Pastoralists – Farmers’ Conflicts in Jigawa State Nigeria: Causes, Repercussions and Solutions

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Introduction:

It is probably inarguable that resource ownership and utilization have directly and indirectly defined the dimensions of most conflicts involving man since time immemorial. Of all resources, however, land has remained an overwhelming source of conflicts among various user groups as well as individuals at varying thresholds. In particular, conflicts between farmers and herdsmen in the use of agricultural land are becoming fiercer and increasingly widespread in Nigeria, largely due to ‘intensification and extensification’ of production activities that are necessitated by increasing human population (Gefu and Kolawole 2005; Fasona and Omojola 2005 cited in Adisa and Adekunle, 2010). The vital role of agriculture in the development of conflicts between pastoralists and farmers have been noted as an example of Low Intensity Conflict emanating from environmental degradation, resource scarcity, demographic and climate change (Shettima and Tar, 2008).

Within the West African sub-region, a large section of the population depend on the production of livestock and crops production for their livelihood and survival, more than 12 million people in West Africa depend on the production of livestock and crop production as their primary means of support whereas over 70 million people in the same region also depend on livestock and crop production related enterprises for their livelihood, farmers and pastoralists interdepend on each other for survival. The Fulani own over ninety percent of the livestock population which accounts for one-third of agricultural GDP and 3.2% of the entire GDP in Nigeria (Fabiyi & Otunuga, 2016 cited in Ajibefun, 2018). However, the Fulani herders in most cases settled in fertile areas to rear their cattle and when the migration continued to be dictated by economic and socio-political factors, increased trends of conflicts between the herders and their host communities (farmers) escalated. Pastoralists move their herds to graze on farmlands belonging to crop farmers and also acquire the food stuffs produced by crop farmers. Farmers on the other hand require from pastoralists protein and dairy products.

The survival of pastoralists is dependent upon their interaction with sedentary people. Thus both farmers and pastoralists depend on each other for water, fodder, land and other resources (Monod, 1975). The resultant increase in competition for arable land has often times led to serious manifestation of hostilities and social friction among the two user groups in many parts of Nigeria. The conflicts have not only heightened the level of insecurity, but have also demonstrated high potential to exacerbate the food crisis in Nigeria and other affected countries due to loss of farmer lives, animals, crops and valuable properties (Cotula et al., 2004 cited
The relationship existing between farmers and pastoralists therefore make conflicts inevitable as competing interest arises over the use of natural resources. These conflicts are occasioned by the seasonal weather conditions which forces pastoralists to move from the semi-arid areas in search of pastures further south, which results in competition over access to available land for crop cultivation and grazing pastures for the cattle. Farmer-herdsmen conflict has remained the most preponderant resource-use conflict in Nigeria (Ajuwon, 2004; Fasona and Omojola, 2005 cited in Rashid, 2012). The necessity to provide food of crop and animal origin, as well as raw materials for industry and export in order to meet ever growing demands, has led to both “intensification and extensification” of land use (Nyong and Fiki, 2005).

**Background to the Study:**

One major problem confronting world peace today is the manifestation of conflicts in different dimensions across the globe. From Europe to America, Africa to Asia, conflicts are common phenomena (Marshall and Gurr, 2005 cited in Jeong, 2008). Conflict has been defined in different ways by different scholars. For instance, Ekong (2003) defined conflict as that form of social interaction in which the actors seek to obtain scarce reward by eliminating or weakening their contenders. Folger et al. (2009) defined conflict as the interaction of interdependent people who perceive incompatible goals and interference from each other in achieving those goals. Gyong (2007) defined conflict as the struggle for dominance or control of one person or group by the other in such a way as to subjugate or even eliminate the opponent.

Nigeria has experienced and is still experiencing conflicts of grave proportions among several ethnic and religious communities across the states. These conflicts significantly vary in dimension, process and the groups involved. It was observed by Momale (2003) that, while some conflicts arise between same resource user group such as between one farming community and another, others occur between different user groups such as between herders and farmers or between foresters and farmers. Adisa (2012) observed that the farmers-herdsmen conflict has remained the most preponderant resource-use conflict in Nigeria. According to Abbas (2009) in a study of major sources of conflicts between the Fulani pastoralists (to be used interchangeably with “herders” or “herdsmen”) and farmers shows that land related issues, especially on grazing fields, account for the highest percentage of the conflicts. In other words, struggles over the control of economically viable lands cause more tensions and violent conflicts among communities.

Social and economic factors continue to provoke violent conflicts among the Fulani pastoralists and farmers. The intensity and variations of the conflicts largely depend on the nature and type of the user groups where the pastoralists graze. These conflicts have constituted serious threats to the means of survival and livelihoods of both the farmers and pastoralists and what both groups are tenaciously protecting. The conflicts (though provocative) over access rights to farmland and cattle routes, have become ubiquitous and seems to have defied solutions (Abbas, 2009). However, Coser (2000) noted that, the inevitability of conflict in the claim for scarce resource is considered here as the bane for struggles over the inestimable value for land and its resource, with the claim for ownership and the claim for its position as a common resource. Nevertheless, the complex land use system that has changed markedly overtime has culminated in the present day tension and conflicts between Fulani herdsmen and host communities.

