

**EFFECT OF FARMERS AND HERDSMEN CONFLICTS ON LIVELIHOOD
ACTIVITIES OF ARABLE CROPPERS IN BENUE STATE, NIGERIA**

BY

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CERTIFICATION

This is to certify that the research work on Effect of Farmers and Herdsmen Conflict on Livelihood Activities of Arable Crop Farmers in Benue state, Nigeria, an M.Sc. project work was carried out by **Emmanuel Ose EHEBHA** of the Department of Agricultural Economics and Extension Services, Faculty of Agriculture, University of Benin, Benin City and has not been presented in any previous application for an M.Sc. Degree. All sources of information are shown in the text and listed in reference and assistance offered by others has been duly acknowledged.

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DEDICATION

This Thesis is dedicated to God Almighty for His unending Grace, divine protection, provision and divine wisdom throughout the duration of this programme. And to my late Father, my mum and sibling, God bless you all.

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GOD BLESS

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ABSTRACT

Violent confrontations between farmers and herders have become a defining feature confronting peace and stability in many parts of Nigeria. This study assessed the effect of farmers and herdsman conflicts on the livelihood activities of arable crop farmers in Benue State. Specifically, it describes the socioeconomic characteristics of the respondents in the study area, identified the livelihood activities involvement of respondents, identified the causes of farmers-herdsman conflicts, examined the key effect of the conflict on the respondents, ascertained perceived vulnerability factors to the conflict, and identified the coping strategies used by the respondents.

The study was carried out in Benue State, Nigeria the selected sampled Local Government Areas are Oju, Guma, and Vandiekya with a sample size of 231 at a response rate of 99.3% (229). A structured questionnaire administered through an interview schedule was used to collect data for this study. Data collected were analysed with descriptive statistics like frequency, percentages, mean, standard deviation. T-statistics in Binary Logistic Regression and F-statistics in Analysis of Variance and posthoc range test were used to make inferences.

Results show a preponderance of male 62% over female 38% with mean age 38 years, the respondents had a mean farm size of 4 hectares, a mean household size of 4 persons and 19 years as mean farming experience. The study also showed that the farmers had a high level of livelihood involvement in major arable crop production with yam having the highest with $\bar{x} = 3.68$. The destruction of crops during the conflict was identified as the major cause of conflict with $\bar{x} = 4.77$ while crop was destroyed during the conflict was identified as one of the major key effects of the conflict with $\bar{x} = 4.72$.

The ineffectiveness of security structure ($\bar{x} = 4.24$) was identified as the major vulnerability factors to the conflicts. The study also revealed that children were withdrawn from school

(\bar{x} =4.26) and children are now involved in child labour (\bar{x} =4.09) were the major ways respondents coped with the conflict. Variables on determinant of conflict among farmers and herdsman conflict such as sex (Wald = 18.06), age (Wald = -10.36), education (Wald = 8.12), religion (Wald = 27.14), type of farming (Wald = 17.06), farm size (Wald = 14.67) were significant at 0.01 level while primary occupation (wald=3.09) was significant at 0.05 level. Results further showed that a significant difference existed in the effect of conflict in the three local government Area as Oju experienced more than the other two Local Government Areas with the F-test values of 28.58 df (2) 226 at 0.01 significant level Also, farmers in Guma were more vulnerable to farmers-herdsman conflicts than those in the other local government Area with the F-test value of 4.176 df (2) 226 at the 0.05 significant level. It was concluded that the conflict had a negative effect on the livelihood activities as the production income of the farmers in the affected Local Government Areas were greatly decreased by over 50%.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the study

Conflict is one of the major challenges the world faces in recent times with respect to peace and stability, it exists in various dimensions and intensities across the world's complex continents. (Cox, Sisk and Orsborn, 2015). Africa is a continent with a history filled with tales of wars and conflict highly susceptible within and between the states. This has led to the belief that conflicts and chaos is at home in Africa (Olaosebikan, 2010), but is important to note that Africa does not have a monopoly on war, as other parts of the world are also fraught with significant aggression and civil conflagration. (Olaosebikan, 2010). According to Anyim and Odomelam (2017), conflict can be defined as a social situation involving more than one individual or group that appears to share a difference in their interest, or the other individual or group's social position.

