study area.

A sample size of 216 was determined using Krejcie and Morgan table, based on the population of registered cattle fatteners in Maiduguri metropolitan council (MMC), Jere, Mafa and Konduga local government areas of Borno State. However, out of the 216 questionnaires administered, 16 were inappropriately completed; as a result, only 200 questionnaires were used for the analysis.

A multi- stage sampling technique was used for selection of communities in the study area. A total of 24 communities were selected for the study. In each of these selected communities, purposive sampling technique was used to select cattle fatteners based on owners' consent. A structured questionnaire was used in data collection.

The questionnaire had information on cattle fattening from 2004 to 2008 (Before insurgency) and 2009 to 2020 (During insurgency) in Maiduguri and its environs. In addition, variables such as the social demography, sex, age, years of experience, breed, profit margin, cattle use for fattening within the study area and challenges encountered were all addressed.

Data obtained from this study were converted to frequencies and percentages using SPSS version 16 to determine frequencies of the responses of cattle fatteners and the results were presented in

Tables.

Results

Cattle fatteners in the study area before insurgency and during insurgency were predominantly found to be male (84% and 87%), married between the ages of 31-50 (61%). Majority of the cattle fatteners were crop farmers (52%), flowered by few civil servant with different level of educational qualification. Most of the sampled farmers had 21-30 years experience in cattle fattening and were from Jere (45%) local government area of Borno State.

Table 1: Socio- economic characteristics of cattle fatteners before insurgency and during insurgency in Borno state

Variables	Before insurgency (%)	During insurgency (%)
Gender		
Male	87	84
Female	13	16
Age categories		
<30	8	4
31-50	57	61
51-70	35	35
Marital status		
Single	21	17
Married	79	83
Occupation		
Farming	43	57
Civil servant	23	19
Trading	17	14
Student	17	10
Level of education		
Religion	55	59
Primary	15	18
Secondary	17	11
Tertiary	13	12
Local government Area		
MMC	30	31
Jere	45	37
Mafa	14	16
Konduga	11	16
Years of experience		
<20	16	16
21-30	55	59
31-40	29	25
Total	100	100

Significant numbers of the respondents (34%) were keeping more than 40 cattle before insurgency and were fattened three (3) times in a year for 2-3 months (66%). During insurgency, only few (22%) were keeping more than 40 animals, fattened for 4-5 months (63%). Most of the respondent fed their animals with self formulated feeds

before and during insurgency in Maiduguri. Majority of cattle fatteners were selling out their animals all at once before the insurgency (42.5%) in Southern part of Nigeria (56%), while during insurgency, significant numbers of the respondents (58%) sell their animal in Maiduguri.

Table 2: Some characteristics of feedlot cattle production before insurgency and during insurgency in Maiduguri, Borno State

Variables	Before insurgency (%)	During insurgency (%)
Source of Animal for fattening		
Maiduguri	11	37
Neighboring state	18	46
Neighboring countries	63	8
Others	8	9
Number of Animal kept for fattening		
<20	16	18.5
21 to 30	19	31.5
31 to 40	31	28
> 40	34	22
Duration of fattening		
2-3 months	66	17
4-5 months	26	63
> 5 months	8	20
Target market		
Maiduguri	37	58
Northern Nigeria	7	13
Southern Nigeria	56	29
Method of animal sale		
Individual	27.5	31.5
All at once	42.5	25
Depending on the market	30	43.5
Frequency of fattening in a year		
Once	8	11
Twice	19	23
Three times	71	55.5
Others	2	10.5
Types of feed use for fattening		
Commercial	27	10
Self formulated	73	90
Total	100	100

Before insurgency majority of the animals used for fattening were imported from neighbouring countries, while during insurgency most of the animal use for fattening was sourced locally (56%).

Ambalai breed of cattle were mostly used before insurgency (64%), however, during insurgency majority of the cattle fattened were Azawak bred (56%) followed by Red Bororo (20%).