Although clashes between farming communities and pastoralists is not a new phenomenon in Nigeria, the frequency and severity of the conflicts in recent years has been an important issue of national concern posing enormous threats to the national security. Decades ago, the crises were more common in northern states where the Fulani herdsmen population was relatively big and live close to many farming communities, the crises is now a problem in many north central and southern states. Loss of lives, destruction of properties and infrastructure, drop in crop production, increased expenditure, displacements etc. are now very common in most of the states battling the menace. Besides, increased tensions and the possibility of the crises being
transformed into more complicated ethnic and political crises are so eminent. Most worrisome is the type of sophisticated weapons being used replacing the hitherto local weapons such as bows and arrows, cutlasses, spears etc. used in such conflicts years ago.

However, in the few recent years, there were growing concern in some parts of the country that the issue of farmer-pastoralists’ conflicts have been highly politicized especially with respect to the trend of these clashes in the north central and southern states. The types of sophisticated weapons being used, the apprehension of non-fulanis attacking farming communities in disguise as Fulani men, the discovery of secret illegal warfare training sites in some states known to be embattled by the crises as well as accusation of the incumbent president who is also a Fulani by tribe by some sections of the country of taking sides with his tribes men were some of the reasons pointing to the politicization of the whole issue.

**Problem Statement:**

Historical tensions between Nigeria's pastoralist Fulani and settled indigenous farmers have intensified in recent years, with dwindling natural resources and land availability greatly contributing to the ongoing, escalating conflict in the country (Okello et al., 2014). Berger (2003) considered that, pastures, woody vegetation, water resources and land are taken as a common property resource. The increasing number of reports of violence at this occupational boundary makes understanding herder-farmer conflicts an urgent task. We need to know not just why friction begins, but also why and how, as some conflicts unfold they articulate with religious, ethnic, and political conditions (Morizt, 2010).

Competition-driven conflicts between arable crop farmers and cattle herdsmen have become common occurrences in many parts of Nigeria (Ingawa et al., 1999). The competition between these two agricultural land user-groups has often times turned into serious overt and covert hostilities and social friction in many parts of Nigeria (Adisa, 2012). Cases of herders-farmers conflicts are widespread in recent times. Nweze (2005) also stated that, many farmers and herdies have lost their lives and herds while others have experienced dwindling productivity in their herds. In most of these encounters, citizens are regularly killed and the destruction or loss of property leaves an already endangered populace even poorer. The frequency and scale of these communal conflicts have become alarming (Leadership Newspaper, May 17, 2011).

The dimension of militancy in the conflicts is associated with the advent of the aggressive Udawa and Bokoloji pastoralists which further led to the emergence and introduction of guns and other sophisticated weapons in the conflicts as well as the use of mobile phones, accompanied with banditry. All these have produced adverse consequences in the destruction of villages, settlements, crops, irrigation facilities, human and animal lives. The incidence of serious cases of conflicts for survival between pastoralists and farmers also led to loss of lives and destruction of properties with the emergence of insecurity due to the continuous desire for vengeance by the parties involved (Pyramid Trust, July 17, 2009).

The rate of the incessant conflicts between Fulani herdsmen and farmers made the Local, States and the Federal Government of Nigeria to employ different mechanisms in order to end the menace. For instance, the Federal Government of Nigeria has commenced the construction of grazing reserves, and has clearly delineated stock routes covering 1,000,000 hectares in Jangere village of Katsina State (NAN in Daily Trust, September 22, 2009).

According to 2009 official report of the Federal Ministry of Agriculture and Water Resources, Nigeria has officially demarcated 4125 grazing reserves or routes. Out of this number, only one third is put in use, whereas 270 grazing reserves have been put into cultivation. In order to curb farmers-pastoralists’ clashes, the federal government in September 2009 carried out demarcation of a grazing route running through the central states of Nasarawa, Benue and Plateau. Other grazing routes also marked out and demarcated were started across
Katsina and Bauchi States, spanning across Abuja. Further grazing routes were also demarcated from Sokoto in the Northwest to Oyo State in the Southwest as well as another 2,000 km grazing route from Adamawa State in the Northeast to Calabar in the Niger Delta (IRIN, 2009). All these were done to strengthen the relationship between the two groups, but the relationship keeps on degenerating.

The question not yet answered is why all these efforts have and resources not produced the desired result? What is clear to all, however, is that something fundamental is amiss. Could it be the defective public policy, in some cases, the lack of policy or the failure of the Fulani to avail themselves to modernization (Iro, 2000). Similarly, Tonah (2006) opined that, farmer–herder differences are not only seen as resource conflict but are also sometimes represented as ethnic conflict involving the two groups. Since herder and farmer groups have very different values, customs, physical and cultural characteristics, disputes between them are frequently characterized as ethnic conflict.

Hence, it is against this background that this study was conducted to examine the factors responsible for the conflicts, its repercussions, possible mitigation measures as well as the roles played by constituted authorities in managing the conflicts between crop farmers and pastoralists in Jigawa State, Nigeria.

