

**AN EMPIRICAL SURVEY OF FARMERS-NOMADIC CATTLE HERDERS
CONFLICT IN CROSS RIVER AND BENUE STATES, NIGERIA:
A PROPOSAL FOR ACHIEVING SUSTAINABLE
LASTING SOLUTION**

BY

¹Adalikwu, Rose Amokeye, Ph.D, ²Sunday E. N. Ebye- Ph.D & Nkpoyen,
Festus, Ph.D

^{1&2} *Peace and Conflict Unit, Centre for General Studies, Cross River University of
Technology, Calabar Cross River State, Nigeria* ² *Department of Political Science, University
of Calabar, Calabar* ³ *Department of Sociology, Faculty of Social Sciences, University of
Calabar, Cross River State, Nigeria.*

ABSTRACT.

The central focus of this study was to carry out an empirical survey of farmers-nomadic cattle herders' conflict in Cross River and Benue States, Nigeria: A proposal on achieving a sustainable lasting solution. The research design used was the survey research design with a population of the study consisting of all assessable communal farmers and nomadic cattle headers in some selected Local Government areas in Cross River and Benue State, Nigeria. Totaling 6, 325. The sampling technique adopted for this study was the purposive sampling technique. This technique was considered appropriate in the study. The sample size of the study was three hundred and ten (310) respondents drawn from ten (10) communities in Cross River and Benue states, namely Odukpani, Yala, Ogoja, Abi, Otukpa, Gboko, Katsina-ala, Obi, Otukpo, and Ugbokolo. The instrument used for data collection was the mixed-method questionnaire. The instrument was developed by the researcher. The questionnaire contained two sections A and B. Section A was designed to elicit information from respondents' demographic variables such name of LGA and community, while section B is a 20-item four points Likert-type scale designed to measure the sub-variables of the study. Each item required the respondent to indicate the frequency of his or her various opinions under strongly agree, agree, disagree and strongly disagree. The two kinds of validation were established for the instrument of the study face and content validity. The face validity was established by using three (3) experts. Reliability was established through Cronbach alpha reliability of the instrument (questionnaire), a trial testing was done using thirty (30) farmers-nomads with Cronbach alpha reliability was conducted and the internal consistency of 0.66 - 0.71 showed that the research instrument was reliable. The hypotheses formulated to guide the study were appropriately tested using a population t-test. the findings revealed that the growing population of farmers-nomadic cattle herders is significantly high. Also, greater insecurity among farmers-nomadic cattle herders is significantly serious and climate change among farmers-nomadic cattle herders is significantly high. It was recommended among others that government should enact policies that will prevent the growing population of farmers-nomadic cattle herders. This will help to reduce the overpopulation of headers in most communities in Cross River and Benue States, Nigeria.

Keywords: Farmers, Herdsmen, Crises, Sustainable, Lasting solution.

INTRODUCTION

The Fulani is an ethnic group, thought to be the largest in the Sahel Savanna region with a population of over 30 million (Gordon, 2000). Traditionally, the Fulani are semi-nomadic cattle herders and communities who travel vast distances along grazing routes to find places for their herds to eat. In Nigeria, the Fulani are mostly concentrated in the North. But a combination of political instability and drought is pushing them further and further south, where they are coming into conflict with local farming communities. Over the past few years, tensions between farmers and herdsmen have risen sharply, as has violence between the groups (Allison, 2018).

The contemporary crisis in Nigeria appears to have increasingly ethnic (Fulani versus other Nigerian ethnicities), religious (Muslim versus Christian south), and cultural (nomadic versus sedentary) dimensions. Fulani attacks on farmers are primarily practical rather than ideological. Competition for suitable grazing land over the autumn and winter months has historically been seen as a reoccurring seasonal problem for many of the farming communities in the south. The herdsman-farmer clashes, with both sides forming armed 'self-defense' militia, have become the dominant security issue in the country. It is one element of a wider social pathology in contemporary Nigeria (Allison, 2018).