Nigeria, the acclaimed giant of Africa is plagued by a plethora of socio-economic, political, and security disputes and has become a pervasive phenomenon in all human endeavours (Ali, 2013). According to Eminue (2004), two specific types of conflicts have been established that have arisen in various degrees in Nigeria, these conflicts include internal conflicts in which the Government authorities of a State resist group within that State attempting to violently overthrow such authorities, Such as the terrorist attack on Nigerian citizens by Boko Haram Islamists. The second type is inter-group conflict. These conflicts include, among others, herdsmen and farmer conflict, banditry and kidnapping.

According to Cox *et al*, (2015), these conflicts far portray a social, economic and political dimension and has been more prominent in recent years. These types of violence have impacted individuals and States throughout the country (Folarin 2015). Nonetheless, the majority of those

conflicts which have recently been encountered are inter-group conflicts that are embedded in the use and possession of mostly natural resources (Marietu and Olarewaju, 2009), primarily between agricultural groups and another (Momale, 2003).

Land and water resources, in particular, are some of the key natural resources that farmers and producers need to grow effectively and efficiently. However, their ownership and use, especially with the ever-expanding urbanization, deforestation, climate change, and ever-increasing demand for food and raw materials from the overcrowded population, industries, and exports for economic gain, has exerted more pressure on the available livelihoods, resulting in the fierce competition for this resource (Nyong and Fiki, 2005).

These farmers and herdsmen conflict are threatening people's livelihood activities, especially farming communities, because of their high dependency on natural resources for survival. Conflicts among herdsmen and farmers not only directly affect the lives and livelihoods of the persons or groups involved, but also threaten and alter the sustainability of agricultural and pastoral production in Nigeria (Moritz, 2010). In this sense, livelihoods include all forms of economic development and jobs that foster health and wellbeing, such as cultivation, small business, art, manufacturing, etc. (USAID, 2005). Historical friction between farmers and herdsmen has been described as the central manifestation of these conflicts since the casualties arising from this conflict are far-reaching and affect both farmers and herdsmen (Gbaka, 2014). The conflicts are of a different dimension and vary from one State to another depending on the type and nature of the groups involved, this conflict has affected the various regions of the country with the North-Central part of Nigeria being the most affected (Gbaka, 2014, McGregor 2014).

This conflict between farmers and herdsmen has reached an unprecedented point that has culminated in the killing of thousands of people and loss of property worth millions in dollars (International Crisis Group, 2017). More than 1,229 people were killed in 2014 (Global Terrorism Index 2015), more than 2,000 were killed in 2016 and hundreds of thousands homeless in Benue and Kaduna States (International Crisis Group, 2017). 1705 death cases arising from the violence were registered in 18 States in Nigeria in 2018 (Amnesty International 2018). Not only has this conflict demonstrated high potential to cause food crises and poverty by limiting people's access to their off-farm, on-farm and non-farm livelihood activities, but also creating a possible distortion of rural farmers livelihood activities (Adisa, 2012). This massive herdsman assault on the vulnerable population has enormous political, monetary, economic, cultural, and psychological consequences for the people's livelihood activities. Such reoccurring disputes indicate to the rural farmers the twisted insecurity and potential coping challenge.

1.2 Statement of Problem

A violent conflict which are most times irreversible has consequences for both individual, community, State and country, these confrontations between farmers and herders are common and widespread. Koyenikan and Vincent-Osaghae (2018). Weather instability, environmental degradation, and socio-political upheaval have moved pastoralist migration patterns from other African countries to Nigeria and as such increased tensions among farmers and herders (Freeman, 2017). Such developments have resulted in increased confrontations between farmers and herders, resulting in violent conflicts, casualties, forced displacement and migration, deterioration of inter-communal ties, and loss of agricultural and livestock production.