**Study area:**

Jigawa state is one of the 36 states that constitute Federal Republic of Nigeria. It is situated in the northwestern part of the country between latitudes 11.00°N to 13.00°N and longitudes 8.00°E to 10.15°E. Its coordinates are 12°00′N 9°45′E. Kano State and Katsina State border Jigawa to the west, Bauchi State to the east and Yobe State to the northeast. To the north, Jigawa shares an international border with Zinder Region in the Niger Republic. The state has a total population of 4,361,002 as at 2006 census with Hausa and Fulani ethnic groups being the dominant and about 90% of the population being rural. Jigawa has a total land area of approximately 22,410 square kilometres. Its topography is characterized by undulating land, with sand dunes of topography various sizes spanning several kilometres in parts of the State. The southern part of Jigawa comprises the basement complex while the northeast is made up of sedimentary rocks of the Chad Formation. The main rivers are Hadejia, Kafin Hausa and Iggi Rivers with a number of tributaries feeding extensive marshlands in northeastern part of the State. Hadejia – Kafin Hausa River traverses the state from west to east through the Hadejia- Nguru Wetlands and empties into the Lake Chad Basin. Most parts of Jigawa lie within the Sudan Savannah with elements of Guinea Savannah in the southern part. Total forest cover in the state is below national average of 14.8%. Due to both natural and human factors, forest cover is being depleted, making northern part of the state highly vulnerable to desert encroachment. The state Vegetation enjoys vast fertile arable land to which almost all tropical crops could adapt, thus constituting one of its highly prized natural resources. The Sudan savannah vegetation zone is also made up of vast grazing lands suitable for livestock production.

**Materials and methods:**

The study was conducted in three Local Government Areas of the state renown for frequent occurrence of farmer–pastoralists clashes; Kiri Kasamma, Guri and Birniwa LGAs. Agricultural strong holds of Jabo, Garin Mutum Daya and Diginsa from Kiri Kasamma, Guri and Birniwa LGAs respectively were purposively sampled for the study. Almost all of the inhabitants of these villages are crop farmers and are also frequently dominated by Fulani herdsmen because of their abundant grazing fields and availability of water sources. Main objectives of the study were to determine the demographic and occupational characteristics of herders and crop farmers in the areas and assess the major causes and repercussions of the farmer–pastoralist conflicts in Jigawa state, Nigeria. Descriptive Survey design was adopted in the conduct of the study involving mixed methods targeting a sample size of 303 respondents comprising of 150 crop farmers, 150 Fulani cattle herders and 3 Village Heads. Respondents from among the crop farmers and cattle herdsmen were sampled through
Purposive and Snowball sampling techniques while the Village Heads were purposively sampled. In the case of the herders, due to their nomadic nature they were selected using Snowball technique at grazing areas, markets and their extended family settlements locally known as “Rugage”. Structured Key Informant Interview, Self-Made Closed Ended Questionnaires and Focused Group Discussions were the major data collection instruments employed. Quantitative data was analysed in SPSS Version 20 using Descriptive Statistics while qualitative data obtained from the interviews and Focused Group Discussions was analysed using Content Analysis method.

Results and discussions:

Table 1: Demographic characteristics of the respondents

| Variables       | Crop Farmers | Livestock Herders |
|-----------------|--------------|-------------------|
| Gender          |              |                   |
| Male            | 135          | 150               |
| Female          | 15           | 0                 |
| Age             |              |                   |
| 15-25 Yrs       | 22           | 34                |
| 26-35 Yrs       | 57           | 64                |
| 36-45 Yrs       | 42           | 31                |
| 46-55 Yrs       | 12           | 16                |
| 56-65 Yrs       | 9            | 5                 |
| Above 60 Yrs    | 8            | 0                 |
| Marital Status  |              |                   |
| Married         | 139          | 122               |
| Single          | 6            | 24                |
| Divorced        | 5            | 4                 |
| Level of Education |        |                   |
| None            | 20           | 121               |
| Arabic          | 58           | 18                |
| Primary         | 44           | 11                |
| Secondary       | 14           | 0                 |
| Diploma/NCE     | 8            | 0                 |
| Graduate        | 6            | 0                 |
| Post graduate   | 0            | 0                 |
| Tribe           |              |                   |
| Fulani          | 34           | 150               |
| Hausa           | 111          | 0                 |
| Others          | 5            | 0                 |
| Years of Residence |        |                   |
| 1-5 yrs         | 12           | 111               |
| 6-10 yrs        | 11           | 39                |
| 11-15 yrs       | 34           | 0                 |
| 16-20 yrs       | 48           | 0                 |
| Above 20 yrs    | 45           | 0                 |
| Family Size     |              |                   |
| 1-5             | 56           | 112               |
| 6-10            | 73           | 38                |
| 11-15           | 21           | 0                 |
| 16-20           | 0            | 0                 |
| Above 20        | 0            | 0                 |
Table 1 above presents demographic characteristics of the respondents including both the crop farmers and the Fulani herdsmen. As it is the culture in many parts of northern Nigeria where majority of the people are muslims, most socioeconomic activities upon which families depend for livelihood such as farming and livestock rearing are mostly responsibilities of the men. Thus, 90% of the respondents from among the crop farmers were male while the figure among the herdsmen was 100%. However 15% of the crop farmers were women most of whom were either singles or divorcees. Besides, majority of them 80.7% were youth within the age group of 15-45 years for the crop farmers and 86.1% for the herders while married men were also the majority 92.7% among the crop farmers and 81.3% among the Fulani herdsmen. Traditionally, based on the Islamic religion, men get married at early ages in many parts of the north.

Similarly, as it is the case in many traditional African settlements, the majority of the respondents 52.1% (crop farmers) and 92.7% (Fulani herdsmen) did not possess any formal education. Despite efforts by governments at all levels to bring education closer to the nomadic Fulani communities especially through the establishment of the Nomadic Education Programme, illiteracy level among the Fulanis was found to be much more higher than among the crop farmers. Obviously, the nomadic nature of the Fulani herdsmen prevents them from benefiting from many educational programmes. Similar results were discovered in two Local Government Areas of Kaduna state, Nigeria by Owolabi et al., (2016) in a report which stated that about 32.5% crop farmers and 30.0% of the pastoralists, representing 62.5% of respondents had no formal education respectively. However, the crop farmers were found to have relatively acquired good levels of formal education up to graduate level.