Though the herdsmen attack has not been persistent in Cross River State, unlike Benue state. in Cross River State, attacks by suspected Fulani herdsmen have left not less than 10 people dead and over 3,500 rendered homeless in Odukapni local government council of Cross River State. shortly after, a medical doctor with Monaya Hospital, Ogoja in the northern part of Cross River State was reportedly been attacked by Fulani herdsmen. Although the attempt by the Herdsmen was not successful the victim as Njoku said narrowly escaped being abducted by two herdsmen on Tuesday night shortly after he arrived home from work. In Benue state, farmland was destroyed as a result of insecurity. Over the years, farmers and herders in Benue state have had clashes that resulted in the loss of lives, and according to Nigeria Security Tracker, more than 1,550 deaths have been recorded in the state in the past 10 years. Governor Samuel Ortom lamented that over 4,000 persons have been killed in the state by herdsmen who have in the last few years staged ceaseless attacks on communities in the state. He said the attacks have also left the state grappling with over two million Internally Displaced Persons, IDPs, who are living in dire conditions in official and official IDPs camps across the state. The

effect of these killers has drastically affected food security include: low finances, reduced household feeding, a hindrance to socio-economic development, and farmers-herders conflicts affecting the supply-demand balance in food and agricultural markets on food security.

The emergence of Nigeria's Fourth Republic in 1999 witnessed the farmer-Fulani crisis at a significant magnitude. The conflict has killed thousands of people and displaced tens of thousands more. It followed a trend in the increase of farmer-herder conflicts throughout much of the western Sahel Savanna due to the following factors: expansion of agriculturist population and cultivated land at the expense of pasturelands, deteriorating environmental conditions, desertification and soil degradation; breakdown in traditional conflict resolution mechanisms of land and water disputes, and proliferation of small arms and crimes in rural areas. Insecurity and violence have led many populations to create self-defense forces and ethnic militias, which have engaged in further violence. The majority of farmers-herders clashes have occurred between Muslim Fulani herdsmen and Christian peasants, exacerbating ethno-religious hostilities (IPI Global Observatory, 2018).

Global Terrorism Index reported that Fulani militants were the fourth deadliest terrorist group in 2014. Using machine guns, they launch attacks on villages and in the process assault and intimidate farmers. After killing around 80 people in total from 2010 to 2013, they killed 1,229 in 2014. Most deaths occurred in the Nigerian Middle Belt, particularly in the states of Benue, Kaduna, Nasarawa, Plateau, and Taraba which recorded 847 deaths in the same period. The state of Zamfara in the northern belt recorded 229 deaths. In addition to terrorist attacks, Fulani militants were also involved in non-state armed conflicts with groups from Eggon, Jukun and Tiv farming communities. These conflicts resulted in 712 deaths. The year 2016 saw further incidents in Agam, Benue, and Nimbo, Enugu state. Many Nigerians perceive the establishment of grazing reserves as a sufficient mediating factor against the crisis (Allison, 2018).

Grazing reserves in Nigeria started during the pre-colonial era (Bako and Ingawa, 1988). Although formally introduced by the British, grazing reserves were demarcated by the Fulani who conquered and ruled Northern Nigeria. The attempt by the British in 1940 to separate grazing land from farmland, however, faltered because the Europeans imposed Land Use controls and did not take cognizance of the economic and demographic dynamics in the pastoral system (Muhammad- Buba, 2007).

Formal grazing reserves in Nigeria started accidentally in the 1950s when Hamisu Kano, working with pastoralists on livestock vaccination, foresaw the shortages of grazing land in Northern Nigeria. Supported by the government, he initiated the grazing reserve scheme from the abandoned government resettlement schemes (Fulani Settlement Scheme). The resettlement scheme collapsed because the government had neither the financial nor the managerial ability to continue with the financially burdensome scheme. The best alternative use of the land, the government thought, was to convert it into grazing reserves that were less financially committed. The grazing reserve hatched in 1954 after a study of the Fulani production system contained in the “Fulani Amenities Proposal”. The proposal suggested the creation of grazing reserves, the improvement of Fulani welfare and the transformation of the herd management system. By 1964, the government had gazetted about 6.4 million hectares of the forest reserve, ninety-eight percent in the savanna. The Sokoto province had twenty-one percent of the land, followed by Kabba, Bauchi, Zaria, Ilorin and Katsina, with 11-15 percent each (Awogbade 1982) in Iro (2011). The Wase, Zamfara and Udubo reserves followed in succession (Iro, 2011).

