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THE IMPLICATIONS OF FARMERS-HERDERS CONFLICT ON CROP PRODUCTION IN NORTH CENTRAL, NIGERIA

***Adimula, R. A. and Idowu, S. A.**

Centre for Peace and Strategic Studies University of Ilorin, Nigeria

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***Corresponding Author:**
*Adimula, R. A.
Centre for Peace and Strategic Studies,
University of Ilorin, Nigeria
e-mail: adimula.ra@unilorin.edu.ng

ABSTRACT

Farmers-herders conflict is one of the most difficult challenges of national security that has threatened lives and properties across many States in Nigeria. The North central region, which is often regarded as the largest producers of agricultural crops in Nigeria, is under attack by cattle belonging to herders with attendant loss to crops and displacement of farmers from their farmlands. The paper examines the implications of farmers-herders conflict on crop production in North Central Nigeria using Kogi, Kwara and Nasarawa states as units of analysis. The objectives of the paper are to examine the historical relationship between farmers and herdsmen in North Central Nigeria; analyze development of conflict leading to recent violence; assess food productivity before recent violence and now and suggest policy recommendations to reduce conflict between herdsmen and farmers. The study relies on structured and key informants interview guides. The research sample consists 150 respondents purposively selected from the study area. The respondents are drawn from All Farmers Association of Nigeria (AFAN) and Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN). The study employs both primary and secondary data (from Agricultural Development Project). The data are analyzed using SPSS statistical analysis. The finding from the paper revealed that farmers and herders had lived peacefully with each other in Kogi (97.7%), Kwara (95.9%) and Nasarawa States (86%) as a result of mutual trade in crop and animal exchange. It was revealed that destruction of crops by herders was the main cause of conflict between farmers and herders in Kogi , (72.1%), Kwara (66.7%) and Nasarawa (89.5%) States. The finding further revealed that there was sharp decline and increase in food production in Kogi (96.3%), Kwara (95.6%) and Nasarawa (89.3%) States due to persistent destruction of crops occasioned by farmers-herders conflict. This claim was further supported with available data on market prices in the study area that indicates exponential increase in food prices with high inflation on food commodities. The paper concludes that farmers-herders conflict has undermined agricultural productivity in the North central region with an implications on high cost of food prices and reduction in farm output. The study recommends that reconciliation and dialogue workshop between farmers and herdsmen will restore their strained relationship and strengthen the socio-economic ties between them.

Keywords: Conflict, Farmers-Herders, Food production, North Central States, Violence

INTRODUCTION

Farmers-herdsmen conflict is one of the most daunting national security challenges that is threatening and undermining the peace and security of Nigeria. Conflict between farmers and herdsmen has been in existence for long and a common feature of economic livelihood in West Africa (Tonah, 2006). Blench (2004) observed that farmers-herders conflict has existed since the beginnings of agriculture, but in Africa the prevalence of tsetse flies and low settlement densities kept the incidence of clashes at a low frequency until the twentieth century. The historical backgrounds to farmers-herders in Nigeria have shown that herders have intermingled with farmers for centuries, with established reciprocal-trade relationship. The mutual relationship between farmer and herdsmen suddenly changed when competition over access to land became increasingly high and has resulted into frequent hostility between two land users. Ever since then, the two good friends started waging war as a result of limited land to cultivate crops and feed livestock (Tonah, 2006).

The conflict has resulted into huge financial loss to both farmers and herders. The parties involved often engage in series of attacks over land use and it has resulted to substantial damage of properties and loss of lives (Idowu,

2014). Social and economic activities have been paralyzed in some communities as a result of incessant attacks on livestock and crops farming. Many have absconded their farming due to incessant attacks on their farm and continuous loss of lives on daily basis. The conflict is more pronounced in North-Central geopolitical zone of Nigeria where heavy causalities and displacement of farmers from their home have been registered (Abass, 2012; Abuga & Onuba, 2015; Omitola, 2015).

According to Amaza (2016), the devastating effects of the attacks have led to emergence of Internally Displaced Persons (IDPs), economic loss and wanton destruction of lives and properties in North Central region. The natural and geographical features of the north central region of Nigeria are themselves enough reasons to understand that rural conflict in communities located in this region of the country are worst (Baba and Abeysinghe, 2017). There is no doubt that the economic importance of farming and pastoralism are significant to the Nigerian economy. Now that Agriculture has been regarded in recent times as the most viable route with which Nigeria can successfully get rid of her current economic woe, hence the conflict between the farmers and herdsmen require a lasting solution for improve productivity and economic growth.

Statement of the Problem

Farmers-herdsmen conflict has caused serious damages on agricultural crops in the North Central zone of Nigeria, generally recognized for its mass production and supply of food for subsistence and commercial purposes. Constant encroachment of farmlands by herds of cattle has no doubt affected crop production output in the zone. The recent study carried out by Baba and Abeysinghe, (2017) identified the effects as loss of lives and properties and growing cases of humanitarian crisis. Studies on the effects of farmers-herdsmen conflict on crop production in Nigeria particularly North Central region are scanty. The existing literature in this area dwell mainly on social, economy, environmental and political effects. This paper is an attempt to reveal the effects of farmers-herdsmen clash on crop production. The essence of this research is to examine the effects of recent conflicts on crop production and to suggest possible ways to reduce the conflict, to ensure maximum production of crops to meet the growing demand of the Nigerian populace.

Objectives of the Research

The general objective of the study is to examine how recent violence among herders-farmers affected crop production in North Central Nigeria, while specific objectives are to:

(i) examine the historical relationship between farmers and herdsmen in North Central Nigeria;
(ii) analyze the development of conflict leading to recent violence;
(iii) assess food productivity before recent violence and now;
(iv) suggest policy recommendations to reduce conflict between herdsmen and farmers.

Study Area

The North Central Zone is a critical part of Nigerian federation and is composed of six states (Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau) and the Federal Capital Territory, Abuja. The zone constitutes what is geographically referred to as the savannah belt of Nigeria and is characterized by fertile arable land for the cultivation of wide range of both food and cash crops such as yams, maize, guineacom, millet, soyabeans, Beniseed, cassava, groundnut, cotton, Irish potatoes, sweet potatoes, tomatoes, onions, cabbage, carrot and a host of others, too numerous to mention (IPCR, 2016).

The vegetation of the region is a fertile soil conducive for good agricultural production. Grasses in this region which are green and fresh throughout the seasons provide one of the best foliage's for animal consumption in the whole of Nigeria and sub-Saharan region of Africa. Grassland in the Benue and Niger rivers troughs provide the best grazing site in the country and the whole of western Sudan (IPCR, 2012). The agricultural potentials of the region ahead of other parts of the country is glaring and Benue in particular is known with its food production capacity strong enough to feed the whole of West African sub-region-code named the “Food Basket of the Nigerian Nation” (Baba and Abeysinghe, 2017). Thedominanteconomicactivityofthepeoplethatinhabitthisstrategiczone is agricultural production.

Fundamentally, agriculture is the main stay of the economy of the North Central geo-political zone of Nigeria and by implication, it's the traditional occupation of the people in the region. The significant contribution of the zone to the growth and development of the agricultural sector of the Nigerian economy qualifies it as the "food basket of the nation."The agricultural resourcefulness of the zone is further boosted by the confluence of the two main rivers (Rivers Niger and Benue) at Lokoja, the capital of Kogistate (IPCR, 2012).