Unsurprisingly, the majority of the crop farmers (84.7%) were found to be indigenous residents of the area who have resided there for more than 10 years however, due to their nomadic nature, 100% the Fulani herdsmen did not reside in the study area for more than 10 years as 74% of them stated that they only lived moving from one place to another within the Local Government Area for not more than 5 years. The herdsmen are typically known to move with their cattle and families to places rich in pasture and water bodies to graze and water their animals. Thus, during the rainy season when there is abundant grass in many places, the herders are found in many parts of the state but only confined to places surrounding rivers which seem to be relatively richer in pasture during the dry seasons. Consequently, more often than not, farmer-pastoralists clashes tend to be higher at these times.

Surprisingly, family sizes were found to be relatively higher among the crop farmers with 62.7% of them having family members between 6 – 15 while among the Fulani herdsmen family sizes were considerably low as 74.7% of them had family members ranging from 1 – 5 and another 25.3% had family members ranging from 6 – 10. Usually, in many rural African farming communities, large family size was a source of pride as according to these communities a large family size depicted power, meaning that, such families can cultivate large areas of land and produce large amount of farm produce. Hence, most rural farming communities in many parts of northern Nigeria tend to produce more children in order to be able to produce more food.
### Table 2: Occupational characteristics of the respondents

| Crop Farmers | Livestock Herders |
|--------------|-------------------|
| **Variables** | **Frequency** | **%** | **Variables** | **Frequency** | **%** |
| **Farm Size** |  |  | **Animal Species Reared** |  |  |
| <1 ha         | 12 | 8.0 | Mixed        | 33 | 22.0 |
| 1-2 Ha        | 27 | 18.0 | Cattle       | 117 | 78.0 |
| 3-4 Ha        | 66 | 44.0 | Sheep        | 0 | 0  |
| 5-6 Ha        | 45 | 30.0 | Goat         | 0 | 0  |
| >7 Ha         | 0 | 0  | Number of Animals | 20-40 | 23 | 15.3 |
| **Type of Crop Grown** |  |  |  | 41-60 | 34 | 22.7 |
| Mixed Cropping | 107 | 71.3 | 61-80        | 23 | 15.3 |
| Maize         | 10 | 6.7  | 81-100       | 12 | 8.0  |
| Sorghum       | 12 | 8.0  | >100         | 58 | 38.7 |
| Corn          | 14 | 9.3  | Grazing Type |  |  |
| Cotton        | 7 | 4.7  | Free Range   | 150 | 100 |
| Beans         | 0 | 0    | Paddocking   | 0 | 0  |
| Groundnut     | 0 | 0    | Ownership of Animals |  |  |
| **Type of Farming** |  |  |  | Father | 123 | 82 |
| Commercial    | 76 | 50.7 | Family      | 27 | 18  |
| Subsistence   | 74 | 49.3 | Type of Farming | Commercial | 26 | 17.3 |
| Father        | 133 | 88.7 | Subsistence | 124 | 82.7 |
| Mother        | 7 | 4.7  | Average Annual Income (₦) | 100,000-300,000 | 8 | 5.3 |
| Family        | 10 | 6.7  | <100,000     | 0 | 0 |
| **Average Annual Income (₦)** |  |  | 301,000-500,000 | 142 | 94.7 |
| <100,000      | 34 | 22.7 | 501,000-800,000 | 0 | 0 |
| 100,000-300,000 | 55 | 36.7 | >800,000     | 0 | 0 |
| 301,000-500,000 | 22 | 14.7 |  |  |  |
| 501,000-800,000 | 34 | 22.7 |  |  |  |
| >800,000      | 5 | 3.33 |  |  |  |

**Occupational characteristics of crop farmers:**

With regards to their farm sizes, the majority of the crop farmers (70%) own big farm sizes of between 3 – 6 hectares only 85% possess farm sizes less than 1 hectare. As it is the practice in many parts of northern Nigeria, mixed cropping was also found to be the most popular form of cropping with 71% of the farmers engaged in mixed cropping usually growing cereal crops alone with leguminous plants such as beans and groundnuts. In some cases, sesame (*sesamum indicum*) is grown alone with cereal crops. In this area, it is widely believed that mixed cropping enhances soil fertility. However, few percentages of the crop farmers claimed that they practice mono cropping usually growing sorghum, maize, corn and cotton. These cereal crops form the staple foods among the people of northern Nigeria while cotton is mainly grown as a cash crop. Possibly, perhaps the reason why more than half of the crop farmers possessed big plots of farm lands was because they were commercial farmers mainly engaged in farming for commercial purposes. Thus, 50.7% of the farmers stated...
that they grow crops for cash while another 49.3% claimed that they were subsistence farmers mainly engage in crop farming to feed their big families. However, these subsistence farmers do sometimes sell some portion of their farm produce in order to raise some money for certain family needs especially marriage purposes. Many reports have made it known that majority of peasant farmers in northern Nigeria are subsistence farmers contributing enormously to the country’s Gross Domestic Product (GDP). Similarly, traditionally, farm lands upon which families depend on as sources of livelihoods are usually owned by heads of the families who most often tend to be the fathers. Although a good number of the respondents (49.3%) claimed to be subsistence farmers, 40.7% of them could earn between 300,000 – 800,000 Naira annually from the sales of some of their farm produce.