Increased competition for land and water supplies only exacerbates day-to-day tensions as they arise. The effects in Nigeria have been serious as it has impeded the growth of the country and the economic growth of rural people by damaging productive assets, preventing trade, dissuading investment and eroding trust between market actors (Mercy Corps, 2016). According to Mercy Corps, (2016), the average household impacted by the conflicts between farmers and herdsmen will expect an income increase of at least 64 per cent, and a potential increase in people's livelihood practices if these conflicts were decreased to near zero per cent.

Benue State in the North-Central region of Nigeria has had its share of this conflict, where World Watch Research (2017) reported that seventeen out of the twenty-three Local Government Area (LGAs) in Benue State have experienced farmers and herdsmen conflict (2014-2017) with about 195,576 homes destroyed over 4194 persons killed, 2957 injured and over 23,000 currently living in various internally displaced person (IDP) camps across the State and its neighbouring States, and worthy to note that this is rapidly spreading to other Local Government which if not curtail will lead to a nationwide emergency.

In May 2015, over 100 farmers and family members were massacred in villages and refugee's camps located at Ukura, Per, Gafa and Tse-Gusa in Logo Local Government Area of the State (Mayah,2016). In July 2015, Adeke a community on the outskirts of Makurdi was attacked (Mayah, 2016). In December 2015, six persons were killed at Idele village in Oju Local Government Area. A reprisal attack by youths in the community saw three Fulani herdsmen killed and beheaded. The Oju killings were followed by an attack at Ucha-Nyiev village, near the Federal University of Agriculture, Makurdi, (Mayah, 2016), hence, this conflict has no doubt, weakened the natural cohesion and integration that once existed between these two agricultural communities in the rural Areas and also affect their livelihood, (international crises group, 2007).

The consequences of the farmers'-herdsmen's conflict in Benue State, especially for rural farmers and the communities in general, particularly the incessant daily killings, land grabbing and destruction, have left rural people helpless, vulnerable and their livelihoods in serious doubt. These disputes have become omnipresent and seemed to have defied possible solutions by unfounded arguments regarding access to farmland and cattle roads (Abbas,2009).

This study is intended to determine the effects of conflict between farmers and herdsmen on the arable crop farmers ' livelihood activities. This work would address relevant questions about socio-economic characteristics, livelihood patterns, triggers, consequences, vulnerability problems, and how best they have been able to cope with the conflict. Against this background, this study sought to answer the following specific research questions:

- i. what are the socio-economic characteristics of the rural farmers in the study Area?
- ii. what are the livelihood activities involvement of the respondents in the study Area?
- iii. what are the key causes of conflicts between farmers and herdsmen in the study?
- iv. what is the effect of the conflict on the rural farmers?
- v. what are the vulnerability factors in the study Area?
- vi. what are the coping strategies used by the respondents in the study Area?

1.3 Objectives of the Study

The broad objective of this study was to assess the effect of farmers-herdsmen conflict on livelihood activities of arable crop farmers in Benue State, Nigeria.

The specific objectives of this study were to:

1. describe the socioeconomic characteristics of the respondents in the study Area,
2. examine the livelihood activities involvement of the respondents in the study Area,
3. identify the key causes of farmers-herdsmen conflicts in the study Area,
4. identify the perceived effect of the conflict on the rural farmers,
5. ascertain the vulnerability factors to the conflict in the study Area,
6. Ascertain the coping strategies used by the respondents in the study Area.

1.4 Hypotheses

The following null hypotheses were tested.