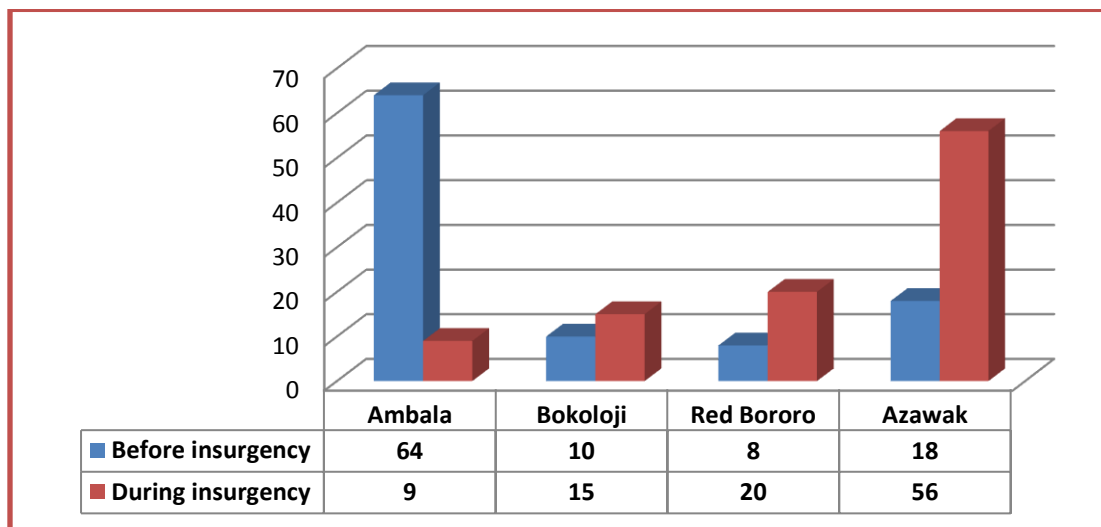


Figure 1: Breeds of animal use before insurgency and during insurgency in Maiduguri

The highest profit earned before insurgency was >20% of their total inputs per herd (56%), while during insurgency the maximum profit obtained per animal is

between 16-20% of the total input per animal, while only few (12%) farmers earn above 20 percent per animal as reported by the respondents during the insurgency.

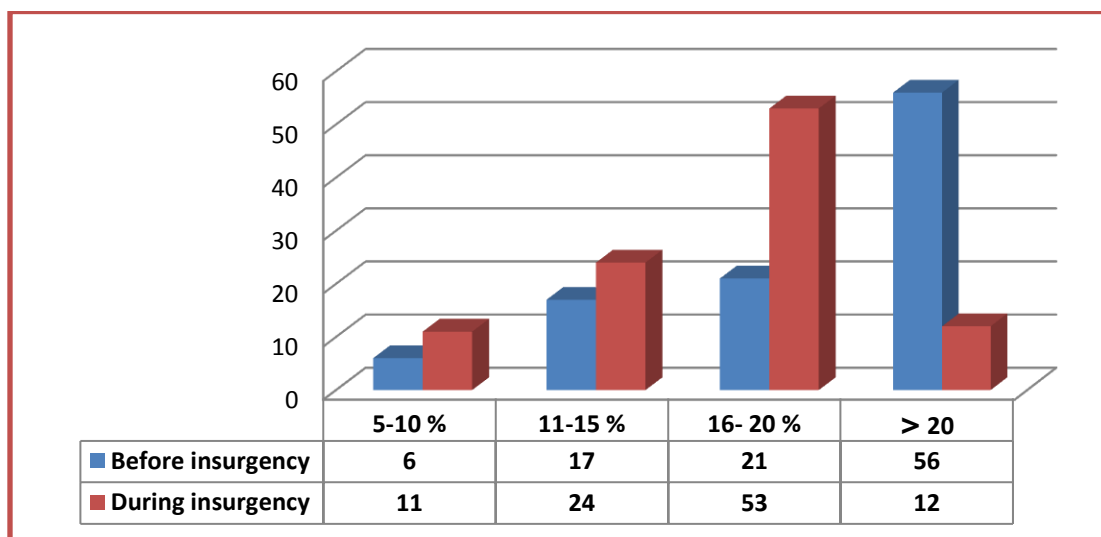


Figure 2: Percentage profit per animal before insurgency and during insurgency in Maiduguri

During insurgency, most of the problems encountered by the cattle feedlot farmers in the study area were threats from the insurgents (46%), market closure as a result of curfew (25%), lack of access to the feedlot (20%) due to multiple road blocks by

the security agents and band on movement of cattle within and around Maiduguri (19%). Only few respondents (33%) were receiving assistances such as bull and animal feeds (90%) from Nongovernmental organization.

Table 3: Problems associated with feedlot cattle production during insurgency in Maiduguri, Borno State

Variables	Percentages (%)
Problems encountered	
Market closure (curfew)	24
Lack of access to the feedlot (road blocks)	29
Border closure	27
Threats from the insurgent	56
Assistance	
Yes	33
No	67
Form of assistance	
Extension services	1
Marketing	2
Animal and feeds	90
Source of water	
Borehole	85
Others	15
Total	100

Discussion

Majority of the cattle fatteners in the study area were male, married and fall within the age group of 31-50 years. Similarly, (14) who reported that, most of the cattle farmers in Nigeria were males. This is also in line with the findings of (15) who reported that cattle feedlot can be practice by males within certain age group limit that have better performance and productivity (40-50 years) and can cope with various rigors of cattle fattening. Married people were mostly involved in cattle fattening in the study area, this is in agreement with (16), which postulated that majority of cattle fatteners 93 % had house hold size of two to 15 persons with a mean of nine (9) persons.