**Occupational characteristics of the livestock herders:**

Verily, Fulani herdsmen are very much known to rear herds of cattle alone in many areas of Jigawa state. This could be the reason why 78% of respondents stated that they rear only cattle while 22% rear mixed animal species mostly cattle alone with sheep, goats or both. Besides, with regards to the number of animals owned, the respondents could be described as rich because more than 62% of them rear herds with more than 60 cattle and 38.7% own more than 100 cattle. Possession of big herds of cattle among the Fulani ethnic group in Nigeria is considered as being wealthy and powerful as a result of which owner of the highest number of cattle in the area is usually addressed as the leader of the community locally called the “Ardo”. Expectedly, most herds of the cattle were owned by heads of the families (the fathers) (82%) while family ownership stood at 18%. Although 82.7% of the respondents claimed to be subsistence livestock farmers rearing animals just to take care of their families, they did state that they make good amount of money from the sale of milk locally known as “Kindirmo” as well as butter obtained from the animals to cater for their needs and those of their families. Only, 17.3% of the herders claimed to be commercial livestock farmers. Obviously, kindirmo and butter obtained from the cow milk locally called “Man Shanu” are very popular among the populace of northern Nigeria. Consequently, the sales of these products did earn the Fulani herdsmen a very good amount of money annually. Consequently, 94.7% of the respondents stated that they could make up to 300,000 – 500,000 Naira annually bulk of which realized during the rainy season when the production of these products by the cattle is high, attributable to the abundance of pasture.

**Table 3: Possible causes of farmer-pastoralists’ clashes**

| Causes                      | Crop farmers | Herdsmen |
|-----------------------------|--------------|----------|
|                             | Frequency    | Percent  | Frequency | Percent  |
| Crop damage by cattle       | 150          | 100%     | 122       | 81.3%    |
| Encroachment into cattle tracks | 122        | 81.3%    | 150       | 100%     |
| Inadequate grazing reserves | 134          | 89.3%    | 146       | 97.3%    |
| Lack of access to water points | 92          | 61.3%    | 87        | 58.0%    |
| Killing of stray cattle     | 87           | 58.0%    | 99        | 66.0%    |
| Indiscriminate bush burning | 111          | 74.0%    | 134       | 89.3%    |
| Cattle theft                | 76           | 50.7%    | 94        | 62.7%    |
| Poor land tenure system     | 98           | 65.3%    | 112       | 74.7%    |
| Climate change              | 80           | 53.3%    | 65        | 43.3%    |
| Desertification             | 78           | 52.0%    | 87        | 58.0%    |
| Corruption                  | 121          | 80.7%    | 109       | 72.7%    |
Unsurprisingly, crop damage and encroachment into cattle tracks happened to be the major causes of clashes between pastoralists and farmers in the areas studied with 100% of both farmers and herdsmen in agreement. Some years back, government set aside cattle tracks in areas with high cattle population mainly for grazing animals where farming activities were strongly restricted, however. Perhaps due to the increasing demand for arable land as well as growing human population, many if not all of these cattle tracks have been significantly encroached and have now been converted into farmlands. Consequently, herdsmen also encroach into these farmlands leading to considerable damage to crops. Certainly, more often, this happens to be the number one cause of conflict between farmers and nomadic herdsmen in many parts of northern Nigeria.

Although both parties commonly agreed with the above outlined factors as the major causes of the conflicts, slight variations were observed in the two groups’ perceptions of these possible causes. However, considerable portion of the respondents did agree that inadequate grazing fields, indiscriminate bush burning, ineffective land tenure system and corruption as other important factors responsible for the conflicts in the areas. Obviously, no area of land was found to have been set aside as a grazing field in all the areas studied despite the heavy population of cattle being reared. Thus, herdsmen graze their animals close to farms thereby increasing the risk of encroaching into these farms; a catalyst for farmer-herdsmen clashes. These findings do agree with those made by Owolabi et al., (2016) in a study that examined the impacts of farmer-pastoralists conflicts on food production in Kaduna state, Nigeria where they found out that factors influencing the conflicts include inadequate grazing land (87%), climate change (66%) and suspicion (60%).

Obviously, the issue of lack of sufficient grazing reserves and fields which forms the backbone of the farmer-pastoralists conflicts in Nigeria could be to some extent attributed to the governments’ lukewarm attitude towards agriculture. Consequently, the movement of herdsmen in search of viable grazing fields always led to encroachment into farmlands resulting in subsequent clashes with farmers and host communities. According to a report by Egwumba Egbuta in Dec 2018 (retrieved from www.accord.org.za), in recent times, farmer-pastoralists’ conflicts has heightened insecurity in Nigeria, particularly in the North Central region and by extension in other parts of the country. The driving force of the clashes is the competition for available resources, especially grazing land. It seems that the government has abandoned the grazing reserve system created by the Northern region government in 1965. Then, the government created over 417 grazing reserves in the north. Under the grazing reserve system, government provided space, water and vaccinations for the livestock while the herdsmen paid taxes to the government in return. However, the discovery of oil and subsequent exploration and export made Nigeria an oil economy, particularly in the 1970s and 1980s. Subsequently, the grazing reserve system was abandoned due to the neglect of the agricultural sector as the mainstay of the country’s economy.