1. H0₁: There is no significant relationship between the selected socio-economic characteristics of respondents and the effects of conflicts in the study Area.
2. H0₂: There is no significant difference in the effects of conflicts across the three Local Government s under the study
3. H0₃: There is no significant difference in the vulnerability factors of respondents in the three Local Government Areas

1.5 Justification

Violent confrontations between farmers and herders have become a defining feature of inter-group interactions between groups in the Middle Belt region of Nigeria. Environmental degradation, societal exploitation of ethnoreligious bias, and technological advances have altered ties that have traditionally been interdependent and mutually beneficial. Conflicts between farmers and herdsmen occur on a large scale within Nigeria cutting across different States in the country. Nevertheless, States within the Nigerian Middle Belt, in particular the Benue State, have experienced an upsurge in the number of casualties as a result of these broken relations. These strained alliances and waves of attacks have killed thousands of people in Nigeria and especially

in the Middle Belt and displaced more than 62,000 civilians and also lead to cycles of revenge attacks. Instability and migration have impeded business creation and economic growth in a region which is called Nigeria's "food basket" (Mercy Corps, 2016). Nonetheless, According to Mercy Corps (2016), if disputes between farmers and herders were reduced to near zero percent, the typical household impacted by the conflict would witness an improvement in income of at least 64 percent and a possible increase in people's livelihood activities.

This research would aim to bridge that gap by ascertaining how the rural farmers ' livelihood activities were affected as a result of this conflict with a critical look at the various livelihood activities that were affected. This study will also examine the vulnerability factors to the recurrence of the conflict and the extent to which arable farmers have been able to cope with the conflict with high levels of impact on their livelihoods and vulnerability.

This thesis will bring more insight to the existing literature on this subject and will also act as reference material for further analysis for other students and researchers. Recommendations from this report will be useful to policymakers and international bodies of Government and non-Governmental organizations with jurisdiction for maintaining peaceful coexistence between groups and individuals.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Conflict

Conflict is part of the social fabric which is arguably intrinsic and inevitable. Therefore, social settings are only complete and meaningful when conflicts exist, (Fisher 2000; Antwi, 2018). Conflict refers to dissension and differences in opinion, fights and grapples among individuals, groups or States (Antwi, 2018). Africa as a continent has been ravaged by a plethora of complex conflicts, which have been a key contributor to the continent's underdevelopment. Conflicts in the Great Lakes, Angola's war, the conflict in South Sudan, and many others. The fight against colonialism, coups d'états, ethnic conflicts, natural resource disputes, civil wars, and a slew of other conflicts fall under this category. (Antwi, 2018).

Due to the constant dynamics of conflicts, researchers/scholars have different meanings of the term conflict, according to Hocker and Wilmot (1985), cited in Antwi, 2018 defined conflict as the interaction of independent people who perceive incompatible goals and interference from each other in achieving goals. Ron and Fisher (1990) also viewed conflict just like Wilmot by defining it as an incompatibility of goals or values between two or more parties in a relationship combined with attempts to control each other (Fisher 2000). The incompatibility or difference may exist or maybe a delusion with opposing interest being the backdrop. Moreover, the goals might be the same but the approach to achieve the goals might differ which encourages parties to strive and impose their methods of controlling affairs on others (Okoli, 2018).

Therefore, conflict cannot happen in a vacuum. It is worth noting that conflict in itself is not violent, but if not managed well and resolved, it tends to assume a violent nature. (Fetherston,2000)

However, scholars have argued that conflict has different sources and in examining the causes of conflict, Daniel Katz (1965) cited in Fisher (2000) identified three sources: economic conflict, value conflict, and power conflict. According to him, economic conflict erupts or happens because of competition over limited or scarce resources. Groups or individuals get involved in such a conflict with the fundamental objective to gain control over the limited resources through fair or foul means. In the words of Ron Fisher (2000), the behaviour and emotions of each party are directed towards maximizing its gains. Land, minerals, water, forest, pastures, and oil are among the scarce resources which can cause economic conflict. Scarcity may cause economic conflict, due to increased population, unequal distribution of resources, inadequate supply of resources and many more (Percival and Homer-Dixon 1998).

