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Journal homepage: www.rangeland.ir



Review and Full Length Article:

Livestock Production at the Nexus of Resources Competition and Ethnoreligious Cynicism in Nigeria–Implicative Analysis on Food Security

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Received on: 29/06/2019

Accepted on: 14/04/2020

Abstract. Nigeria is one of the most malnourished and hunger ridden in the league of developing countries; according to reports of Food and Agricultural Organization (FAO) of United Nations estimated daily animal protein intake for developing countries averaged at 4.5 g/head/day at the beginning of this century which has hardly risen to 10 g/head/day into the second decade of the century in Nigeria. This calls for an increase in the supply of animal protein to address the poor intake, but Nigeria's animal protein supply depends on pastoral livestock production on extensive natural grassland. This production system is under challenges of climate and poor production techniques; hence government effort towards improvement via the establishment of grazing reserves is a way out. Therefore, this paper discusses Nigerian livestock production, climate change effects on Nigeria livestock production and its social implications, including food insecurity. We also consider sources of ethnoreligious violence linked to livestock production in Nigeria, grazing reserve bills (proposed legislation) in Nigeria the proponents, the opponents and what are the pitfalls the rationale for modification and re-introduction of grazing reserves bill in Nigeria and the potential of some models such as the Taylor Grazing Reserve Act of the United States of America.

Key words: Livestock production, Nigeria, Ethno-religious, Grazing reserve and climate change, Taylor grazing act, food security, Legislation

Introduction

Livestock production in Nigeria is a practice of rearing domesticated animals usually by smallholder farmers who primarily reside in the rural areas of the country. These animals are being kept by these farmers to produce commodities such as food, fibre and as sources of employment. In addition to production for profit-making, too many of these farmers' livestock are generally seen as a sign of prestige and a principal form of inheritance especially among the Fulani's which are mostly associated with a pastoral livelihood in the country. However, in the modern era; agricultural practices have generally changed tremendously in response to human increasing demand for more and varied foods. Livestock production in many regions now has undergone huge transformation away from the primary basic subsistence pastoral model, unfortunately, in Nigeria, traditional forms of livestock production still dominate the scene and hence the shortage of supply is inevitable which is a threat to food security and a common scenario in many developing countries (Steinfeld *et al.*, 2006).

Livestock production in Nigeria over the years has been based on nomadic pastoralism even before independence; and despite the unimproved nature, it accounts for one-third of Nigeria's agricultural GDP, providing income, employment, food, farm energy, manure, fuel, and transport. Livestock integration with the crop is another role of animals' production in Nigeria; recycled animal wastes are more effective on the farm thereby enhancing crops' yield. In such a system, livestock is being fed crop residues, like straw, fruits, and grains, as well as other products that would have otherwise been disposed of as agricultural wastes (Fakoya, 2007). However, in recent years, violence in various forms; ranging from farmers-herders face-off to socio-economic complexities are associated with livestock production. Although, less critical than

socio-economic factors; climate change triggered factors are more responsible for most conflicts because of these problems via a continuous decrease in basic resources such as natural water bodies, shortage of feed resources, desertification to human anthropogenic factors such as urbanization, indiscriminate bush burning, and increased agricultural food production. However, less attention is being paid to these realities by most stakeholders. Therefore, deliberate efforts toward climate change adaptations are required more than current myriads of socio-political solutions and or propaganda that are mostly being deployed by several stakeholders.

Climate change effects on Nigeria livestock production and its social implications

Climate change is the biggest threat to pastoral livestock production systems in many parts of developing countries because apart from compromised animal performance and lack of feed resources, pastoral mobility in search of water is a risk factor for livestock mortality. It causes overstocking, increased competition for feed and water as well as the introduction of diseases from one pastoral location to another causing significantly higher mortality (about 43 %) within any year with pastoral mobility in Maasai land (Nkedianye *et al.*, 2011). Climate change effects of drought and flood cause water scarcity, difficult access to water sources in flood areas, shortage of feed and fodder availability, especially in the arid and semi-arid locations. Apart from flooded or drought areas, even at places where moderate rainfall is being witnessed, urban development; increasing agricultural crop production and continuous competition for resource utilization are affecting the availability of feed resources for pastoral activities forcing increasing pastoral movements (Sikiru, 2016).