In 1965, the Northern Nigerian Government incorporated the Fulani Amenities Proposal into the Grazing Reserve Law. Before the enactment of the Grazing Reserve Law of Northern Nigeria, the pastoral Fulani relied on the lordliness of occupied and unoccupied land, because interpersonal and kinship affiliations governed the dispensation of land, the Fulani were worried about being evicted from the land when their relationship with the hosts become strained (Waters-Bayer & Taylor-Powel, 2006). The planners however applied a top-down approach that excluded the Fulani from formulating and implementing this well-intentioned program. Accordingly, Fulani gave less than the expected cooperation in the scheme (Laven, 2001).

In 1979, the Survey Department finished the survey for most of the land earmarked for grazing. The United States Agency for International Development gave the technical assistance. By 1980, Nigeria had established 2.3 million hectares of grazing reserves, although this figure represented only eleven percent of the planned size (Omaliko, 2004, Bako & Ingawa, 2008). The government acquired less than five percent of the ten million hectares proposed as grazing land (N.L.P.D Record, 1992). Of the forty-five planned dams, twenty-four have been completed. Five boreholes have been sunk. Of the expected 722 roads, 150 had been built, showing a huge deficit (Iro, 2010).

At the close of 1992, the government had identified over 300 areas with twenty-eight million hectares for grazing reserve development. About forty-five of these areas, covering some 600,000 hectares have been gazetted. Eight of the reserves, totaling 225,000 hectares are fully established. Already, 350 of the projected 950 pastoral families and 11,600 of the planned 46,000 cattle are using these reserves.

An empirical study by Ofuoku and Isife (2010), the study was conducted in Delta state to investigate the farmers-nomadic herder conflict that is very common in many parts of Nigeria. Such conflict has caused a lot of losses to Nigeria, the State, Local Communities, and families. This study unveils the secrets behind such conflicts and gives ideas on the way to prevent and solve such in the future. Using simple random and positive sampling techniques, 80 farmers and 20 nomadic cattle herders were selected respectively from 8 randomly selected communities. Data were collected using a structured interview schedule. The causes of such conflict were the destruction of crops, contamination of streams by cattle, zero grazing of land, disregard for local traditional authorities, female harassment, harassment of nomads by host communities youths, indiscriminate bush burning, defecation of cattle on roads, cattle theft, and straying of cattle. The socio-economic effects of the conflicts result in a reduction in crop yield and income of farmers/nomads displacement of farmers, loss of lives and properties and loss of products in storage. T-test results showed differences in the responses of farmers and nomads in the respect to the causes of the conflicts ($P < 0.05$). It was then suggested that a mechanism of local development plans should be established to reduce such conflicts. Also, the extent of damage and compensation be agreed upon by both parties at the community level with the extension agents as facilitators. On the basis of this background that the study sought to carry out an analysis of the farmers-nomadic cattle herders' conflict in Benue States, Nigeria: A proposal on achieving a sustainable lasting solution.

ACHIEVING SUSTAINABLE SECURITY

1. The land grazing bill

The Land Grazing Bill sponsored by Nigerian lawmaker, Zainab Kure, is aimed at securing areas for Fulani herdsmen across the federation and for the mapping out of grazing routes. Beyond that, the bill seeks to establish a National Grazing Reserves Establishment and Development Commission. The successful signing of this bill into law means there will be limited areas reserved for the Fulani herdsmen and their cattle. On the land required for the grazing routes, Nigeria's Minister of Agriculture asserted that many northern states have donated several pieces of land for the project. However, states in the southern part of the

country have kicked against the idea, noting that they cannot be forced to give out their land for this purpose (David, 2016). The Fulani herdsmen have unabatedly continued to wreak havoc, mostly in the middle belt area of the country. The inability of the Nigerian Police to contain them may spell greater doom for lives in susceptible areas.