Moreover, value conflict is concerned with the various preferences, principles and ideologies that people have. Conflicts driven by this factor are demonstrated in wars wherein separate parties have sets of beliefs that they assert vehemently. The Cold War which was indirectly fought between the US and Soviet Union was due to their economic and political differences. Muslim, Christian conflict in Nigeria, ethnic conflict, and religious conflicts are all examples of value conflicts.

Lastly, power conflict occurs when the parties involved intend to maximize what influence or power they wield in the social setting. Such a situation can happen among individuals, groups or even nations. Power also permeates through most if not all conflicts since parties in conflict always fight to gain control over the other. In power conflict, the actor's struggle ends in victory, defeat or a 'stand-off' whereby the tension between the parties lingers on (Fisher 2000). From the above explanations, it can be argued that conflicts are triggered by a combination of sources and it is rare to have a conflict with a single source. For instance, farmer-herder conflict arguably

has both economic and power conflict sources. The reason is that farmer-herder conflict involves the fight over arable land for farming or grazing and each party wants to have the power to control and determine the use of scarce lands.

Natural resource conflict occurs when there is a dispute over access to, control over and the use of natural resources. Freshwater, forest, lands, minerals, and pastures are some of the natural resources which individuals and groups battle over. According to Schweithelm *et al.* (2006), natural resource conflict is when “allocation, management or use of natural resources results in violence, human rights abuses or denial of access to nature to the extent that significantly diminishes human welfare.” Therefore, when individuals whose livelihood depends on natural resources face challenges over access and loses control, they intend to fight back which results in violent conflict.

According to Moritz (2010), explanations of herdsman-farmers conflicts have generally been structural, invoking factors shared by all members of both communities. Moritz (2010) further enumerates several structural factors identified by researchers that contribute to the increasing incidence of conflicts between herders and farmers, namely, resource scarcity, decreasing interdependence of pastoral and agricultural economies, institutional failure to resolve conflicts, the larger political context and historical context or cultural differences between herders and farmers.

The USAID (2005) reiterates that even where there are other primary causes of an escalation of tensions, livelihood failure can contribute to the emergence of conflict by weakening the social fabric, making people resort to desperate means to obtain resources, and deepening vulnerability to exploitation by those with an interest in promoting conflict for political or economic gain. Also, as the effects of conflict are increasingly felt at the community and individual levels, the

original ideological causes of a conflict will frequently be supplanted by others linked to protection or restoration of livelihoods (USAID, 2005). In another hand, shocks associated with conflicts invariably impact the livelihood of the disputants and communities at large.

2.2 Livelihood, conflict and resources

Livelihoods are fundamentally about what people do to meet their needs over time, such as agriculture, small businesses, and manufacturing (United States Agency for International Development (USAID), 2005). According to the study It includes how households obtain and sustain access to the resources required for immediate and long-term survival. People's livelihood resources are threatened by conflict in many forms, especially farming communities, due to their high reliance on natural resources for production and survival. Conflicts between herders and farmers not only affect the lives and livelihoods of those involved, but they also disturb and threaten the sustainability of agricultural and pastoral development in West Africa especially Nigeria (Moritz, 2010). These essential resources can be categorized into physical, natural, human, financial, social and political. Households used these resources to withstand shocks and manage the risk that threatens their well-being. Furthermore, the conflict can severely undermine and constrain development efforts by destroying infrastructure, interrupting the production system and diverting resources from productive uses (Adetula, 2007). livelihood failure can contribute to the emergence of conflict by weakening the social fabric, making people resort to desperate means to obtain resources. Agriculture is still by far the largest single source of livelihood and income to major families especially rural farmers contributing about 26.95 per cent of the total gross domestic product (GDP) of Nigeria economy (Statista, 2021), these conflicts arise mostly due to environmental scarcity of arable land and water resulting in livelihood conflicts (Ohlsson, 1999). More often, arable farmers are highly vulnerable, perhaps

due to the subsistence, small scale, rudimentary system production and over-dependence on natural resources for livelihood. Besides, they have limited resources and are dependent on rainfall, traditional farming implements (hoes and cutlasses), family and hired labour with poor access to institutional and infrastructural facilities (input, advisory services and market information, roads, etc.) (Attah, 2012), which have implications for yield per hectare mostly among arable crop farmers.