Climate change effects on livestock production are happening but mitigation

and coping strategies are lacking. As a result, research programs focusing on understanding climate change complexities in livestock production as well as physiological and genetic adaptation to climate change effects are essential as livestock production coping strategy under a continuously changing climate (Gaughan and Cawdell-Smith, 2015). Water consumption is the most limiting resource for grazing animals whether during drought or not. In the tropical and sub-Tropical countries such as Nigeria because during the dry season there is always water shortage coupled with high temperature which put livestock under stress conditions (Casamassima *et al.*, 2008).

In Nigeria, areas that can be easily regarded as livestock production belts are drylands (arid, semiarid or subhumid) Most of these areas spread across different locations in Katsina, Kano, Jigawa, Sokoto, Zamfara, Kebbi, Yobe, Borno and Bauchi states. Annual rainfall ranges between 600mm to 1000mm depending on the severity of aridity of the area but they are generally characterized by a longer dry season annually. The wet season is becoming shorter and rainfall more variable. The rainfall pattern in some of these areas is unpredictable and often leads to drought causing, water shortage and poor pasture plant population and yield from these poor infertile soils. The arid pastoral areas have vegetation that consists of plains with small trees and shrubs as well as grass species that are very poor in nutrients composition for animal consumption. Livestock production in the areas relies on extensive grazing and limited supplementation with crop residue hence there is the poor yield from the animals in terms of meat and milk production. In the worst-case scenario, due to drought and poor nutrients composition in the pasture, animals often lost weight, fail to reproduce, or are unable to produce meat, milk or experience high mortality rates. Smallholder livestock producers (in particular) face challenges imposed by

climate change This livestock production belt is an important area when it comes to agricultural production because the dry region in Nigeria is spread over more than 300,000 km² amounting to 85% of total land area in Nigeria. Again, this area is not only large; but it is an area that supports large livestock production and supply to other areas in the country; however, continuous land degradation, drought, climate change and loss of vegetation currently challenge the capability of these locations to support animal production in Nigeria. Neglect of this climate change triggered effects are the cause of increased poverty among the dwellers of the region and shortage of animal product supply for the teeming population of Nigeria in other regions.

In Nigeria dryland areas, pastoral nomadism is the most common system of livestock production whereby cattle, sheep, and goat are herded to graze range that during the wet season are usually available but by the onset of the dry season, they are no longer available During the dry season, nomads and herdsmen move their animals southward in search of green pasture throughout the dry season. This becomes so important for them to support their animals because of poor nutrient levels, poor yield, and non-availability of pastures in their areas. It is a common practice associated with livestock production in Nigeria but it has been reported not to be to the delight of the herdsmen themselves owing to the difficult nature of the practice and laborious nature of the transhumance (Otchere *et al.*, 1985), Worst hit is the increasing spate of socio-economic disasters associated with the movement of the pastoral nomads in the modern time that is charging the peaceful polity of Nigerian systems.

However, despite the challenges associated with pastoral nomadism; it remains the best option for the livestock producers who now move from different locations in the core northern parts of Nigeria to all other parts of the country.

Some of the pastoral nomads as a way of adaptation gave up their nomadic lifestyle and transform into agro-pastoralists; adopt complete mixed farming of food crops and livestock rearing and become migrant settlers in areas they found conducive for their livestock. This transformation is common in Nigeria middle-belts states including Niger, Plateau, Kaduna, Nassarawa Benue, Kogi, Kwara and even Nigeria capital territory of Abuja (Sikiru, 2016). In addition to the spread of pastoralists in these areas; the southwestern part of Nigeria especially the derived savanna agro-ecological zones of the area including states of Oyo, Osun, Ekiti, and Ogun in Nigeria now housed many of the nomadic pastoralists who have transformed to become agro-pastoralists.