The heavy concentration of farmers, cattle and other livestock breeders, resource based conflicts bordering on land, water, cattle routes, grazing land, the sensitive and emotive citizenship conundrum and a host of others are so wide spread in the zone. The frequency of intense competition over these limited natural and social resources has indeed, constituted critical destabilizing factor in the North Central zone of Nigeria (IPCR, 2016).

Literature Review

Historical Relationship between Farmers and Herdsmen in Nigeria

Studies have shown that there is symbiotic relationship between farmers and herders. According to Elliot (1997), pastoralists have intermingled with farmers for centuries, with established reciprocal-trade relationship, as well as collaborative symbiotic traditional practice in grazing of livestock. Herders graze on farmlands that belong to crop farmers and farmers depend on animal dungs for improving soil fertility. Also, pastoralists require the calories produced by crop farmers, much as the crop farmers often require the protein and dairy product produced by pastoralists (Abba and Usman 2008).

Oyama, (2014) reveals that in Sahel region, sedentary farmers have established socio-economic relationships with nomads for the purpose of subsistence. For example, after harvest, the herdsmen seek to establish contracts with farmers to camp on their farmland for some time. They stay in such camp during the night and graze their livestock around the camp during the day. In this way, domestic animals provide excreta which improve the fertility of the soil. Oyama notes that this was the customs being practiced by the farmers and herders in Sahel region. This is no longer the same as a result of limited land for farmers to cultivate their crops and herders to graze their animals.

Similarly, Bagu and Smith, (2017) noted that, for centuries, farmers and herdsmen have lived in relative harmony, benefiting from symbiotic partnerships to keep crop land fertile and cattle well-nourished. Herdsmen seasonally migrate their cattle in search of grazing land, available water sources, and profitable markets for their cattle, often near villages and farms. In turn, the cattle provided critical dung fertilizer that nourished the soil for crop production, leading to high yields. Farmers and herders both benefitted in the exchange of grain for dairy and crop residue for manure.

Aminu, (2012) gives a vivid account of symbiotic relationship between farmers and herdsmen in Nigeria. For example, in some Northern States like Sokoto, Kebbi and Zamfara, farmers negotiate with herdsmen to stay in their farms after the harvest period. This is mainly for the manure that would be provided by the animals through their dung and they stay up to four months in the farms and get paid for their services. The occupation to a very large extent makes them mobile, as they move with their families from one place to another searching for a better place where their animals could graze on. As a result of the increase in population, farmers look for more farmlands to engage in commercial farming activities in order to generate more income. The quest for more farmlands by local farmers creates serious problems, as many cattle routes which were established and demarcated by the government for the usage of herdsmen many decades ago are being encroached by farmers, who have been planting crops on cattle routes over the years. This has left the herdsmen with no any other option than to allow their animals to graze on farmlands and this brings them into conflict with farmers, whose crops are damaged by cattle while grazing (Aminu 2012).

According to Shettima, (2008), pastoralists move across and graze on farmlands that belong to crop farmers. Pastoralists require the calories produced by crop farmers much as the crop farmers also often require the protein and dairy products produces by the pastoralists. Monod, (1975) states that 'no nomad can exist for long without contact with secondary people' Monod also observes that even the Tuareg nomads of the Sahara maintain contact with Asis dwellers. Thus: pastoralists and crop farmers are intertwined- sharing land, water, fodder and other resources.

Webb, (1995) cited in Hussein, (1998:20) stated that, from Northern areas of the Sahel, very deep exchange relations persisted between the two groups. The deserted herders depended on savanna farmers for calories, exchanging salt for grain, and for the provision of essential needs such as tent poles, cloth and cooking utensils'. This exchange relationship was also evident in the wide network of exchange between pastoralists and cultivators, including, for instance, pastoralists trading animals manure for grain. Horowitz et al, (1983) and Little (1987;62) cited in Shettima (2008) writing on Niger, noted that in the post harvest period, farmers were 'enticing animals onto the cropped fields with gifts to the herders of money, sugar and tea. Farmers were known to dig wells on the field to attract post-harvest grazing and to consign a few animals to the care of a particular herder in the hopes that he would lead the herd onto the owner's field.'

Awogbade, (1983) cited in Shettima (2008) observed that, though the relationship between farmers and Fulani herdsmen was coming under increasing pressure due to fierce competition for resources, Fulbe herds were still welcomed by Jos farmers. Herders keep animals for the village farmers who consider livestock, particularly cattle, as a form of investment; milk, cattle and manure are traded for agricultural produce and social links between the sedimentary populations and the herders are evident in ceremonial exchange. Such complementary interactions and exchanges have also been reported of other agricultural societies (Kanuri, Hausa, Songbay) and the pastoral groups (Tuareg, Fulbe) in Nigeria where 'all cultivators own livestock's, and many nomads practices agriculture'

In a similar study of the 'Goll' of Frandene village in Senegal, Gueye, (1994) cited a well known adage in the region which holds that 'herders and field are natural allies' which buttresses the long standing reciprocal, complementary relationship that has existed between farmers and pastoralists. The closeness of the reciprocal ties between farmers and pastoralists in the semi-arid region of Africa have led many scholars to liken it to the relations between family members; in some cases as husbands and wives; in others like disputing brother -i.e Cain and Abel- (Hussein, 1998).

Studies conducted by Basil and Ekpeyemi, (2016) have shown that, serious conflict erupt between Fulani herdsmen and farmers leading to loss of lives, valuable properties and destruction of vast expanse of arable agricultural farmlands thereby posing serious threat to food security, as farmers for fear of attack, could no longer go to farm and harvest their farm produce. Ogundipe and Oluwole, (2016) revealed that the clashes, which have resulted in the death of thousands of rural dwellers over the past two decades, usually arise from disagreements over the use of essential resources such as farmland, grazing areas and water points.

The natural and geographical features of the north central region of Nigeria are themselves enough reasons to understand that rural conflict in communities located in this region of the country are eminent. Baba and Abeysinghe, (2017) affirmed that in the process of utilizing natural resources, interests are likely to clash with each other's, especially in a federal entity with diverse cultural heritages like Nigeria.

Communities in the North Central zone are agrarian. They depend on farming for survival and means of earning their livelihoods. And the herdsmen who are livestock breeder have their animal to protect because it is their source of wealth and survival.

Theoretical Framework

Human Needs Theory

The human needs theory is attributed to the works of John Burton (1979) and Azar (1990). The main argument of this theory states that all humans have basic needs which they seek to fulfill and that the denial and frustration of these needs by other groups or individuals could affect them immediately or later, thereby leading to conflict (Faleti, 2006). Burton (1990) maintains that conflict stems from unsatisfied human needs. Burton explained that human needs go unsatisfied because institutions have been designed from the context of power. Coercive measures are employed by some to satisfy their needs to the detriment of others. In using power to satisfy needs, one behaves in such a way as to satisfy one's own needs, while removing needs satisfaction from others. Burton argues that people will not easily accept institutional arrangement that denies the satisfaction of their human needs.