Government must strike the balance between the Fulani cattle herders and their need for grazing land for their livestock and the lives and interest of the farmers and their farmlands across the country. There is a need for a proper policy on grazing lands in Nigeria. A lot of lands is available for grazing in the country but because of poor government policy, that has not been effectively utilized. The Grazing Reserve Law 1965, domesticated by the Northern Nigerian Government which created an area mainly in the Northern part of Nigeria exclusively for the Fulani herdsmen to graze their cattle should be revisited. A vast area of land spanning Sokoto, Bauchi, down to Ilorin was demarcated for this purpose (Braithwaite, 2017).

With the huge increase in population and development even areas that may have been demarcated for grazing land in the North becoming bare due to encroachment by the Sahara desert, and it seems that grazing land is scarce. The Federal, State government, Cattle breeders associations, and the communities whose lands are going to be used must come together to map out an accommodating strategy, with new areas throughout the country, exclusively for grazing. Better still, the parties involved must have input in any proposed strategy (Galaty & Satzman, 2000).

As long as alternative grazing land/reserves are not provided, the type of violent bloody clashes being witnessed between the agronomists and pastoralists in various parts of the country will become institutionalized in our environment. The responsiveness of the government is viewed as a serious setback. Today, the farmers and their communities are bearing the brunt of this problem (Martin, 2016). According to Martin (2016) Miyetti Allah, the Fulani indigenous organization should be proscribed like IPOB. People cannot just go around killing, raping, looting, threatening, maiming and destroying other people's property all in the name of cattle grazing. The fact that the federal government seems to be somewhat quiet and inactive over such a serious crisis which seems to be escalating is worrying. Naturally, people in the south have started to ascribe tribal sentiments to the matter.

Open grazing as practiced is a crude and outdated archaic practice that was used in the past. Apart from being unattractive to the naked eye to see cows running around the streets and so on, especially in metropolitan settings or megacities like Villa in Abuja, Lagos, etc, the environment becomes filthy and fly-infested with cow dung lying all over the place, stinking,

plus livestock running around the streets, unregulated grazing as obtained in Nigeria causes damage to soil, plants, streams and springs which breeds de-development (David, 2016).

2. Anti-grazing Prohibition

With the increasing problems with the cattle herdsman and farmers, some states such as Ekiti, Benue and Taraba have enacted anti-open grazing laws. The Ekiti state Prohibition of Cattle and other Ruminants and Grazing law came into effect in 2016. In Ekiti state, it is an offense for cattle herders to graze their livestock outside the hours of 7 am to 6 pm, allowing their cattle to graze on people's farms or farmlands not allotted by the government.

3. Ranching

Ranching is one solution to open grazing. It is simply a particular area of land, used for grazing cattle or livestock for meat. The Cattle Breeders Association should acquire land in the designated areas. It is even healthier for cattle to graze in designated areas where fewer herbicides and chemicals are sprayed or not at all on the grass because the grass is meant for cattle feeding. Ranching prevents the spread of diseases and the issue of conflicts among people. In Nigeria, where the government is trying to promote the agricultural sector, especially the export with less destruction of farmlands and crops, there will be increased agricultural output. In America, the grass is even transported from grass-growing areas to other areas that require grass for their livestock (David, 2016).

4. Participative management

Traditional cattle breeders should be made to partake in collective land conservation as a sound range management practice to avoid the tragedy of the commons. The Government should adopt a sociological approach that will ensure that all the stakeholders (Landowners/communities, Cattle Breeders Association and the government) take part in the policy formulation process to stimulate a peaceful conclusion and adoption of the bill. This model is referred to as the "bottom-to-top approach which is also in line with the World Bank recommendation of applying a Clinical Model (the community and government participatory approach) in the formulation of policy and implementation of developmental projects. The Fulani pastoralists must be seen to participate in policy formulation and implementation rather than being at the receiving end of government decision-making.