This form of livelihood and socio transformation of Nigeria primary pastoralists is a common practice which has been witnessed all over Africa from Lesotho to Senegal, and from Nigeria to Somalia; a situation which as lead to deliberate efforts by governments and other stakeholders including private corporate organizations to key into this way of life by providing social and economic supports via the provision of modern social amenities and infrastructures, business models such as dairy milk collection and other associated developments across Africa (Swallow, 1993). Apart from these developments; there is a striking socio-cultural change that took place in Nigeria which crossed boundaries of culture and way of life whereby pure pastoralists now practiced crop farming and the pure crop farmers rear animals; inter-ethnic marriages between the pastoralists and non-pastoralists; community engagement. In fact, in the lower southwest Nigeria; relationships between migrant Fulani nomadic pastoralists are highly integrative and transformed into the socio-cultural system of the region which is a Yoruba dominated part of Nigeria (Fabusoro, 2006; Alpen, 2011).

Pastoral Fulani who was pure cattle keepers before their southward migrations depending entirely on their livestock long ago is now sometimes described as crop farmers because they now farm most grains and other common staples for their families' consumption; according to reports of Powell and Taylor-Powell (1984). According to Okoruwa *et al.* (1996) in a competitive evaluation of crop-livestock production in the derived savanna zone of Nigeria (southwest), it indicated that incorporation of livestock into agricultural production system was a highly profitable venture; it reduced cost of crop farming, reduce dependence on synthetic fertilizer and adoption of livestock production by crop farmers was easier and cheaper. According to Fabusoro and Sodiya (2011), the advent of pastoral Fulani migrants into other parts of Nigeria has led to the development of new social relations in the country which was described to be a peaceful co-existence that can further be enhanced through commitments of the pastoralists themselves to their host communities by their engagement for collective action that is related to building social coherence, and peaceful coexistence with host communities, promote livelihood development and improved socio-political networking.

Ethno-religious violence linked to livestock production in Nigeria—searching for the sources

According to Netting (1971) and Frantz (1978); sociocultural studies of human societies across the world has revealed that some societies derived their living through herding of animals; and again, exploration of human interactions with the environment have shown human adaptation to diseases, parasites, water supply, soil conditions, and animals' survival. This formed the basis of natural adaptation of Nigeria pastoralists to homes outside their homelands. For example, in the Benue area of Nigeria, because of the natural effects of the river Benue in

support of year-round forage for animals' consumption; the Fulani found the area highly habitable. This area is an example of indigenous wetland that is described to spread across West Africa which primarily supports crop production and pastoralism because as the Fulani uses the land for livestock production, indigenous farmers also use the wetland for the cultivation of food crops especially rice (Adams, 1993).

In Africa generally and Nigeria in particular, there exist no specific policy or guidelines supporting extensive pastoral resources preservation and or management; pastoralists do not own land even in some of their traditional homelands, they only get access to land use via specific mechanisms of social cooperation and customary arrangements (Fabusoro, 2009). This naturally puts pastoralists under temporary use or ownership of land resources irrespective of how long they use the land or how long they have stayed within the vicinity. Meanwhile, encroaching interest for human advancement and climate change pressures are too complex to be captured by weak cooperation or customary relationships between the pastoralists and their host communities. This situation at all times is a threat to the human livelihood, economic development, and peaceful coexistence anywhere these pastoralists are living in Nigeria because of competitive access to the use of land resources and water. This can be regarded as the natural source of conflicts between pastoralists (Fulani) and other people of Nigeria. It is however unfortunate that this natural competition for resources has degenerated to ethnoreligious violence in recent years.

Like many other pastoral tribes in Africa and other parts of the world, to a Fulani pastoralist; cattle are life and life depends on cattle, life is worth living only when there are cattle. Pastoralists with the ideology of this type resist any form of threat to their animals' lives, as a result, when other land users, specifically farmers, crave for development via expansion of

cropland to increase food produce or use of water for irrigation; a typical Fulani pastoralist feels it is an encroachment on his access to resources. Therefore, a Fulani pastoralist chooses not to surrender to this perceived encroachment and give everything possible to protect his interest in access to land resources utilization for livestock production (Abbass, 2014). It is arguable however that this scenario is a pure resources competition conflict instead of ethnocultural cum religious as it is being understood today in Nigeria because according to reports on perceptions on sources and level of insecurity vulnerability associated with pastoral Fulani conflicts; poor access to land for grazing, water deficiency, and cattle diseases outbreak were all listed in the category of highly vulnerable source compare with sociocultural problems and conflicts with the host communities which were listed in the category of not vulnerable sources (Abbass, 2014; Fabusoro and Oyegbami, 2009).