Azar (1990) attributed grievances resulting from deprivation of human needs as the cause of conflict. Failure to redress these grievances by the authority cultivates a niche for a protracted social conflict. Human needs are basically non-negotiable; if conflict comes, it is likely to be intense, vicious and irrational. Situating this theory in the study, the grievances resulting from deprivation of human needs of farmers and herders causes conflict and the failure to redress the grievances expressed by farmers and herders by the authority cultivates a niche for a protracted social conflict between them. Thus, transforming the conflict implies meeting the needs in a way that will be mutually satisfactory to both parties.

Research Methodology

The study adopts a descriptive survey design, with quantitative and qualitative tools to answer the research questions. The sample is drawn from farmers and herdsmen in the three (3) selected States (Kogi, Kwara and Nasarawa). Purposive sampling method is utilized in the selection of farmers and herdsmen through their association (All Farmers Association of Nigeria (AFAN) and Miyetti Allah Cattle Breeders Association of Nigeria (MACBAN) respectively. A sample size of 150 respondents consisting of farmers and herdsmen were purposively selected from an estimated population of 4.5, 3.2 and 1.8 million people in Kogi, Kwara and Nasarawa states respectively. The data were collected using questionnaires and structured interview guide administered to respondents; while, secondary data were sourced from Agricultural Development Project (ADP) on crop production yield and market prizes food commodities. The collected data were analyzed through descriptive statistical analysis and content analysis of key informant interviews. Frequency tables and percentages were used to answer the research questions.

Results and Discussions

Table I: Demographic distribution of respondents

Responses	KWARA		KOGI		NASSARAWA	
	Frequency	Percentage	Frequency	Percentage	Frequency	percentage
Age						
20-30 years	12	25.0	0	0	0	0
31-40 years	34	70.8	0	0	0	0
41-50 years	2	4.2	43	100	18	31.6
Above 50 years	0	0	0	0	39	68.4
Religion						
Islam	34	72.3	19	44.2	18	32.1
Christianity	13	27.7	24	55.8	35	62.5
Others	0	0	0	0	3	5.4
Marital Status						
Single	11	23.4	3	7.7	0	0
Divorcee	3	6.4	2	5.1	0	0
Married	33	70.2	34	87.2	50	94.3
Widow	0	0	0	0	3	5.7
Gender						
Male	37	78.7	36	90.5	27	48.2
Female	10	21.3	4	9.5	29	51.8
Educational Qualification						
First school leaving certificate	13	28.9	12	28.6	9	16.1
SSCE and its Equivalent	2	4.4	6	14.3	9	16.1
OND/NCE	6	13.3	5	11.9	9	16.1
Degree/HND	20	44.4	16	38.1	24	42.9
Post Graduate	4	8.9	3	7.1	5	8.9
Tribe						
Fulani/Bororo	14	28.6	11	26.2	5	9.3
Yoruba	23	46.9	14	33.3	25	46.3
Tiv	4	8.2	6	14.3	9	16.7
Others	8	16.3	11	26.2	15	27.8
Occupation						
Farmer	30	69.8	23	67.6	45	91.8
Herders	13	30.2	11	32.4	4	8.2

Source: Researcher's field survey, 2018

Table I reveals that, all respondents are between age 41 and 50 years in Kogi State, while 70.8% of respondents were aged between 31 and 40 years, 25% between 20 and 30, 4.2% aged between 41 and 50 in Kwara State and 68.4% of respondents were aged above 51 years, 4.2% aged between 41 and 50 in Nassarawa State. 55.8% of respondents were Christians, 44.2% practiced Islam in Kogi State while 72.3% of respondents practiced Islam and 27.7% practiced Christianity in Kwara State and 62.5% of respondents were Christians while 32.1% practiced Islam and 5.4% were other

religions in Nassarawa State. 87.2% of respondents were married, 7.7% were single, 5.1% were divorced in Kogi State while 70.2% of respondents were married, 23.4% were single while 6.4% were divorced in Kwara State and 94.3% of respondents were married while 5.7% were widowed in Nassarawa State. 90.5% of the respondents are male while 9.5% are female in Kogi State while 78.7% are male while 21.3% are female in Kwara State and 78.7% are male while 21.3% are female in Nassarawa State.

Educational qualifications shows that 38.1% of respondents had a degree/HND, 28.6% only had first school leaving certificate, 14.3% had SSCE, 11.9% had OND/NCE while 7.1% were postgraduates in Kogi State. In Kwara State, 44.4% of the respondents had a degree/HND, 28.9% only had first school leaving certificate, 4.4% had SSCE, 13.3% had OND/NCE while 8.9% were postgraduates. In Nasarawa State, 42.9% of respondents had a degree/HND, 16.1% only had first school leaving certificate, 16.1% had SSCE, 16.1% had OND/NCE while 8.9% had postgraduate degrees.

On tribal affiliation, the table shows that 33.3% of respondents were of the Yoruba tribe, 26.2% were Fulani/Bororo, Tiv were 14.3% while 26.2% were from the other tribes in Kogi State. In Kwara State, 46.9% of respondents were of the Yoruba tribe, 28.6% were Fulani/Bororo, Tiv were 8.2% while 16.3% were from the other tribes. In Nasarawa state, 46.3% of respondents were of the Yoruba tribe, 9.3% were Fulani/Bororo, Tiv were 16.7% while 27.8% were from the other tribes.

Occupational distribution of the respondents shows that 67.6% of respondents are farmers while 32.4% are herders in Kogi State; 69.8% of respondents are farmers while 30.2% are herders in Kwara State; and 91.8% of respondents are farmers while 8.2% are herders in Nassarawa State.

Table II: Perception of respondents on history of relationship between farmers and herdsmen.

Out of the 150 research instrument distributed in the study area (Benue, Kogi and Kwara States) 149 were recovered. The analysis was therefore based on 149 respondents in the study area.

Reponses	Frequency	Valid Percent
Yes	138	92.6
No	8	5.4
i dont know	3	2.0
Total	149	100.0

Source: Researcher's field survey, 2018

Table II above shows that a total of 92.6% of respondents in the study area agreed to peaceful coexistence, 5.4% disagreed, while 2.0% don't know. (In Kwara State, 97.7% of respondents agreed to peaceful coexistence while 2.3% disagreed. In Kogi State and 86% of respondents agreed to peaceful coexistence, 10.5% disagreed, while 3.5% don't know in Nassarawa State).

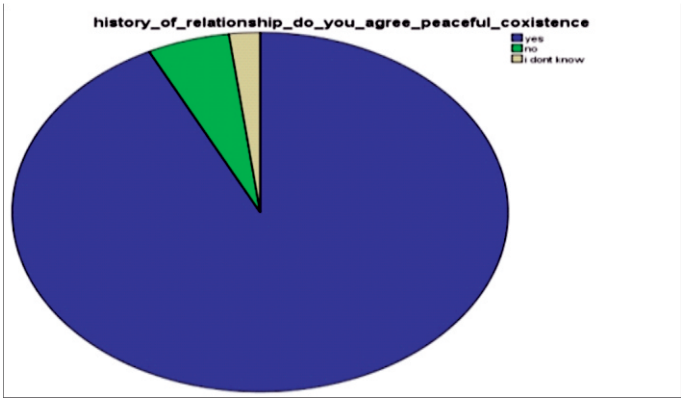

Figure 1: **history of relationship between farmers and herdsmen**

Table III: Perception of respondents on factor responsible for peaceful relationship between farmers and herdsmen

Here, 141 respondents responded to the research instruments.