5. Balanced development

The government should shun the winner takes all approach by favoring one region alone at the expense of the remaining five regions. Distribution of development projects should be shared equally for all devoid of ethnic bias.

6. Mitigating climate change

Nigeria must prioritize efforts to mitigate the worst effects of climate change, such as with the Great Green Wall, a reforestation initiative designed to prevent the Sahel desert from creeping further south. Nigeria should be a member of the Climate Vulnerable Forum (CVF)- a 43-nation group of most vulnerable countries that negotiate as a bloc at the United Nations Framework Convention on Climate Change.

Statement of the Problem

In Nigeria, encroachment by the farmers is by far the most serious impediment to the development of grazing reserves (Muhammad-Buba, 2007). Other problems include the taking away of land by Agricultural Development Projects and the increase in the population of bovines due to the improvement of veterinary services. The method which allows temporary access to the reserves is a major obstacle. The reserves suffer from shortages of workers. The staff becomes more interested in collecting revenue rather than in serving and developing the amenities on the reserves. High costs of infrastructure and land compensation impair the development of such amenities. Urban or rural expansion impinges on access to grazing sites causing herders, farmers, and builders to struggle for areas with known quality land. In the Fadama floodplains, conflicts are life's dreaded chores. Clashes on these wetlands escalate when farmers deny animals access to water and verdant grass (Galaty, Arouson & Salzman, 2000).

Farmers, in disregard of pastoral transhumance, occupy the swampy depression that is temporarily vacated by the shepherds. In the absence of an arbitrator or ombudsman, arguments and violent clashes result when the farmers refuse to surrender the space to the returning pastoralists (Baker, 2005). Fighting also occurs when the pastoral Fulani fails to guard animals against eating crops or trampling on them. Although restitutions take place frequently out of court, records of legal proceedings show widespread rural claims against the Fulani. Such claims tend to rise with the shrinkage of pastureland. In the Mambilla area, women cause conflicts through the unauthorized opening of farm plots in the grazing areas (Jacobs, 2000).

The Fulani are believed to be the largest semi-nomadic group in the world and are found across West and Central Africa, from Senegal to the Central African Republic. In Nigeria, some continue to live as semi-nomadic herders while others have moved to cities. Unlike the more

integrated city dwellers, the nomadic groups spend most of their life in the bush and are the ones largely involved in these clashes. They herd their animals across vast areas, frequently clashing with farming communities. They are often linked with another group, the Hausa-Fulani but they are different groups. The Fulanis played a key role in the 19th century of Islam in Nigeria (BBC, 2017).

According to BBC (2017), the herders have been forced from their more traditional grazing lands in the north by the Boko Haram insurgency and the encroaching desert. It has put them in direct conflict with local farmers, resulting in death and the destruction of entire communities. The Global Terrorism Index says Fulani militants were responsible for almost 1,800 deaths during 2014 and 2015, leading to the government ordering a crackdown on the herders. It considers the herders' raid as the second-biggest threat to peace in the country after the Islamist Boko Haram militants. However, the Fulani insist they are only trying to defend themselves and preserve their way of life.

Martin (2016) stressed that farms have been built on ancient routes of a semi-nomadic community in Nigeria, causing violence that has already claimed hundreds of lives. Clashes between herdsman and farmers are increasingly common in some parts of the country as the struggle over grazing rights and access to water becomes more acute. Martin (2016) observed that during the dry season in Nigeria, herdsman begin the long migration from the northern states to the country's central region in search of grazing pastures for their cattle. It is a journey the herdsman, often young boys, have been making for centuries. Following well-established routes, they often return to the same areas. But land that was once unclaimed and therefore free to graze on is now being farmed, frequently triggering clashes. Farmers accuse the Fulani of failing to control their cattle and of damaging crops. In turn, the Fulani accuse farmers of stealing their cattle.

Research questions

The following research questions were formulated to guide the study

1. How has the growing population of farmers-nomadic cattle herders promoted conflict in Benue State, Nigeria?
2. What is the level of insecurity among farmers-nomadic cattle herders in Benue State, Nigeria?