Nigeria is a pluralistic society combining people of different ethnic, cultural, religious and economic backgrounds but despite these differences; there exist economic and ecological interdependencies among these groups. Natural resources are shared, there are trade and occupational relations, and cooperation in state governance despite centuries of conflicts and wars in the quest for territorial defense and expansion, the spread of religious belief and cultural ideologies all which took place before the modern era. In a heterogeneous society, display of ethnic rivalries is a natural phenomenon especially where governance is democratically nascent or weak—a situation which one time or the other was recorded in almost every part of the world (Rabushka and Shepsle, 1972).

In Africa, there are reports of ethnic crisis for Nigeria in the case of Biafra war of the late 60s; in Zanzibar, there was a conflict between the indigenous black people and the Arab around independence

period; in Mauritius, there was a report of Muslim–Creole riots in the 1970s; in Sudan, the face of between the Sudan Arabs and the Sudan Black later led to the separation of South Sudan from Sudan and in Ethiopia; the conflict of Eritrea is a typical ethnic clash. In the Americas, race riots between Indians and Creole; and Canadian–French sentiments are examples of ethnic crises while European catholic and protestant conflicts can also be regarded as ethnic fights (Dunn, 1970; Rabushka and Shepsle, 1972). Although despite all these, most of the listed places have gone far beyond these sentiments; it is unfortunate that in Nigeria cases of ethnic conflicts still happen in the recent years and worst hit is the linkage between ethnic crisis and food production especially livestock which is traditionally associated with a Nigerian ethnic group known as Fulani. Livestock production significance in food supply cannot be overlooked and or under-rated because its failure could amount to chronic malnutrition and eventually poor social productivity.

In a pluralistic society like Nigeria, language; religion, tribe, and custom could all be sources of conflicts but, arguably, state–nation effects of a country administration of nonethnic cleavages can cut across racial lines and thereby encourage the joint pursuit of some common multi-ethnic objectives. Attainment of plural acculturation status-situation whereby people within each ethnic category in a plural society retain their own identity yet are familiar with the cultural activities of other groups for mutual understanding between groups to prevent conflicts and violence is the primary responsibility of every state-nation (Crowley, 1957). The inability of Nigeria state–nation to achieve this cohesiveness among different sections of Nigeria is another cause of ethnoreligious conflicts between Nigeria's traditional pastoralists and other people.

The promotion of plural acculturation is capable of ensuring a more satisfying

adaptation to a community based on a better understanding of the individual differences existing between the pastoralists and their hosts (Berry *et al.*, 1989). Trio relationship of religion, politics, and ethnicity are factors preventing Nigeria attainment of plural acculturation; during the pre and post-independent Nigeria, these tools are being greatly exploited first by the colonial administrators in construction of identity, power legitimation, and economic appropriation. Post independent, these tools have been veritable tools for Nigerian politicians and governments over the years. They were used to build and crumble Nigeria democratic republic at independence and shortly after, they were also seriously exploited by Nigeria military rulers to destabilize the country before the advent of democracy again at the beginning of this century (Falola, 1998). Unfortunately, the exploitation of these tools continues until today; their application cut across almost all aspects of Nigeria lives and livestock production is not exempt.

Ethnoreligious crisis and violence in the modern era of Nigeria took its active violence forms in the 1980s stemming from Maistatsine crisis, burning of churches in Kaduna, killing of Muslims in Yola and Jimeta, attack on students at universities, clashes between Christians and Muslims in Nigeria major cities, and media propaganda fueling hatred between Muslims, Christians, and African Traditional practitioners. All these in their actions and violence forms stated in the 1980s and since then bitter conflicts and rivalries of ethnoreligious basis now become a common feature of Nigeria politics (Falola, 1998). In its application to livestock production, because the competitors (Pastoralists and their host communities) failed to see common grounds to resolve their differences and agreed that they are under constraints of natural resources; they are being short-changed by the ruling class and elites who

are being alleged to be profiting in the scenarios.