Despite its devastating impacts on the environment, it is still a tradition in these areas for crop farmers to clear and burn large areas of land in preparation for farming seasons every year. This act destroys significant amount of pasture upon which cattle graze in addition to damaging the soil fertility. Hence, with reduced carrying capacity of the soil induced by indiscriminate bush burning, herdsmen are sometimes left with no option other than encroaching into nearby farmlands to graze their animals. Consequently, clashes ensue with undesirable consequences. Besides, ineffective land tenure system which made the acquisition of land for many land users such as the crop and livestock farmers very difficult also fuels the occurrence of conflicts between pastoralists and farmers usually triggered by competition over land. Presently, many of the farmlands under cultivation in these areas were mainly obtained through inheritance and many farmers cannot acquire more lands now. Moreover, for herdsmen who require vast areas of land as grazing fields, unless the land tenure system is relaxed, acquisition of such fields shall just be a mirage. Similarly, the menace of corruption especially among government officials such as security agents was also discovered as a factor fuelling the conflicts. Usually,
clashes between the two parties are triggered when transgressors are allowed to go free by corrupt officials without being interrogated.

Meanwhile, interference in the hydrology of rivers which recharge the many water bodies upon which herds of livestock heavily depend as sources of drinking water by the construction of Dams mainly for irrigation and potable water supply purposes have significantly affected the flow of water into these water bodies. Consequently, the nomadic herdsmen keep moving from one place to another in search of water points. In so doing, many farmlands are intruded leading to crop damages. Climate change further compounds this issue especially by long droughts. Besides, Jigawa state is one of the many northern Nigerian states battling the menace of desertification; others include Borno, Yobe, Sokoto and Kebbi states. Obviously, the impacts of desertification on livestock and crop cannot be over emphasized. Among others, it led to soil erosion, loss of soil fertility and pasture, drying up of water bodies etc. In addition to all the above causes, M. Babagana et al., (2018) found that Boko Haram was also to some extent responsible for the farmer-herdsmen crises in Yobe state of Nigeria, one of the north eastern state bedeviled by the Boko Haram crisis.

Furthermore, worrisome of all perhaps is the possible lack of political will by governments to employ holistic measures towards bringing an end to the conflicts especially by disrespecting and not implementing international agreements as well as national legislations put in place to manage the proliferation of these crises not only in Nigeria but also in many other sub-Saharan Africa. Governments at all levels have demonstrated near absence of needed political will to proffer lasting solutions to the conflicting claims of different actors in the ongoing conflict between the herdsmen and farmers. Political leaders have failed to invoke appropriate legislations to be backed by action that would define rules and limits for parties involved in the conflict. At the regional level, the Economic Community of West African States (ECOWAS) has a Protocol on Transhuman Movement, though the framework is yet to be fully implemented at national levels. Lack of political will remains a hindering factor among member states (Egwumba Egbuta, 2018 retrieved from www.accord.org.za).

Table 4: Socioeconomic repercussions of the conflicts (Sig. mean value, 2.0)

| Impact                        | Crop farmers (mean) | Herdsmen (mean) |
|-------------------------------|---------------------|-----------------|
| Loss of crops                 | 4.0                 | 3.65            |
| Decreased income              | 3.52                | 3.11            |
| Increased expenditure         | 2.55                | 2.89            |
| Loss of lives                 | 4.0                 | 3.66            |
| Hike in prices of commodities | 2.78                | 3.0             |
| Destruction of properties     | 3.79                | 3.65            |
| Loss of sources of livelihoods| 2.13                | 2.34            |
| Reduced productivity          | 3.33                | 3.44            |
| Loss of infrastructure        | 3.22                | 3.0             |
| Increased tension             | 4.0                 | 3.64            |
| Poor quality of relationships | 3.23                | 4.0             |

Evidently, among all the undesirable impacts of the farmer-pastoralists’ conflicts, loss of live is the most inevitable and the most devastating. This was made evident by the high mean value of 4.0 and 3.66 recorded. In most cases both humans and animals are killed during such clashes in face to face confrontations involving dangerous weapons such bows and arrows, spears, cutlasses and sometimes guns. This finding conforms with many other findings by other scholars. According to Abubakar (2012) cited in Owolabi et al., (2016), the
conflict between these two groups has led to loss of properties worth millions of naira and the death of hundreds of thousands of lives. Despite all these, there seems to no solutions in sight. In recent years, the hike in farmer-herdsmen conflicts has resulted in the death of many people in different states of Nigeria cutting across all regions. These incidences pose greater threats to the national security leading to retaliatory attacks on innocent people. In a report titled Understanding the Herder-Farmer Conflict in Nigeria, Egwumba Egbuta in Dec 2018 (retrieved from www.accord.org.za), it was narrated that since the return to democracy in 1999, Nigeria has been grappling with diverse security challenges, chief among them are insurgency, election violence, kidnapping and most recently, the herder-farmer conflicts among others. The north central states of Benue, Plateau and Nasarawa and other states have experienced conflicts that led to thousands of deaths and displacements as a result of clashes between pastoralists (herders) and local farmers in several communities. In January 2018 alone, Amnesty International reports indicate that 168 people were killed as a result of herdsmen-farmer clashes. Possibly, another factor fuelling the crisis and escalating intensity of the conflict is the increasing proliferation of small arms and light weapons in the country. Thus, with easy access to sophisticated weapons by members of the two groups, minor disagreement or provocation often degenerates into violent clashes, resulting in widespread destruction of property and human casualties.