3. to what extent has climate change affected farmers-nomadic cattle herders conflict in Benue State, Nigeria?

Statement of hypotheses

1. Growing population among farmers-nomadic cattle herders is not significantly high
2. Greater insecurity among farmers-nomadic cattle herders is not significantly serious.
3. Climate change farmers-nomadic cattle herders are not significantly high.

RESEARCH METHODOLOGY

The research design used was the survey research design. The population of the study consists of all assessable communal farmers and nomadic cattle headers in some selected Local Government areas in Cross River and Benue state, Nigeria. Totaling 6, 325. The sampling technique adopted for this study was the purposive sampling technique. This technique was considered appropriate in the study. The sample size of the study was three hundred and ten (310) respondents drawn from ten (10) communities in Cross River and Benue States, Nigeria namely Odukpani, Yala, Ogoja, Abi, Otukpa, Gboko, Katsina-ala, Obi, Otukpo, and Ugbokolo. The instrument used for data collection was the mixed-method questionnaire. The instrument was developed by the researcher. The questionnaire contained two sections A and B. Section A was designed to elicit information from respondents' demographic variables such name of LGA and community, while section B is a 20-item four points Likert-type scale designed to measure the sub-variables of the study. Each item required the respondent to indicate the frequency of his or her various opinions under strongly agree, agree, disagree and strongly disagree. Face validity was established by using three (3) experts who scrutinized the instrument to establish its validity. The reliability was established through Cronbach alpha reliability of the instrument (questionnaire), a trial testing was done using thirty (30) farmers-nomads with Cronbach alpha reliability was conducted and the internal consistency of 0.66 -

0.71 showed that the research instrument was reliable. The hypotheses formulated to guide the study were appropriately tested using a population t-test.

Hypotheses Testing

This sub-section presents the results of the hypotheses. The one-sample t-test was carried out in testing the other three null hypotheses. All decisions were taken at .05 level of significance such that a null hypothesis was rejected if the P-value associated with the computed test statistics is less than .05 and retained if the p-value was greater or equal to .05.

Hypothesis One

The growing population among farmers-nomadic cattle herders is not significantly high. The one-sample t-test was applied in testing this hypothesis with a growing population among farmers-nomadic cattle herders being the single variable involved. The results of the variables involved. The results of the analysis are presented in Table 1.

Table 1: One-Sample t-test Analysis of the Level of growing population among farmers-nomadic cattle herders (N = 307)

Variable	Mean	Standard deviation	t- value	p-value
Level of growing population among farmers-nomadic cattle herders	20.09	2.87	37.02*	.001

*Significant at .05 level $p < .05$

The result in table 2 shows that the p-value (.001) associated with the computed t- value (37.02) is less than the chosen level of significance (.05). Based on this outcome, the null hypothesis is rejected. This means that the growing population of farmers-nomadic cattle herders is significantly high.

Hypothesis two

Greater insecurity among farmers-nomadic cattle herders is not significantly serious. The one-sample t-test was applied in testing this hypothesis with Greater insecurity among farmers-nomadic cattle herders being the single variable involved. The results of the variables involved. The results of the analysis are presented in Table 2.

Table 2: One-Sample t-test Analysis of the Level of greater insecurity among farmers-nomadic cattle herders (N = 307)

Variable	Mean	Standard deviation	t- value	p-value
Level of greater insecurity among farmers-nomadic cattle herders	19.15	2.42	33.19*	.000

*Significant at .05 level $p < .05$

The result in table 2 shows that the p-value (.000) associated with the computed t- value (33.19) is less than the chosen level of significance (.05). Based on this outcome, the null hypothesis is rejected. This means that the Greater insecurity among farmers-nomadic cattle herders is significantly serious.

Hypothesis three

Climate change among farmers-nomadic cattle herders is not significantly high. The one-sample t-test was applied in testing this hypothesis with Climate change farmers-nomadic cattle herders being the single variable involved. The results of the variables involved. The results of the analysis are presented in Table 3.