Until recent times when it became an ethnoreligious crisis; misunderstanding between herdsman and farmer was known to be disputes over land and/or cattle between herders (in particular the Fulani and Hausa) and farmers (for example the Tiv or Tarok) and it is mostly happening in Nigeria states of Benue, Taraba, and Plateau which was a situation of governments (Federal, States and Local) failures in protecting people of the country (Okoli and Atelhe, 2014; Thisday, 2015). A similar crisis between herdsman and farmers were reported for areas located between the Sahara Desert and coastal parts of west Africa spreading across northern Senegal, southern Mauritania, central Mali, northern Burkina Faso, the extreme south of Algeria, Niger, the extreme north of Nigeria, central Chad. Identified causes of these conflicts were reported to include increasing farming population and farmland area which is directly proportional to the reduction in grazing areas; deteriorating environmental conditions, desertification, and soil degradation; breakdown in traditional conflict resolution mechanisms of land and water disputes; and proliferation of small arms and crime in rural areas (Mortimore, 2015).

Governments' failures to provide adequate security of lives and properties to both pastoralists and the farmers led to resorting to self-defense mechanism whereby the herdsman instead of grazing their animals using their grazing stick (as they have done since time immemorial) now use firearms in protecting their stock. The farmers and host communities on the other hand now engage services of the ethnic local militia in protecting their farms and villages in case of any eventuality; and because the majority of farmer-herder clashes have occurred between Muslim Fulani herdsman and Christian peasants, this now led to ethnoreligious roots of the crisis

(Mortimore, 2015). What was known to be localized crisis in some parts of northern Nigeria now spreading like wildfire all over the country where thousands of lives and properties are being lost; it is now a focal point of security challenge for Nigeria because militia now uses high powered arms in attacks associated with herdsman and farmers clashes all over the country threatening economic peace and food security (IEP, 2015). Juxtaposition reports from authors including Blench and Dendo (2003), Alao (2007) then Okoli and Atelhe (2014), it is clear that most conflicts between herdsman and farmers in Nigeria are competition for natural resources use as expressed in this paper, therefore, there is need for sustainable policies for livestock production such as re-introduction of the jettisoned grazing reserve bills in Nigeria.

Grazing reserve bills in Nigeria-who are the proponents, the opponents and what are the pitfalls?

Grazing reserve establishment, improved water supply, rangeland revitalization, dry season feeding management, and forage conservation are all technologies transforming livestock production worldwide. State policy for livestock production usually focuses on many of these approaches. Nigeria was no exception as it was reported that long before the country's independence ideas including all these were introduced and implemented. It is on record that specifically the establishment of grazing reserve was recommended as government intervention for livestock production in Nigeria as far back as 1965 (Gefu, 1992). It was recommended back then, as part of a World Bank programme in Nigeria targeted on livestock development in the country; as a result of this, a bill titled grazing reserve law was enacted to protect rights of the pastoralists and cattle owners on resources uses, reduction of conflicts between farmers and pastoralists and transformation of livestock production into a viable economic avenue for all Nigerians

not just pastoralists or cattle owners (Awogbade, 1983). This earlier effort can be described to be successful and was, arguably, a golden era of livestock production policy promulgation or enactment in Nigeria because it led to the establishment of grazing reserves not only in northern Nigeria but even in the southern parts of the country. It was during this period that private sector participation in livestock production and trading became visible; international donor organizations and profit-seeking agencies were involved in Nigeria's livestock development. Apart from infrastructural provision and grazing reserve promotion, there were reports of establishment of livestock improvement and breeding centres and about 22 million hectares of land was identified as grazing reserve (Gefu, 1992).

However, hardly a trace of this 'golden era' can be found in the country today. Several factors can be linked to the loss of this development, especially the roles of primary stakeholders (pastoralists). At that earlier time, the Nigerian state worked in line with policy inherited from the colonial administration and had financial support from international donor and development organizations like World Bank, IMF, USAID and the German international development agency (GTZ). Most of these organizations' interest is in the economic development of livestock industries which will profit a country's foreign policies and or profit their stakeholders—a situation that can be hardly trusted by Nigerians who just came out of colonialism as of the period. Traditional pastoralists and other livestock stakeholders in Nigeria as of then find it hard to trust government policy on animal production; to some of the modernization of animal production similar to what is obtainable in developed countries will plug them into another colonization milieu. They also suspect the involvement of some Nigeria corporate organizations in livestock production as suspicious because the producers only understand that the government, private sector, and