2.3 Arable Crop Production in Nigeria

Arable farming is the growing of crops in fields that have usually been ploughed before planting and it is usually annual crops of cereals (wheat, maize, barley, rice, and oats), vegetables, and tubers (cassava, potatoes), they are generally grown on mixed-cropping farms. Although there are over 7000 species that can be used for food, the world today relies on just a few crops for its energy requirements. A greater per cent of today's food comes from 12 arable crops and five animal species, with just three arable crops (rice, maize and wheat) accounting for about 60 per cent of the calories and proteins obtained from plants worldwide, arable crops enjoy remarkable dominance, playing significant roles in the socio-economic lives of both rural and urban peoples.

In Nigeria, the production of arable crops is essentially a prominent feature of agricultural activities. Indeed, almost all farmers in Nigeria cultivate one or more arable crops for food and income. According to Fayinka (2004), Nigerian agricultural production is dominated by rural-based small scale arable crop producers, who account for about 80% of the total food requirement. In a study on the production of some major arable crops in Nigeria, Okuneye, (2001) revealed that the average farm size in arable crop production was 4.58 ha. Central Bank of Nigeria, CBN, (2005) reported that 36.25 and 82.41 million hectares of arable crops were

cultivated in 2004 and 2005 respectively. The CBN report further Stated that production of arable crops increased from 88.3million tonnes in 2001 to 111.8 million tonnes in 2005. By far the most widely grown arable crop in Nigeria is maize, accounting for 6.6 and 7.5 million hectares in 2004 and 2005 respectively. Maize is grown almost in every part of the country. According to Okomah and Eruotor (2012) the major arable crops can be divided into four. They are as follows:

A. Root and tubers crops

- **Cassava** (*manihot esculenta*)
- **Yam** (*dioscorea spp*)
- **Coco yam** (*colocasia esculents Areaceae*)
- **Sweet potato** (*solanum tuberosum*)
- **Irish potato** (*ipomea batata l. Lam*)

B. Cereal

- **Maize** (*zeal Mays*)
- **Rice** (*oriya sativa*)
- **Millet** (*Pennisetum Americanum*)

C. Legumes

- **Cowpea** (*vigna unguiculata*)
- **Groundnuts** (*arachnids hypogea*)
- **Soya bean** (*glycine max*)

D. Fibres

- **Cotton** (*gossypurm barbadense*)

- **Jute plant** (*corchorus spp*)

Farmer–herder conflicts, particularly those that occur in Nigeria, are presented by some scholars as being driven by environmental scarcity (Homer-Dixon, 1999; Okoli, 2018; Antwi, 2018). The primary underlying factor which has made such conflict a recurrent one is that humans depend on land for livelihood, population keep increasing while the land remains static coupled with climate change thereby causing heavy pressure on the available but limited arable lands (Moritz, 2012). History shows that States like Benue, Kwara, Zamfara, and Enugu, Ebonyi etc have been awashed in constant violent conflicts Most of which have ended up in loss of lives, displacement of people, destruction of property and turning the Areas into war zones since the parties try to grab and control the right to use land (Benjaminsen 2009).

Studies have shown that there is a positive relationship between violent conflict and food insecurity and the reverse has also been presented by some researchers as positive (Brinkman and Hendix 2011). It has been emphasized that violent conflicts, especially resource conflicts can hurt crop and livestock production. The reason being that when violent conflict erupts, it affects farmers’ ability to produce, market their surpluses, negatively affecting individuals’ ability to access food (UN 1993; Jeanty and Hitzhusen 2006). For instance, violent conflict between farmers and herders may disrupt the supply and distribution of farm inputs such as fertilizers, because the Government injects more resources into maintaining peace by cutting down its spending on vaccines for livestock, fertilizers and other agrochemicals for crop farmers which will, in turn, lead to high scale food insecurity.