Reponses	Frequency	Valid Percent
Trade	59	41.8
food production	44	31.2
Sustenance	38	27.0
Total	141	100.0

Source: Researcher's field survey, 2018

Table III reveals that 41.8% agreed that trade was responsible for peaceful coexistence between farmers and herders, 31.2% thought sustenance it was, while 27.0% believed it's food production in the states constituting the study area. (50% agreed that trade is responsible for peaceful coexistence between farmers and herders, 23.9% thought sustenance it was, while 26.1% believed it's food production in Kwara State. In Kogi State, 53.7% agreed that trade is responsible for peaceful coexistence between farmers and herders, 31.7% thought it's sustenance while 14.6% believed it's food production. In Nasarawa State, 48.2% believed food production was responsible for peaceful coexistence between farmers and herders, 25.9% said it was sustenance while 25.9% agreed it was trade.

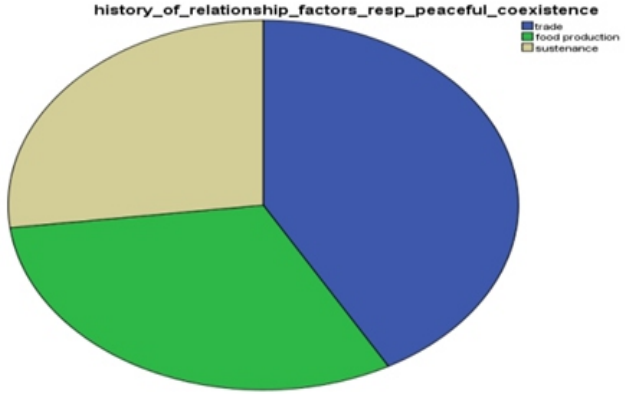

Figure 2: factor responsible for peaceful relationship between farmers and herdsmen

Table IV: Perception of respondents on the causes of conflict between farmers and herdsmen

Causes of conflict	Frequency	Valid Percent
farm destruction	114	77.0
cattle killing/rustling	33	22.3
climate change	1	.7
Total	148	100.0

Source: Researcher's field survey, 2018

From table IV above, the result shows that 77.0% of total respondents from the study area believed that farm destruction was the cause of conflict between farmers and herders; 22.3% thought it was cattle killing/rustling while 0.7% believed it was climate change. (In Kwara State, 66.7% believed farm destruction is the cause of conflict between farmers and Herders, while 33.3% thought it was cattle killing/rustling; 72.1% believed farm destruction is the cause of conflict between farmers and Herdsmen, 25.6% thought it was cattle killing/rustling while 2.3% said it was climate change in Kogi State; and 89.5% believed farm destruction is the cause of conflict between farmers and Herders, while 10.5% thought it was cattle killing/rustling in Nassarawa State).

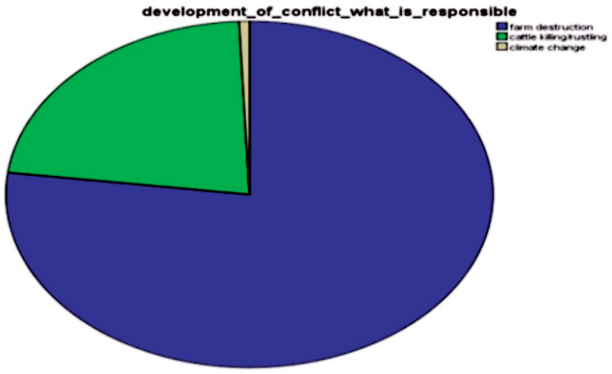

Figure 3: Causes of conflict between farmers and herdsmen

A farmer from Teshi village in Kwara State shared his experience on how a herder chased him and the policemen that followed him to investigate destruction on his farm. According to him;

> *On the 1st of June 2015, a herder grazed his father's cattle in my maize farm and allowed the cattle to destroy maize valued at four hundred thousand Naira (N400,000.00). When the matter was reported at the police station, one policeman was detailed to follow me to the herder's camp to invite him to Police station, so that investigation into the case could commence. On getting to the herder's camp and the herder sighted me and the policeman, he drew his sword and chased us away. Thus, his action prevented us from entering the camp and he threatened to kill us with sword if we dare come to his camp again.*

Contrary to the opinion of farmers, the herdsmen alleged that sometimes, the farmers go as far as poisoning the water so that when cattle go there to quench their thirst, the whole herds of cattle will die immediately after drinking the water. He believed that farmers should not take the law into their hands. A Fulani herdsman interviewed revealed that;

> *It's very painful when it happened that our cattle destroy another man's crops. You know that cattle are animals and not human being, the animal go wayward and become very difficult to control sometimes. If there is any case of destruction by cattle, the farmers should not take law into their hands. They should report the matter to the authority.*

A farmer from Nasarawa State said that:

> *the destruction used to be a mistake by the herds in the past. But nowadays, the destruction is deliberate. Sometimes they uproot the crops and cassava for their animals to graze.*

The destruction usually makes farmers angry and they will want to take revenge.

Table V: Perception of respondents on present relationship status between farmers and herdsmen

Responses		Frequency	Valid Percent
Valid	Peaceful	2	1.4
	Fair	35	23.6
	Aggressive	111	75.0
	Total	148	100.0

Source: Researcher's field survey, 2018

Table v reveals that in the three study locations 75.0% of respondents believed that the relationship between farmers and herders was aggressive, while 23.6% believed that the relationship was fair. Only 1.4% believed that the relationship was peaceful. (In Kwara State 68.8% of respondents believed that the relationship between farmers and herders was aggressive, while 31.2% believed that the relationship is fair; 76.7% of respondents believed that the relationship between both parties was aggressive while 23.3% believed it was fair in Kogi State; and 78.9% of respondents believed that the relationship between both parties is aggressive, 17.6% believed it is fair while 3.5% believed its peaceful in Nasarawa State.

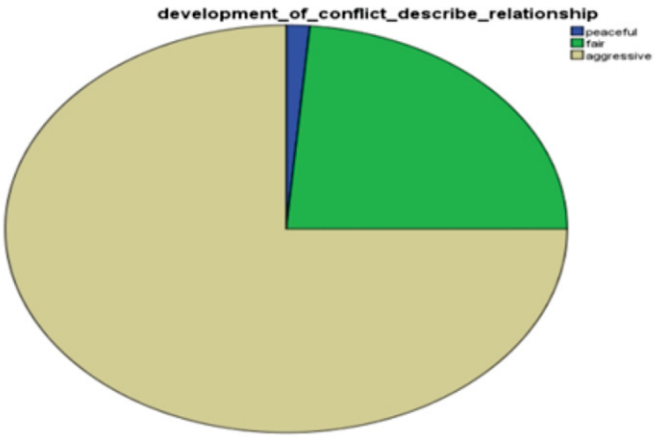

Figure 4: **present relationship status between farmers and herdsmen**

Table VI: Perception of respondents on food production output before recent violence

Perceptions indicators of respondents on food production output before recent violence	Frequency	Valid Percent
Low	9	6.0
High	74	49.7
very high	66	44.3
Total	149	100.0

Source: Researcher's field survey, 2018

Based on table VI above, the finding in the three states study area shows that 44.3% said output before the conflicts used to be very high, 49.7% said it used to be high, while 6.0% believed it was low. (In Kwara State 55.1% said output before the conflicts used to be high, 34.0% believed it was very high while 10.2% believed it was low. 51.2% said output before the conflicts was very high while 48.8% believed it was just high in Kogi State; and in Nasarawa State, 47.4% said output before the conflicts used to be very high, 45.6% believed it was high, while 7% believed it was low).