international organization were all interested in increasing productivity of their stock for their benefits not considering that increase productivity will lead to increase beef and milk supply which will positively improve their nutrition; increase their income and transform their livelihood. So, summarily; there was stiff resistance to the modernization of livestock production through this grazing reserve bill, the nomadic pastoralists who were the target primary users of the reserves refused to settle permanently at those locations because they believe it is a way of excluding them from livestock production arena. International interest vanishes, government commitments faded away and private sector shifted their business commitment and or interest to other economic endeavours and as such the country lost its golden era of livestock production management and or modernization (Bernstein, 1971; Oyenuga, 1973; Horowitz, 1979; Hayami 1984; Gefu, 1992 and Ruttan, 1998).

The foregoing paragraphs indicated that livestock production policy capable of providing multiple benefits of economic advancement and food security slipped away in Nigeria because of ignorance on the part of the pastoralists, stock owners who resisted modernization of livestock production and lack of trust and or distrust of government of Nigeria state by other stakeholders. The pressure of climate change sees the need for re-introduction of the grazing reserve idea in recent years and this now forms part of Nigeria policy. It is supported by the pastoralists themselves, governments, individuals with interest in livestock production, and some other people who see it as an avenue for sustainable development. These sets of people can be regarded as the new proponents of grazing bills in Nigeria but unfortunately, sentiments of politics and ethnoreligious complexities now made some people through ignorance or perversity resist any attempts to allow re-

emergence of grazing reserve in Nigeria; these categories can be regarded as opponents of grazing bills in Nigeria. Since the advent of Nigeria's fourth democratic republic; there are three popular separate bills about grazing reserve and livestock production which found their way to the country's national parliament but all got struck –because of politically motivated.

The first of the bills were sponsored by a parliament member of the Nigerian senate from the Nigerian state of Plateau in the year 2008 under an act seeking for a re-enactment of Nigeria Veterinary Surgeons act (Cap. 464 Laws of the FRN). The proponent of the bill aimed at the establishment of "National Grazing Reserve Commission" as part of the existing Veterinary Surgeons act; the proposed commission was envisioned to be a Nigeria government department with responsibilities including designating, acquiring, controlling, managing and maintaining national grazing reserves and livestock routes, constructing dams for the supply of water for livestock consumption, roads, bridges, fences and such other infrastructures necessary for modernization of livestock production (Gyang, 2008).

The second bill again sponsored by a parliament member of the Nigeria senate from the Nigeria state of Niger in the year 2011; the proponent submitted a bill for the establishment of "National Grazing Reserve Establishment and Development Commission". Similar to the first bill, the proponent of this bill was seeking for a Law to establish a government department that will be responsible in addition to all functions mentioned in the previous bill should see to the development of facilities and amenities within national grazing reserves in Nigeria. It promoted the idea, particularly to the Pastoral and transhumance population, of the necessity for the establishment and development of national grazing reserves and stock routes with the object of developing a greater appreciation of the value of livestock and environmental conservation (Zainab,

2011). The third bill was again sponsored by a parliament member of the Nigerian senate from the Nigerian state of Kano in the year 2016; the proponent, like others before him, submitted that there should be the establishment of a Nigerian government department with name "Grazing Areas Management Agency". The proponent skewed the bill to the recognized role of all stakeholders. This was captured in the explanatory memorandum of the bill as follows:

...to manage demarcated National, State and local grazing areas, routes and livestock ranching reserves in states that require it, which will facilitate peaceful coexistence between nomadic pastoralists and agriculturalists, thereby enhancing Farmer's capacity to have increased food production and safe rearing of Animals. The bill further seeks to create a mechanism for prevention of crises on getting early warning signals, by setting a standing mediation committee in States and Local Government Areas where the grazing areas, routes, and ranches are located and saddled with the responsibility of mediation between the parties (Rabiu, 2016).