Table 3: One-Sample t-test Analysis of the level of climate change farmers-nomadic cattle herders are not significantly high (N = 307)

Variable	Mean	Standard deviation	t- value	p-value
Level of Climate change on farmers-nomadic cattle herders	22.01	2.00	38.31*	.010

*Significant at .05 level $p < .05$

The result in table 2 shows that the p-value (.010) associated with the computed t- value (38.31) is less than the chosen level of significance (.05). Based on this outcome, the null hypothesis is rejected. This means that climate change farmers-nomadic cattle herders is significantly high

Conclusion

The intractable strife between pastoralists and agriculturalists has devastated the affected environment significantly. The government attempted at striking a delicate balance among competing land users without destroying the precarious equilibrium in the nomadic pastoral enterprise. The key is enforcing land reform and protecting the demarcating grazing reserves for the intended users. It should also be within the government's scope to ensure better stoking rates through improved herd quality. The Fulani should be made to appreciate the value of the improved stock rather than keeping a large number of herds for the sake of it.

Recommendation

From the findings, it can be recommended that

1. Government should enact policies that will prevent the growing population of farmers-nomadic cattle herders. This will help to reduce the overpopulation of headers in most communities in Benue State, Nigeria.
2. The government of Benue state should build on the existing community security to protect farmers from headers/nomadic cattle herders attack in all communities in Benue.
3. There should be serious enlightenment campaigns on climate change awareness among farmers-nomadic cattle herders in local areas in Benue state Nigeria.

REFERENCES

- Allison, S. (2018). Herdsmen crisis underscores Nigeria's complex security threats, relief web, May.
- B.B.C. (November, 2017). Nigeria grazing ban to stop deadly cattle wars, retrieved 17 July 2019 from <https://www.bbc.com/news/world-africa-41844655>
- Bako, S. & Ingawa S. (2006). Animal Traction in Nigeria: A Review Paper presented to the Third Regional Workshop on animal Traction for Agricultural Development in West Africa. Selv, Senegal, July, 7-12, 1988. Selv: n.p.1986
- Braithwaite, O. (November 14, 2017). Nigeria: taming the Herdsmen

- Dalrymple, R. L. (2008). Fringe benefits of rotational stocking, Intensive Grazing benefits, Nobel Foundation, Way Back Machine.
- David, A. (2016). Understanding the Fulani herdsmen crisis in Nigeria: here is everything you need to know, retrieved July 11, 2018, from ventures Africa.
- Estes, R. (1992). East African Mammals: an atlas of evolution in Africa, 3, Pp 256 - 77.
- Galaty, J. D. & Satzman, P. (2000). The Future of Pastoral People. ed, John Galaty, Dan Aronson and Philip Satzman, Nairobi.
- Global Observatory (2018). Farmer-herder clashes amply challenge beleaguered Nigerian security.
- Iro, I. (2010). Grazing reserve development: a panacea to the intractable strife between farmers and herders, retrieved July 11, 2018, from www.gamji.com/fulani_8.htm
- Laven, J. (1991). Grazing reserve development and settlement of Pastoralist programme: point for inclusion in N.L.P.D's Memorandum to the National Council on Agreeing meeting in Calabar.
- Martin, B & Schwah E. (2013). Current usage of symbiosis and associated Terminology, International Journal of Biology, 5,1,doi:10.5539/jib.v5n1p32
- Martin, P. (2016). Nigeria's deadly battle for land: herdsmen v farmers, BBCNews. Benue State, Nigeria.
- Muhammad - Buba. (1987). The Pastoral Ful'be, Economy and Society in Contemporary Nigeria: The Political Economy of Agriculture and Livestock Development Policy Programmes, Ph.D. dissertation. University of Missouri, Columbia.
- The Pointer Online Newspaper (2018) Grazing Bill: The law that can destroy Nigeria.
- Zhou, S. (2012) Effects of wildness training giant pandas? Grazing and Artificial harvesting on clone population biomass of umbrella bamboo, Chinese Journal of Applied and Environmental Biology 18,1,1-8.