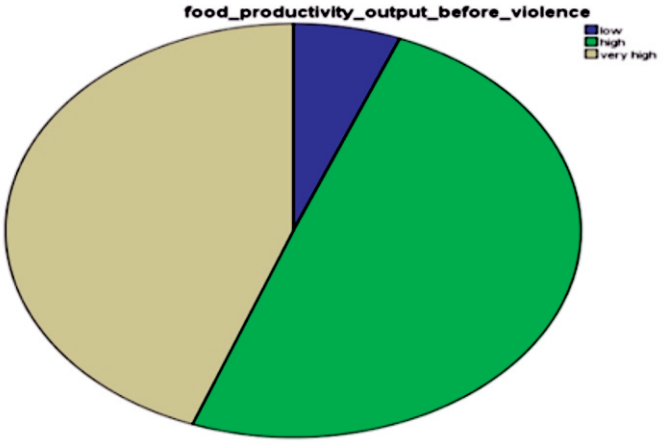

Figure 5: **Food production output before recent violence**

Table VII: Perception of respondents on food productivity now

Perceptions indicators of respondents on food production output now	Frequency	Valid Percent
low improvement	142	95.3
high improvement	5	3.4
very high improvement	2	1.3
Total	149	100.0

Source: Researcher's field survey, 2018

The above table VII shows that, majority of the respondents from the three state studied - up to 95.3% believed that, there has been low improvement in food productivity now as a result of farmers-herders conflicts. 3.4% said there has been high improvement while only 1.3% said there has been very high improvement. (In Kwara State, majority of the respondents, up to 98% believed that, there has been low improvement in food productivity now as a result of farmers-herders conflicts while 2% believed it was high improvement. 96.3% believed there has been low improvement in food productivity now while 3.7% said there was high improvement in Kogi State; 93% believed that there has been low improvement in food productivity now while 7% believed there has been high improvement in Nasarawa state).

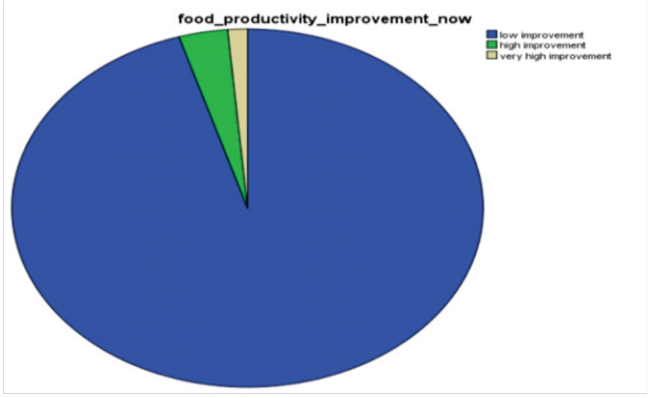

Figure 6: food productively now

Table VIII Perception of respondents on why there is low productivity now

Perceptions indicators of respondents on why there is low productivity	Frequency	Valid Percent
Pest	3	2.1
Conflict	132	91.7
climate change	9	6.2
Total	144	100.0

Source: Researcher's field survey, 2018

According to table VIII above, majority of the respondents-91.7% in the study area said conflict was responsible for the low improvement, 6.2% said it was climate change, while 2.1% said it was pest. (In Kwara State, 95.6% respondents said conflict was responsible for the low improvement, 2.2% said it was climate change while 2.2% said it was pest; 90% said conflict was responsible for the low improvement, 7% said it was climate change while 3.0% said it was pest in Kogi State; and 89.3% said conflict was responsible for the low improvement, 8.9% said it was climate change while 1.8% believed it was pest in Nassarawa State).

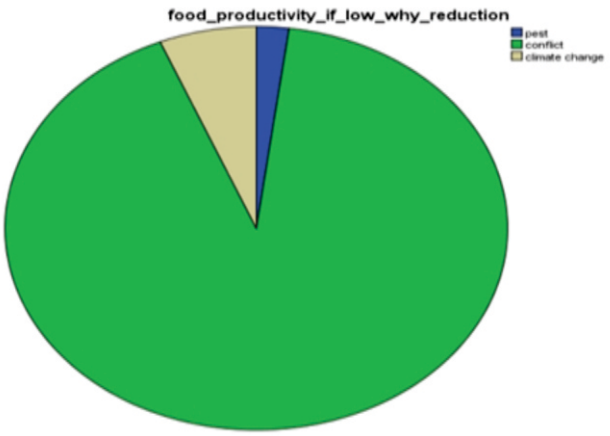

Figure 7: **Why there is low productivity now**

Table IX, X and XI shows agricultural productivity with maize, sorghum, rice, millet, melon, cowpea, soya bean, cassava, groundnut, coconut and yam being the major crops produced in the three States of the study area. The table indicates a sharp decline and rise in production output (yield) of farm crops compare with the increasing number of hectares of cultivated land in each year studied. This suggests that farmers-herdsmen conflict has greatly affected crop production which has led to reduction in farm output with fewer farmers going to their farm. This implication is that there will be disruptions to food value chains and supply. It could as well lead to massive reduction in Nigeria's export earnings from agricultural sector in years to come if the conflict is allowed to fester.

Table IX: AGRICULTURAL PRODUCTION SURVEY DATA IN KWARA STATE, 2007-2016 Figure Shows Agriculture Production Survey Results (Aps) Crop (Tons), (Ha) Cultivated And Yield ('000)