All these bills generated lots of comments and heated-up the Nigerian polity. These various propositions from professionals, politicians, tribal and cultural chiefs, activists, media commentators, pastoralists, farmers, traders, youth organizations, community associations, governments (federal, states and local), traditional rulers and institutions all contributed to failures of these bills to see the light of day. In the academia, it is rather so unfortunate that instead of critical analysis of bills for true scholastic evaluation; many researchers focused on what was described as 'forced acquisition of lands for Fulani pastoralists in the southern states of Nigeria' via the statement in all the bills which empower the government department as proposed in the bills to have the power of acquiring any land in which it appears to the Commission

that grazing on such land should be practiced and any land acquired by the commission through purchase, assignment gift or otherwise.

Although this could be a pitfall it was misinterpreted and most opponents of the bills never see livestock production as economic activities but rather as Fulani way of life. In fact, to some people, it was interpreted as if livestock production couldn't be practiced by the non-Fulani person. Okeke (2014) for example alleged while examining the proposition of the bill that it is legislators from the northern region of Nigeria that are seeking to acquire lands in all the states of Nigeria for the establishment of grazing routes and reserves for Fulani herders which must be resisted; and therefore submitted that cattle breeding in Nigeria must become a sedentary occupation. Although, it is not surprising to come across such submissions because similar submissions were made earlier where it was reported that grazing reserve development is 'a means of pursuing legal grazing rights and title to land for the Fulani pastoralists' who ordinarily have no land ownership status (Awogbade, 1987). To prove the above submission wrong on ethnicity claims; it has to be noted that none of the proponents of the bills was a Fulani by the tribe. The proponent of the first bill was a Berom and a Christian from Nigeria state of Plateau (middle belt region); the proponent of the second bill was a Nupe (a relatively small ethnic tribe) and also a woman from Nigeria state of Niger and the proponent of the third bill was a Hausa water resources Engineer from the Nigeria state of Kano.

Despite glaring evidence that most proponents of the grazing bills are not Fulani or pastoralists themselves; ethnoreligious bigotry has made Nigerians ignorant of the need to agitate for livestock development through grazing reserves. Religious leaders, tribalism promoters, and fake activists now championed a campaign against grazing reserves development in Nigeria. The highest law-making body in

Nigeria (Senate) has even made it clear that legislation on grazing reserve is beyond its responsibilities despite being the representatives of the people; they never bother about its implications on food security but all focused on its political implications and interests of their ethnic groups and or religious organization and unanimously threw out considerations of grazing reserves bill submitted or mooted before the chamber (Ogunmade, 2016).

However, it is unfortunate that despite democratic advancement globally; ethnoreligious bigotry is still thriving in Nigeria; an example of this is according to claims of Pam (2018) which stated that bills seeking for the establishment of grazing reserve can be regarded as a piece of legislation full of unconstitutionality, ethnic discriminations, fundamental human rights violations, religious tenets violations, conspicuous criminal omissions, and unforgivable legislative indiscretions and therefore such bill should be jettisoned. The writer claimed the bill(s) seeks to empower Fulani cattle herders who are richer than poor peasant crop farmers; undue favoritism for Fulani ethnic group which is just one out of over 200 ethnic groups in Nigeria. Reservation of grazing area for Fulani cattle via the establishment of grazing reserves should be the responsibility of the Fulani themselves, instead of using government funding for establishing the reserves. These are some of the arguments against the enactment of the bill legally promoting livestock production in Nigeria.

Although, Fulani code of cultural behaviour known as *pulaaku* is a reason why so many oppositions were melted against them; the culture of Fulani has a general social virtue personality trait of aggressive dominance, although this is vital in the husbandry of their cattle but detested in the human clime and inefficient in a plural cultural country like Nigeria. Meanwhile, the stated cultural behaviour can be regarded as generally associated with animal production because even in

developed countries; generations of people who engaged in horse husbandry seem to have been associated with assertive, aggressive individuals. Therefore, for the successful proposition of bills seeking the establishment of grazing reserves in the nearest future; there should be considerations of mechanisms involving attitudinal changes in the pastoralists themselves (Lott and Hart, 1977).