2.4 Fulani herdsmen and conflict in Nigeria

Fulani herdsmen are nomadic or semi-nomadic herders whose primary occupation is raising livestock. Fulani herdsmen engaged in both random and planned transhumance movements. A

primary reason for the migratory nature of the herdsmen is to reach Areas with abundant grass and water for the cattle (Iro, 1994). The Fulani herdsmen are mainly found in sahel and semi arid parts of West Africa but due to changes in climate pattern many herdsmen have moved further south into the savanna and tropical forest of West Africa. The herdsmen are found in countries such as Nigeria, Niger, Senegal, Guinea, Mauritania, Mali, Burkina Faso, Benin and Cameroon. In Nigeria, the livestock made available by the herdsmen provide the bulk of the beef consumption in the country (Iro, 1994). These migratory movement has resulted in a major conflict known today as farmers and herdsmen conflict across the Africa continent

In Nigeria, conflict has become a very widespread occurrence; manifesting in all spheres of human endeavors which ranges from communal crises, boko haram conflict and the most recent, the farmers -herdsmen conflict which is spreading dangerously across the country. A study of major sources of conflicts between the Fulani pastoralists and farmers shows that land related issues, especially over grazing fields, account for the highest percentage of the conflicts. In other words, struggles over the control of economically viable lands causes more tensions and violent conflicts among farming communities. As pastoralists and cultivators have coexisted for a long time, the complexities over the land-use system have dramatically changed and thus become the dependent variables in conflicts between herdsmen and farmers.

The expansion of Fulani pastoralism into Nigeria is unknown but it is suggested that Fulani began to settle on the plains of Bauchi Emirate transcending onto the grassland of Jos, and there increased or decreased in intensity and frequency depending on economic, environment and other factors. For example, increase in the herd sizes, due to improved condition of the cattle, compelled the pastoralists to seek for more pastures beyond their limited range. Climate change has also constituted a great threat by putting great pressures on the land and thus provoking

conflicts between them. However, improvements in human health and population have enhanced a greater pressure on land. Since the 1980s therefore, there has been a marked expansion of cultivation of the Fadama (riverine and valley- bottom) Areas. This means that both the farmers and pastoralists have engaged in fierce struggles for access to such valuable lands which, more often than not, result in increased conflicts and violence.

Fulani herdsmen and farmers clashes are dated to 2012. Before then, there has been peaceful relationship among farmers and herdsmen across the States in Nigeria, except few cases of minor misunderstandings that did not claim life (Nzeh, 2015 and Doyin, 2017). According to Omawumi (2016), the current feud started because of farming, grazing land and water. The farmers accused the herdsmen of damaging their crops by failing to control their animals while the herdsmen equally claimed that the farming communities steal their cattle (Adeleke, 2018).

In January 2013, Fulani herdsmen attacked some villages in Nasarawa State, killing 10 people and displacing over 5000 people. In a fresh attack on some villages in Nasarawa State, about 33 people were killed in November 2014 (<http://naijagist.com/Fulani-gunmen-attack>). More attacks by the armed Fulani herdsmen came in 2016. Duru (2016) reports a gruesome attack on Agatu Local Government Area of Benue State in February 2016 in which about 7000 people were driven from six villages by the Fulani herdsmen. The villagers observed that despite heavy gunshots by the herdsmen, no military or security presence was felt. Over 200 persons were killed and houses were razed. In April 2016 there was a renewed attack on Agatu by the armed herdsmen. Statistics from the Benue State Emergency Management Agency indicates that no fewer than 30 persons died in the renewed violence.

Mamah *et al.* (2016) reveal that Fulani herdsmen in Enugu State attacked Ukpabi Nimbo in Uzo-Uwani Local Government Area killing over 40 people. Survivors fled to neighboring

communities. Two days after the Ukpabi Nimbo attack, there was another attack by the Fulani herdsmen in Umuchigbo community in Enugu East Local Government Area of Enugu State. It is clear that the deadly escapades of arms-bearing herdsmen are becoming increasingly unsettling. They have left their footprints in virtually every part of the country. In their last outings, they have been very unsparing of the communities (Ede, 2016).