Besides, destruction of crops and other farm produce is always inevitable whenever such clashes erupt (mean value 4.0, 3.65). This includes unharvested crops on farmlands as well stored crops in houses and stores most often set ablaze. Certainly, due to the loss of crops inherent with such clashes in addition to reduced productivity (mean value 3.33, 3.44), destruction of properties (mean value 3.79, 3.65) including houses, means of transport, market places etc., both parties experience significant reduction in their incomes whenever conflicts occur between them (mean value 3.52, 3.11). Consequently, all these eventually culminate into increased tensions and very poor quality of relationships among communities. Definitely, these could serve as catalysts for further clashes when care is not taken. More often, the nomadic Fulani herdsmen relocate to other places immediately after ravaging farming communities. Moreover, due to such conflicts, displacements involving both the farming and herders’ communities further complicate the socioeconomic impacts inherent with it. In serious situations, internally displaced people were camped by the government in IDP Camps. For instance, the persistent attacks in Benue state have had a spill-over effect on the neighbouring state of Nasarawa. In January 2018, the News Agency of Nigeria reported that over 18 000 internally displaced persons (IDPs) were in 11 camps in Nasarawa state.

Table 5: Possible solutions to the conflicts (Sig. mean value, 2.0)

| Measures                          | Crop farmers (mean) | Herdsmen (mean) |
|-----------------------------------|---------------------|-----------------|
| Improved land tenure system/land use plan | 2.67               | 3.21            |
| Increased security                | 3.0                 | 3.23            |
| Good farming methods              | 2.87                | 3.42            |
| Provision of grazing reserves     | 3.89                | 3.77            |
| Stop bush burning                 | 3.43                | 4.0             |
| Awareness raising campaigns       | 3.33                | 3.21            |
| Prompt intervention by authorities | 4.0                 | 3.56            |

Nevertheless, the Federal government of Nigeria and those of many other states in the country had taken giant strides in efforts to bring an end to the menace of farmer-pastoralists clashes. For instance, in 1965 the northern regional government initiated one of the first attempts to respond to the herdsmen-farmer conflict in the country by creating Grazing Reserves which allocated large portions of land to be exclusively used by herdsmen.
to rear their livestock. Besides, the establishment of the National Commission for Nomadic Education (NCNE) in by the federal government in 1989 with the main aim of integrating nomadic pastoralists into national life through mobile basic education and skill acquisition. The programme intended to integrate them into society through education.

Meanwhile, recent measures adopted included the establishment of the National Grazing Reserve Bill in 2016 that was sponsored at the parliament to address the herdsmen-farmer conflicts. The Bill did Proposed Cattle Ranching System 2018. In reaction to increasing conflicts and mass killings resulting from seasonal pastoral movements, the government in 2018, as a matter of policy approved a 10-year National Livestock Plan at a cost of about 179 billion naira. The plan would culminate in the establishment of 94 ranches in 10 pilot states of the federation (Egwumba Egbuta, 2018 retrieved from www.accord.org.za). Also in an effort to curtail the increasing rate of the conflict in the country, the Obasanjo administration in 2013 established the Great Green Wall Agency to tackle desertification considering the fact that desertification happened to be one of the causes of the conflicts especially in the desertification stricken state. This was in response to the 2007 African Union Great Green Wall Initiative that aimed at encouraging member states to plant 8 000km of trees along the Southern Sahel to counter the effects of desertification along that area. Certainly, the desert encroachment along the Sahel region possibly as a result of climate change is a major factor responsible for seasonal migration of herdsmen from one region to the other in search of water and vegetation for cattle grazing.

However, despite all the above mentioned measures taken with the aim of ending the farmer-pastoralists; conflicts in the country, the conflicts seem to be on the increase with dire political and socioeconomic consequences. Thus, based on the findings made by the study, the measures presented in Table 5 above were believed by the respondents to be effective in managing the situation if well implemented. Certainly, with effective land tenure systems as well as effective land use plan, different land users could have access to sufficient land needed for their socioeconomic activities and land use by communities could be well planned evenly among different land users. Thus, cases of competition over land use which happens to be the key factor in most rural community clashes including farmer-pastoralists’ conflicts can be curtailed. It should be noted, insecurity in most rural areas is one of the leading factors in rural-urban migrations which further compounds the ever increasing problems of urbanization. Besides, with security, cattle theft as well as theft of crops on the farm which also fuel the crises could be well addressed. In recent years, cattle rustling in many parts of northern Nigeria have been on the increase thereby further exacerbating security issues from many perspectives.

Inarguably, with more than 40% of the total global land mass under cultivation now coupled with an ever growing human population put at 7.8 billion people in 2019 and estimated to reach 11 billion in 2050 as well as increased urbanization rate, the need for and competition over the decreasing land resources shall probably worsen. Thus, there is a greater need for the adoption of sustainable farm practices in order to maintain soil fertility so as to minimize extension of farmlands and clearance of more forests for cultivation especially for the fact that such practices pose greater threats in the form of habitat loss and fragmentation as well as diversity loss in addition to further compounding the consequences of climate change. Hence, an immediate end should be put to bush burning by enacting appropriate legislation.

Nigeria is endowed with enormous land resources which if properly managed the issue of conflicts over land can be significantly managed. Some years back when human population was not soaring, need for food production and rate of urbanization as well as competition over land resources were low, many grazing reserves and cattle tracks were made available by the government in many areas with considerable cattle population. However, with increased encroachment into these grazing reserves and cattle tracks triggered by urbanization and competition over land for different developmental projects, herdsmen in many places are left stranded with no field to graze their animals. Thus, the provision of grazing reserves and the reestablishment
of cattle tracks, the increasing farmer-herdsmen clashes in many parts of the country can be well managed especially now that such conflicts have become issues of national concern. In a research conducted by Muhammad (2008) cited in Owolabi et al., (2016), Fulani herdsmen have continued to clash with sedentary farming communities in Plateau, Ogun, Oyo, Sokoto, Nasarawa, Benue, Rivers, Bauchi states and federal capital territory. Such reports do also emerge from other states as far as southern states.