S/N	CROP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	MAIZE										
	TON	149.89	164.53	189.78	196.556	210.70	222.54	228.82	236.72	181.27	2I6.01
	HA	109.20	114.66	126.216	133.267	141.16	141.02	143.91	144.91	140.85	142.37
	YEILD/HA	1.37	1.43	1.50	1.47	1.49	1.58	1.59	1.63	1.55	1.57
2	SORGHUM										
	TON	102.97	112.70	131.052	137.960	146.00	148.14	243.26	205.16	176.10	183.73
	HA	67.30	80.50	84.933	87.317	96.26	96.67	62.93	64.38	62.08	76.26
	YEILD/HA	1.53	1.4	1.54	1.58	1.52	1.55	3.87	3.19	2.34	2.49
3	RICE										
	TON	234.21	345.69	440.431	480.804	384.44	310.31	348.55	377.77	369.39	358.09
	HA	97.18	135.04	142.812	147.125	128.75	109.97	117.88	122.89	120.46	120.00
	YEILD/HA	2.41	2.56	3.08	3.27	2.986	2.82	2.96	3.07	3.02	2.97
4	MILLET										
	TON	25.39	28.44	19.537	20.504	26.01	27.66	25.44	20.76	18.40	23.65
	HA	13.43	15.05	16.641	17.087	19.26	19.33	17.09	11.35	11.01	15.61
	YEILD/HA	1.89	1.89	1.17	1.20	1.35	1.43	1.49	1.83	1.46	1.51
5	COWPEA										
	TON	0.968	1.08	3.122	3.271	3.58	4.21	4.70	4.62	4.08	4.24
	HA	4.34	5.12	5.42	5.544	5.91	6.37	6.68	6.59	6.24	6.38
	YEILD/HA	0.22	0.21	0.57	0.59	0.60	0.65	0.91	0.70	0.69	0.69
6	**MELON**										
	TON	6.70	6.85	8.472	8.015	9.12	-	11.74	11.95	10.16	10.20
	HA	15.22	17.12	18.744	18.467	19.69	-	16.99	17.05	16.70	17.78
	YEILD/HA	0.44	0.4	0.45	0.43	0.46	-	0.69	0.70	0.57	0.57
7	**SOYA BEAN**										
	TON	28.70	28.13	30.428	32.546	34.38	35.10	35.78	36.86	34.93	35.41
	HA	18.28	19.40	20.671	21.272	21.09	20.46	21.31	21.30	21.09	21.05
	YEILD/HA	1.57	1.45	1.47	1.53	1.63	1.72	1.68	1.73	1.66	1.68
8	**YAM**										
	TON	810.70	948.58	1,006.06	1,054.52	1,189.51	1,258.6	1,348.9	1,443.4	1,259.0	1,299.97
	HA	69.53	76.13	5	4	90.49	2	2	7	6	92.03
	YEILD/HA	11.66	12.46	80.724	84.147	13.14	91.01	93.35	94.58	90.72	14.10
				12.46	12.53		13.14	14.45	15.26	13.84	

Source: Kwara State Agriculture Development Project, Ilorin KWADP, PME, APS 2016

Table X: AGRICULTURAL PRODUCTION SURVEY DATA IN KOGI STATE, 2007-2013

Figure shows crop area cultivated (HA(000) and production yield (000MD)

S/N	CROP	2007	2008	2009	2010	2011	2012	2013
1	**CASSAVA**							
	Area '000	243.96	252.84	269.07	285.96	336.86	206.014	291.707
	Production '000	3631.94	3741.85	4011.26	4,396.34	5,462.79	4,094.36	5,032.93
2	**YAM**							
	Area '000	100.06	104.56	109.37	114.62	139.15	70.283	116.923
	Production '000	1226.35	1286.96	1361.6	1,480.11	1,887.14	1,320.24	1,647.36
3	COCOYAM							
	Area '000	-	-	-	6.13	5.7	0.494	0.99
	Production '000	-	-	-	53.16	60.5	6.253	5.58
4	SWEET POTATO							
	Area '000	5.27	4.71	4.87	4.88	5.45	0.874	0.883
	Production '000	44.02	46.82	51.51	52.9	56.97	11.297	Na
5	**MAIZE**							
	Area '000	180.81	189.39	208.66	227.05	283.69	130.995	245.554
	Production '000	289.29	300.01	336.66	371.34	476.81	235.79	417,089.09
6	**SORGHUM**							
	Area '000	89.99	84.89	91.60	94.26	106.7	20.051	104.854
	Production '000	89.99	94.49	100.44	105.56	124.98	29,852.19	131.105.52
7	**RICE**							
	Area '000	50.97	53.34	56.17	59.71	65.2	38.572	66.421
	Production '000	119.27	125.18	130.81	136.57	153.92	164.66	166.670.03
8	**MILLET**							
	Area '000	17.15	18.95	19.73	20.11	22.52	NILL	NILL
	Production '000	14.5	14.94	15.43	16	16.94		
9	**GROUNDNUT**			30.16				
	Area '000	26.26	27.02	28.37	42.21	45.88	11.403	44,782
	Production '000	26.78	29.03		73.63	81.21	22.11	81,169.71

Source: Kogi Agricultural Development Project in Lokoja, 2018

Table XI: CROP PRODUCTION FIGURES DATA IN NASARAWA STATE, 2007-2016

Figure shows Crop Area Cultivated (HA(000) and Production('000MT) Yield (MT/HA)

S/N	CROP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	**MAIZE**										
	Production	128.67	140.92	157.65	174.61	367.54	388.72	432.63	434.00	440.40	497.20
	Area	70.08	69.23	76.36	81.20	249.02	251.61	176.22	184.20	187.51	215.11
	Yield	1.84	2.04	2.10	2.15	2.48	2.57	1.87	2.36	2.34	2.31
2	**RICE**										
	Production	98.41	91.03	137.66	288.67	256.75	168.94	170.84	168.20	174.19	198.24
	Area	44.70	41.19	77.35	105.22	113.02	82.92	84.10	85.60	89.90	108.16
	Yield	2.20	2.21	1.76	2.74	2.46	2.03	2.03	1.97	1.94	1.14
3	**SORGHUM**										
	Production	109.22	104.34	149.47	170.24	148.00	160.52	161.80	158.10	152.34	156.03
	Area	71.58	64.41	98.74	105.50	127.48	129.60	130.05	130.40	134.51	137.01
	Yield	1.53	1.62	1.51	1.61	1.16	1.23	1.24	1.21	1.13	1.14
4	**MILLET**										
	Production	30.59	28.53	37.24	25.51	16.08	16.52	14.76	14.78	15.10	15.91
	Area	22.71	21.61	25.04	18.50	16.60	14.73	15.37	16.42	16.40	16.87
	Yield	1.35	1.32	1.49	1.38	0.97	1.12	0.66	0.90	0.92	0.94
5	**COWPEA**										
	Production	51.74	47.70	53.57	59.55	72.75	65.24	66.67	65.90	65.19	70.49
	Area	83.36	82.24	94.34	116.24	87.34	1.70	93.23	90.67	91.60	95.30
	Yield	0.62	0.58	0.57	0.51	0.78	0.72	0.55	0.74	0.17	0.73
6	**GROUND NUT**										
	Production	83.25	80.93	97.46	86.51	220.37	226.15	239.23	240.10	249.60	263.70
	Area	67.72	67.45	62.79	60.25	184.34	196.51	146.50	150.20	156.29	160.97
	Yield	1.23	1.20	1.55	1.44	1.20	1.15	1.63	1.60	1.59	1.64
7	**YAM**										
	Production	1773.39	1612.15	2057.11	2568.99	4039.06	4203.66	4283.98	4370.60	4365.20	4370.19
	Area	96.85	79.77	95.41	118.46	203.96	205.40	219.70	225.00	223.70	224.44
	Yield	18.31	20.21	21.56	21.69	19.80	20.46	19.50	19.43	19.51	19.47

8	**CASSAVA**										
	Production	871.12	995.86	1034.59	1480.59	1957.70	2464.14	2514.60	2544.90	2540.90	2575.60
	Area	61.08	67.57	70.93	98.91	120.75	128.88	130.40	129.80	128.90	131.90
	Yield	14.30	14.74	14.59	14.97	16.21	19.57	19.28	19.61	19.71	19.53
9	**SOYABEANS**										
	Production	2.39	2.71	4.37	6.35	8.91	10.23	9.8 6	10.71	11.21	14.01
	Area	3.40	2.12	3.73	5.80	13.60	16.55	13.49	14.11	15.10	15.90
	Yield	0.70	1.28	1.17	1.10	0.66	0.16	0.73	0.76	0.74	0.88

Source: Nasarawa ADP Department Lafia, 2018

Table xii, xiii and xiv further shows the market price of food commodities in the three States of the study area. The table indicates a hike in food inflation as food prices skyrocketed beyond the reach of common man. It is safe to conclude here that a rising cost of food is largely caused by protracted conflict between farmers and herders. The implication here is that many household will continue to lose purchasing power to buy food commodities in the market, if the conflict is not contained to the barest level.