Food insecurity—the need for modification and re-introduction of grazing reserves bill in Nigeria

Nigeria is the most populous country in Africa, presently about 200 million people; the seventh-largest population in the world (Akinyemi and Isiugo-Abanihe, 2014). This population is relatively young because more than 40 % were reported to be between ages 0 and 14 years; the annual birth rate is in millions; according to report of National Identity Management Commission of Nigeria, a total of seven million children are giving birth to annually in the country but sadly one out of every five of these children never reach the age of 5 years; infants mortality has been on the rise since the beginning of this century (Kerber *et al.*, 2007 and Choji, 2018). This population in addition to infant mortality also faces a trio—the challenge of malnutrition, hunger, and extreme poverty. The Food and Agricultural Organization (FAO) of United Nations as of the year 2001 estimated that daily animal protein intake in developing countries including Nigeria was 4.5 g/head/day which was very low compared with the minimum global requirement of 35 g/head/day. Even after more than a decade into the millennium, *per capita* intake of animal protein was still 10 g/head/day in Nigeria which is less than average for middle-income developing countries (16 g/head/day) not to even mention the global recommended average. This is an indication of malnutrition especially animal protein intake in Nigeria (FAO, 2015).

World Food Program (WFP) also reported that one-third of children less than five (5) years old in Nigeria are stunted due to poor nutrition and this is twice the rate of such incidence in Thailand and three times that of Tunisia which is also developing countries like Nigeria—hence the incidence of severe malnutrition is glaring in the country. Children in many remote communities across Nigeria are four times more likely to experience malnutrition than children in less remote communities. There are also indicators that malnutrition in Nigeria is the case of women of reproductive age which are about 48.5 percent anaemic a situation ranking Nigeria 172nd best out of 185 countries in the world. Livestock production with special emphasis on productivity and product yield were observed as major means of promoting food security through proper breeding of animals, the introduction of feeding strategies for optimum animal performance and health management practices. These will promote animals' capacity for high productivity and sustainable management of natural resources—which are the need for re-introduction of grazing reserve as a strategy for sustainable development (Rupasi *et al.*, 2014).

Grazing reserves for improved livestock production is beyond bigotry associated with it in Nigeria, as of 1934 in the United States of America; it was observed that public rangelands were often overgrazed because of policies designed to promote the settlement of the West and a lack of understanding of how to care for these lands—a situation similar to Nigeria pastoralists who overgrazed land and lack understanding of land management which is a scientifically proven reason of their migratory lifestyle. The situation in the United States of America then led to the passage of the Taylor Grazing Act of 1934 (named after Rep. Edward Taylor of Colorado), for the creation of grazing districts. In these districts, grazing land was apportioned and regulated; today, the

United States now have an agency referred to as Bureau of Land Management–BLM which is responsible for the management of these grazing reserves in the country (BLM, 2018); this is a proof that Nigerians who see grazing reserve as undemocratic are wrong.

Unlike views expressed by some Nigerians who were against the establishment of the grazing reserve; the establishment of grazing reserves can be under the management of an agency established for that purpose and fashioned after Taylor grazing reserve model whereby grazing permits are issued on public lands within the grazing districts established under the Act. This permit will give leasing rights to any of its user as against claims by some Nigerians that Fulani will now have right to where they do not belong; the permits should also have lifetime expiration, not more than 10 years after which it can be renewed and should be available for issuance to any interested parties not only Fulani as being promoted by opposers in Nigeria (Hurlburt, 1935). Future livestock production in Nigeria under this type of arrangement can lead to the production of specialized cattle breeds for milk and beef production which will contribute to food security, income, employment and even increase crop yields via cheap availability of organic manures.

Conclusion

Livestock production and their development are important for the survival of human society because despite the continuous increase in food production millions of people are still experiencing serious hunger and or malnutrition. The bulk of these people are in developing and poor countries including Nigeria due to population growth which is beyond food production capacities. To solve this problem, the development of a more productive livestock production system can be a way of contributing to increased food (protein) supply for human consumption. However, climate change challenge is the

biggest threat affecting the productive capacity of animals and optimum access to natural resources which causes undue competition among the pastoralists and other land users. In the light of these, all sentiments of ethno-religious backgrounds need to be set aside to allow modification and reintroduction of grazing reserves bill to address its pitfalls and accommodate concerns from different stakeholders. This will not only favor an ethnic group or a section of the society but provide food on the table for all and will also contribute to income generation and employment in addition to its roles as a contributor to nutritional management against malnutrition.

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