Other consequences of the farmer-pastoralists’ conflicts are increased tensions and soaring relationship between farming communities and herdsmen which in most cases last for decades and even passed on to later generations. In such situations, frequent occurrence of clashes between warring communities is very inevitable. Thus, as a matter of urgency, governments at all levels, farmers’ and pastoralists’ associations as well traditional rulers should take up the issue of awareness raising campaigns for these communities highlighting the importance of cordial relationships and the need to live in harmony in order to make progress. Communities should be well enlightened on the need to understand the value and necessity of interdependence among them. In doing so, the values, cultures and needs of all communities should be well respected. Radio jingles, cinema shows, lectures etc. can be employed especially for the fact that, due to their nomadic nature, the Fulani herdsmen are renowned for relying heavily on Radio for news updates. Rural education systems as well as Nomadic education systems should also be strengthened with particular emphasis of inculcating into the growing generation the spirit of love for one another as well as the greater need for the farming and livestock rearing communities to live in peace and harmony.

**Table 6: Respondents’ perceptions on the performance of institutions in managing the conflicts**

| Institutions                                      | Mean | Status          |
|--------------------------------------------------|------|-----------------|
| Police                                           | 3.10 | Very effective  |
| Courts                                           | 1.45 | Ineffective     |
| State Governments                                | 2.1  | Effective       |
| Local Governments                                | 3.05 | Very effective  |
| Traditional Rulers                               | 1.65 | Ineffective     |
| Crop Farmers Associations’                        | 1.88 | Ineffective     |
| *Miyetti Allah* Cattle Breeders’ Association      | 2.0  | Effective       |
| Community leaders                                | 2.86 | Effective       |

Although respondents’ perceptions on efforts of constituted authorities especially the police, Local Governments and community leaders in curtailing the farmer-herdsmen conflicts were found to be significantly effective, in general, the efforts exhibited by constituted authorities with respect to these clashes were not encouraging. Usually, it is the intervention by the police that brings an immediate end to these clashes whenever they erupt and in collaboration with Local Government authorities put in place measures for controlling further escalations. *Miyetti Allah* Cattle Breeders’ Association is a National Association with members majorly drawn from the Fulani herdsmen. The association fights for the welfare of its members and intervenes whenever clashes erupt between its members and the farming communities. The efforts of this association are felt all over the country although it is sometimes accused of taking sides. Community leaders also play vital roles in curtailing this menace. Unfortunately, efforts of courts of law, traditional rulers and crop farmers’ associations in addressing the conflicts were discovered to be ineffective. Hence, a lot has to be done in order to bring an end to this clashes that are capable of threatening the national security especially due to the fact that these conflicts can be easily manipulated and transformed into ethnic, religious as well as sectional crisis.
Conclusion:

Summarily, based on the findings made by the study, it can be concluded that, with the growing rate of insecurity in the country especially in the northern states coupled with decreasing agricultural productivity, frequent occurrence of farmer-pastoralists’ conflicts could further worsen the situation with devastating socioeconomic consequences and food insecurity. With already dwindling agricultural productivity, such conflicts could further spark more food crises in the most populace country in Africa. Certainly, with a population of nearly 200 million people, Nigeria requires increased food production in order to feed the ever growing population. Besides, with more than 85% of its population living in rural areas bulk of whom being peasant farmers who contribute enormously to the country’s GDP through food production, escalation of these crises could affect the country’s economy as well in addition to exacerbating the fragile security issues that pose greater threats to national security. Furthermore, due to the fact that such clashes always led to decreased level of income among the affected communities, if left unchecked, it could further exacerbate the abject poverty that bedevils many rural areas. Thus, with its proximity to Yobe state; one of the north eastern states embattling the Boko Haram crisis, increasing poverty rate among rural communities in Jigawa state majority of whom lacking any formal education could be very worrisome especially for the fact that poverty has been identified as one of the leading causes of the Boko Haram insurgency in the country.

Recommendations:

Considering the numerous threats posed by the growing farmer-pastoralists’ conflicts to food and national security, definitely all hands have to be on deck in order to put a halt to the crises and prevent further degeneration. Thus, the following recommendations are hereby proffered:

1. Based on the findings made on respondents’ perceptions of possible solution to the crises, the control measures presented in table 5 above should be well implemented.
2. All aspects of security measures including intelligence gathering should be employed by governments at all levels in order to stop the spread of dangerous firearms among rural communities. Definitely, access to such firearms significantly fuels the crises.
3. Politicization of the farmer-pastoralists’ conflicts by unscrupulous people especially politicians should be avoided bearing in mind that the political and socioeconomic consequences of such acts could more devastating the actual impacts of the conflicts.
4. Now that lack of political will and lukewarm attitudes of governments have been identified as some of the factors responsible for the clashes, governments at all levels should work out modalities such as the provision of effective legislations with the aim of bringing an end to the menace.
5. Many of the northern states embattling the farmer-pastoralists’ conflicts are also stricken by serious desertification hence; controlling desertification which further exacerbates the issue should be given more emphasis. In so doing, the Ecological Grants being offered to all states facing ecological problems such as desertification should be used judiciously specially for the purpose for which it is meant.
6. The study discovered that the efforts of traditional rulers and farmers’ associations in managing the conflicts were not encouraging at all. Thus, being the closest form of constituted authorities to the warring communities; traditional rulers should be more proactive in their efforts to curtail the issue.

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