Table XII: KOGI STATE MARKET PRICES SUMMARY FROM 2012-2015

S/N	Agric. Commodities	Annual Average Prize			
		2012	2013	2014	2015
1	Cassava Tuber	8.11	23.12	39.00	15.00
2	Soya Beans	163.22	219.20	263.00	152.8
3	Yam Tuber	71.12	89.38	78.00	198.00
4	Sorghum	82.65	145.00	-	140.00
5	Maize	77.46	104.62	-	135.00
6	Millet	88.03	150.00	-	150.00
7	Groundnut	202.38	300.00	-	280.00
8	Cowpea	320.83	300.00	-	310

Source: Kogi State ADP, Lokoja 2018

Table XIII: NASARAWA STATE MARKET PRICES SUMMARY FROM 2011-2017

S/N	Agric. Commodities	Annual Average Prize					
		2011	2012	2013	2014	2016	2017
1	Cassava Tuber	71.75	13.69	38.60	393.94	70.14	124.98
2	Sweet Potato	44.79	66.70	56.57	-	-	-
3	Yam Tuber	76.22	51.89	127.96	154.71	260.56	225.66
4	Sorghum	153.30	52.61	102.94	-	-	-
5	Maize	65.64	61.69	101.25	-	-	-
6	Millet	77.13	75.23	103.88	-		
7	Soya Bean	-	-	-	160.33	152.21	139.77
8	Rice	120.40	129.93	162.52	169.62	232.12	-

Source: Nasarawa State ADP, Lafia, 2018

S/N	Agric. Commodities	Annual Average Prize			
		2012	2013	2014	2015
1	Cassava Tuber	8.11	23.12	39.00	15.00
2	Soya Beans	163.22	219.20	263.00	152.8
3	Yam Tuber	71.12	89.38	78.00	198.00
4	Sorghum	82.65	145.00	-	140.00
5	Maize	77.46	104.62	-	135.00
6	Millet	88.03	150.00	-	150.00
7	Groundnut	202.38	300.00	-	280.00
8	Cowpea	320.83	300.00	-	310

Table XIV: KWARA STATE MARKET PRIZE SUMMARY FROM 2008 to 2015

S/N	Agric. Commodities	Annual Average Prize							
		2008	2009	2010	2011	2012	2013	2014	2015
1	Soya Beans	-	103.60	101.06	130.46	138.25	153.19	137.81	177.76
2	Maize	69.02	71.68	67.20	65.26	69.04	79.64	72.64	66.80
3	Rice {Local}	-	139.83	113.67	112.10	151.33	195.12	153.41	142.15
4	Sorghum	79.78	71.82	92.95	78.38	85.16	87.06	78.93	72.79
5	Millet	-	83.97	91.38	80.86	80.22	101.44	109.38	118.05
6	Cowpea	157.67	148.81	153.61	154.19	232.70	229.46	224.21	228.28
7	Yam Tuber	50.06	53.08	64.48	70.54	76.05	72.20	82.64	127.16
	Cassava Tuber	8.67	11.45	24.88	9.97	11.24	11.70	14.13	15.71

Source: Kwara State ADP, Ilorin 2018

Discussion

The result from the field survey shows that, historically, there is peaceful co-existence among farmers and herdsmen. If at all there was disagreement between them, the matter was settled right there on the farm. However, as time goes by in the study areas, farmers started witnessing the upsurge of 'armed' herdsmen from the North (some of whom were believed to be citizens of neighbouring countries) and a rise in conflict.

This further affirms the findings of existing scholars in the field. The study by Shettima, (2008) has shown that pastoralists move across and graze on farmlands that belong to crop farmers. More so, pastoralists require that calories produced by crop farmers, much as the crop farmers also require the protein and dairy products produced by the pastoralists. Similar findings by Bagu and Katie, (2017) revealed that, farmers and herders have lived in relative harmony, benefiting from symbiotic partnerships to keep cropland fertile and cattle well-nourished.

On the issue of the development of conflict leading to recent violence among farmers and herders in the study area, it was found that, the factor responsible for the peaceful coexistence previously according to the respondents was trade. Other respondents identified additional factors such as subsistence farming, mutual gain and respect. This corroborated with the findings of Hussein, (1998) that from Northern areas of the Sahel, very deep exchange relations persisted between the two groups. The deserted herders depended on savanna farmers for calories, exchanging salt for grain, and for the provision of essential needs such as tent poles, cloth and cooking utensils'. However, the respondents identified that recently, crop destruction by cattle belonging to herdsmen was the principal cause of conflict. Farmers alleged that the destruction of their crops was caused by constant cattle grazing on the crops leaving little or nothing to harvest was

provoking. In the contrary, the herdsmen claimed that the farmers out of annoyance, attack their cattle without investigating the person that destroyed their farms. This brings strife and conflict between farmers and herdsmen.

In assessing the rate of food productivity before recent violence and now, it was found that food production output according to the respondents was very high before the recent violence. The reason asserted was because farmers were at their best with little or no disturbance from the cattle of the herdsmen. But now, due to constant invasion of cattle on farmlands, there is no significant improvement in food production output as a result of persisting conflict between farmers and herdsmen. Farmers attributed conflict as the main factor responsible for low food production in the study area. Food production was expected to rise with the introduction of mechanized farming, fertilizers, farm seedlings introduced to farmers by Local, State and Federal government. This argument is further supported by the data obtained from Agricultural Development Programme on crop production yields from the three States of the study area (see table ix, x and xi).

Also, on table xii, xiii and xiv, the market prices of some crops produced by farmers in the last few years have greatly increased. Although, there are other factors identified by respondents affecting crop production output like pest and climate among others, however, the impacts of these factors were not greatly felt compared to conflict resulting from crop destruction by cattle. The implications of this is that, there will be low food for consumption in years to come if the issue leading to crop destruction by cattle is not curbed now. Apart from that, it is unfortunate that the masses may not have the purchasing power to buy food commodities in the market even if the food items are available. This is because, some have already abandoned farming, as they could no longer cope with the challenges of farm destruction. Many have been displaced from their homes. People who are supposed to be in the farm are now living in various Internally Displaced Persons (IDPs) camps where they are undernourished, victimized and abused, with extensive human rights violation against them.

Furthermore, there are allegations of rape and robbery attack by herdsmen, making rural women to be afraid of going to farm to get goods and food items to sell in the market. Some farmers recounted their ordeal in the hands of miscreant herdsmen who have used the occasion to rape women and dispossessed them of their belongings.