Results also indicated that significant number of the cattle fatteners in the study

area were farmers by occupation and sizable number attained Qur'anic education, while some proportion with secondary and tertiary qualification in both the study periods. This statement concurred with report by (17) who stated that, farmers with formal or informal education tend to enhance technical competence and produce more output and respond to the use of modern technology when compare with an illiterate farmer. In the course of this study, it was clear that large number of farmers have 21 to 30 years working experience, however, working experience has a significant influence on the decision making process of farmers with respect to risk aversion as reported by (18).

Cattle fattening activities in Borno state is a lucrative economic activity that provides substantial source of livelihoods and

employments to many people in the area, this has created an increased cross-border trade between Borno, Niger, Chad, and Cameroon (19). Majority of cattle fatteners in the study area were fattening Ambala breed during insurgency as presented in Figure 1, source from Chad republic and attained market size between 2-3 month only, which is in accordance with report by (20), who stated that preferred choice for cattle feedlot in Maiduguri is Ambala breed of cattle which is exclusively imported from Chad republic despite having a highest purchase price and become ready for market after 2 month of fattening, while during insurgency, significant number of the cattle fatteners were fattening Azawak breed (Figure 2) which are commonly found in the study area, they are fattened three times in a year, which become ready for market after 3 to 4 month. This finding is in tandem with the report of (21) who stated that Azawak is a breed of cattle found in Nigeria and is said to be native to the Azawak valley North-East of Nigeria and is distributed along its North-Western border. Moreover, they represent 0.7 % of the national herd. (22) reported that Azawak breeds have higher weight gain and lower values of feed intake when compare with other local breeds other than Ambala.

While during insurgency most of the respondent source and sale their animals within Borno state while few individual purchases from neighboring state (Geidam, Yobe state), this is not unconnected with the executive order for the closure of Nigerian land border by the federal government against all importation and band on supply of livestock into and out of Borno state by the Nigerian Military and Borno state government, which caused adverse effect on importation of cattle as reported by (7). Before insurgency, most of the cattle fatteners in the study area transport their animals to the Southern part of Nigeria and

sold them all at once with profit of over 20 % of their total input per bull, while others sale their animals in Maiduguri with average gain of 15 to 20 % of their input per bull, this outcome is in corroboration with report by report by (20) who stated that fattened cattle were sold locally but most of them were transported by road, to major cities in Southern Nigeria like Lagos, Port Harcourt and Enugu for better market prices, with average profit of 40 thousand naira (25-30 %) on average per bull, where the least profit per head of cattle fattened and sold in Maiduguri was 10-20 thousand naira (8-15 %).

During insurgency, the analysis of the result showed that significant number of the respondents earned 11 to 15 % profit per herd and only few earned above 15 % per bull as presented in Figure 2. Boko Haram insurgency in the study area has significantly affected the price of cattle; also, the supply might reduce owing to increase in road blocks by security personnel which ultimately increased the cost of transportation and risk of transporting cattle into Maiduguri (19) and (23).

Furthermore, most of the problems encountered by cattle fatteners were threats from the insurgents, market closure (curfew), and poor access to the feedlot as results of multiple road blocks. The routes of moving these cattle from neighboring countries to Borno State were hot enclaves of the Boko Haram insurgents, thereby; affecting the number of animals kept.

Other problems include lack of capital and threats from the insurgence and the cost prices of cattle have risen during insurgency. (7) reported that Boko Haram insurgents in the study area declared brokering and taxing herder men illegally at the detriment of their life, further disrupting the marketing of cattle and the cost of animal has increased due to the increase the informal and formal fees

charged at each of the checkpoints by security personnel.

Insurgency has seriously affected the livelihoods of cattle marketers such that many people including businessmen are fleeing to safer zone in other parts of the country due to threat from insurgents. The price of cattle has been increasing astronomically following the drastic fall in the supply of the cattle from neighboring countries as reported by (19). Market access is often affected by road blockages and numerous check points; perhaps maintaining adequate supplies of cattle is one of the major challenges facing cattle traders (7). (24) reported that there were several incidences of the farmers been robbed and killed including their animals by the insurgents in Borno state.

In an effort to assist in the economic recovery and rehabilitation of the conflict ravaged area in Borno state, much assistance is needed to feedlot cattle fatteners in Maiduguri and the rest of the north eastern Nigeria. In the present study only few cattle fatteners received assistance from nongovernmental organization (NGOs) such as Food and Agriculture Organization of the United Nation (FAO) of the united nation, more often than not such assistance should be in the context of financial inclusion, bull and feeds stuff. (25) reported that assistance through provision of financial services to economically disadvantaged areas plays an important role in growth and sustainable development of any economy.

Conclusion and Applications

1. Boko Haram insurgency has negatively affected cattle feedlot production in Borno state.
2. This negative effect is especially seen in the breeds of cattle used, target market, number of animals kept, price of cattle and threats from the

insurgents.

3. Nigeria government should involve in building of feedlot cattle enclosures according to global best practices and introduce assisted reproductive technology in other to develop our local breeds.

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