Conclusion

Though the symbiotic relationship between farmers and herders dated back to several generations, recent violence in studied area have resulted in decreased in crop production, because of the frequent and incessant destruction of agricultural crops by cattle belonging to herdsmen. This study established that the unending conflict between farmers and herdsmen had largely affected crop production output in the three States surveyed. As it was revealed from ADP crop production yields, crop produced by farmers in the three States is not progressing in terms of yield. The market price of food produced has geometrically increased due to low turnout of crops produced. On the other hand, the herdsmen have lost huge number of their cattle to rustlers and deliberate killing by farmers or host communities. This paper therefore concludes that, the displacements of farmers from their farms and herdsmen attacks on farm produce are responsible for low production output in Kogi, Kwara and Nasarawa States. The continuous destruction of crops if not curbed on time could result to hunger and poverty, a condition of food insecurity.

Recommendations

To ensure that farmers return to their farms and to enjoy peaceful atmosphere that can enhance crop production on their farms, the study recommends that reconciliation and dialogue between farmers and herdsmen in conflict should be encouraged. This will bring peaceful relationship and strengthen the socio-economic ties between them.

Also, since it has been established that the relationship between farmers and herders are symbiotic with mutual benefits, there is a need for peaceful coexistence to thrive between them. Thus, it is suggested that government should organize regular sensitization programmes between the herdsmen and crop farmers, on the importance of peace and brotherliness towards peaceful coexistence. If interaction improves, conflict will reduce to the barest minimum level.

Furthermore, border security should be strengthened to prevent armed bandits from neighbouring countries from entering into the country, through the porous borders, to perpetrate criminal activities by disguising as herdsmen. Nigerian government should equip border officers to regulate movement in and out of the borders and also put monitoring authority in place to screen out armed bandits from entering the country.

Moreover, government at all levels should ensure that proper grazing reserve are provided by local, state and federal government, to prevent farmers-herdsmen clashes. Administrative authorities can be put in place to ensure that herders register as they enter new locations and they are allocated areas from the grazing reserve promptly, this will go a long way to prevent cattle grazing on farmers crops.

Above all, functional law with penalty should be put in place, to prevent herders from grazing on cultivated farms. Also, farmers should be prevented from killing cattle unlawfully, rather, herders should be penalized to pay for such damages. These recommendations require political will to ensure implementation. National Assembly or relevant stakeholders can propose Bill towards legislation.

References

Abass, I. (2012), No Retreat No Surrender: Conflict for Survival between the Fulani Pastoralist and Farmers in Northern Nigeria. *European Scientific Journal*. 8(1): 331-346

Abuga, S.O. and Onuba, C. O. (2015), Climate Change and Pastoral Conflicts in the Middle Belt and South-East Nigeria: Implication and Human Resource of the Region. *Global Journal of Human Resource Management*. 3(5): 44-51

Amaza, M. (2016) Nigeria's next security challenge is at a

tipping point and could be as deadly as boko haram. *Nomadic conflict April 30, 2016* (https://qz.com/670768/nigerias-next-security-challenge-is-at-a-tipping-point-and-could-be-as-deadly-as-boko-haram/).

Aminu, M. (2012) Nigeria: Lone Wonderers- the intriguing life of nomadic herdsmen. All Africa.com, 15 September, 2012. Accessed from https://all africa.com/stories

Awogbade, M.O. (1983). Fulani pastoralism: Jos case study *Ahmadu Bello University Press, Zaria.*

Azar, E. (1990), The Management of Protracted Social Conflict: Theory and Cases Worcester: Dartmouth.

Baba, I. and Abeysinghe, C. (2017) Farmers-herdsmen conflict in the north central region of Nigeria. (an analysis of cause and effect). *International Journal of Social Science and Humanities* 5(3): 53-63.

Bagu, C. and Smith, K. (2017). *Past is prologue: criminality and reprisal attacks in Nigeria's middle belt.* 1st ed. Washington DC: *Search for Common Ground*. Retrieved online on June 3, 2019 from https://www.dmeforpeace.org/wp-content/uploads/2017/10/Criminality-Reprisal-Attack_FINAL.pdf

Blench, R. (2004), Natural resource conflicts in north-central Nigeria: A handbook and case studies. Mandaras publishing, London.

Burton, J. (1990), Conflict: Human Needs Theory, Macmillan, London.

Elliot, F. (1997) Pastoralism: governance and development issues. *Annual Review of Anthropology* 26:235-261

Faleti, S. (2006) *Social Conflict Theories* in Best S.G. (2006): Introduction to Peace and Conflict Studies in West Africa: Spectrum; Ibadan.

Gueye, M. B. (1994). *Conflict and alliances between farmers and herders: the case of Goll of Fandene Senegal.* Sustainable Agriculture and Natural Resource Management Knowledge base. Retrieved online on June 3, 2019 from https://vtechworks.lib.vt.edu/handle/10919/66603

Hussein, K. (1998). *Conflict between farmers and herders in the semi-arid Sahel and East Africa*: *a review* London: IIED/OD Group. Retrieved online on June 3, 2019 from https://pubs.iied.org/7386IIED/

Idowu, S.A. (2014), Government Intervention in Farmers-Herdsmen Conflict in Oke-Ogun, Oyo State, Nigeria, Centre for Peace and Strategic Studies, University of Ilorin. Unpublished Dissertation.

Institute for Peace and Conflict Resolution IPCR (2012), Consolidated and Zonal Reports, John Archers Publishers Ltd.

IPCR, (2016).Institute for Peace and Conflict Resolution IPCR (2016), Consolidated Zonal report: North Central Zone. Retrieved on June 3, 2019 from https://www.undp.org/content/dam/nigeria/docs/gov/Strategic%20Conflict%20Assessment%20of%20Nigeria%202016.pdf

Kogi State Agricultural Development Programme (ADP), Statistics Data on Crop Production Yield (2007-2013), Lokoja, 2018.

Kogi State Agricultural Development Programme (ADP), Average Market Prices for Year 2012-2015, Lokoja

Kwara State Agricultural Development Programme (ADP), Statistics Data on Crop Production Yield (2007-2016), Ilorin, 2018.

Monod, T. (1975). *Pastoralism in tropical Africa.* London: International Africa Institute/Oxford University Press

Nasarawa State Agricultural Development Programme (ADP), Statistics Data on Crop Production Yield (2007-2016), Lafia, 2018.

Nasarawa State Agricultural Development Programme (ADP), Average Market Prices for Year 2011-2017, Lafia.

Ogundipe, S. and Oluwole, J. (2016). *Nigeria loses $14 billion annually to herdsmen-farmers clashes*. Retrieved from Premium Times News, Friday 12 August, 2016.

Omitola, B. (2014), Between Boko Haram and Fulani Herdsmen: Organize Crime and Insecurity in Nigeria. A paper Presented at the 5th Institute of Security Studies, South Africa.

Oyama, S. (2014).*Farmer-herder conflict, land rehabilitation and conflict prevention in the Sahel Region of West Africa*. African Study Monographs, Suppl. 50

Shettima, A. G. and Usman, A.T. (2008). *Farmer pastoralist conflict in West Africa: exploring the causes and consequences*. Information Society and Justice, Volume 1.2

SBM Intelligence (2015).*Terror in the food basket: a look into the north central Nigeria.*

Webb, Jr., J. L. A., (1995). *Desert frontier: ecological and economic change along the western Sahel*, 1600-1850 Wisconsin; The University of Winsconsin.