Militants from the Fulani ethnic group are believed to have killed at least 1229 people in Nigeria in 2014 up from 63 in 2013, Adetula (2016), and Benue State seems to be the hardest hit in recent times. Barely 5 days before the end of Governor Gabriel Suswam's administration in May 2015, over 100 farmers and their family members were reportedly massacred in villages and refugee camps located in the Ukura, Per, Gafa and Tse-Gusa Areas of the State. According to reports, in July 2015, suspected herdsmen attacked Adeke, a community on the outskirts of the State capital, Makurdi. In December 2015, 6 persons were killed at Idele village in the Oju Local Government Area. A reprisal attack by youths in the community saw 3 Fulani herdsmen killed and beheaded.

In February 2016, as a result of a clash between herdsmen and farmers in Benue State, 40 more people were killed, about 2000 displaced and not less than 100 were seriously injured (Duru 2016). Most recently, more than 92 Nigerians were massacred by suspected Fulani herdsmen in Benue and Niger States.

2.5 Negative Effects of Farmers-Herdsmen Conflicts on National Development

The effects of the Fulani herdsmen's activities cannot be overemphasized. Here under they are enumerated.

2.6 Economic effect

It is an indisputable fact that the activities of the Fulani herdsmen against the farmers have resulted in a huge economic setback in Nigeria today. Some of these setbacks are discussed here below.

Creation of artificial scarcity: From what we know, anytime farmers are attacked they will run away from their farmlands and find it difficult to return for fear of being attacked again. This sometimes lasts for a long time, thereby hindering cultivation and harvest, the Zaki-biam Yam Market attack in Benue State that happened on 20 March 2017, in which over 50 people were killed, and out of fear the traders refused to come back to the market for a long time. This created a man-made scarcity of one of the most staple food in Nigeria which ordinarily would have been avoided if the Fulani herdsmen's attack on the farmers market and villagers had not happened.

There is a decrease in output per capita, because of restrictions on people's movements as a result of curfews. Moreover, the daily output in goods and services is seriously affected. People can no longer move to their farms, shops and business centres freely as they wish leading to the overall output decreased of the people.

Inflation and devaluation of the naira: Inflation, simply put, is a persistent increase in the prices of goods and services over a period of time. Anyanwuocha (1996) defines it as a persistent rise in the general price level. The artificial scarcity created by the frequent attacks of the herdsmen on citizens as Stated earlier leads to inflation, which in turn leads to devaluation of the naira as such money cannot buy as much quantity as it could naturally buy before.

Discouragement of foreign investment: The incessant attacks by the Fulani herdsmen scare away foreigners who have come to Nigeria to do business especially in the agricultural and other related sector. In the course of the attacks, lives and property, public companies, film-producing

houses and industries are destroyed. When foreigners see these things happen, they get discouraged and withdraw their businesses and go back to their countries (Ibenwa 2012).

2.6 Vulnerability factors to conflicts in Nigeria

Agricultural production in Nigeria is resilient due to rural farmers' vulnerability and susceptibility to security concerns. At the return to democracy in 1999 the transformation of rural farmers became an issue of increasing concern as the security threats posed by herdsmen re-emerged in the form of crucial and seemingly persistent attacks in part of northern Nigeria, the Middle Belt and Eastern Nigeria respectively.

The tendency for re-occurring conflict is discernible in several rural communities as the herdsmen graze unguardedly. The evidence of social decay and ineptitude of the State apparatus to douse the problem, makes agricultural resilience strategies inevitable. Though in some developing countries there have been remarkable success in deploying the agricultural resilient strategies through the introduction of some institutional apparatuses and dissemination of information to the rural farmers also in South Africa, there have been some insightful agricultural resilience programs which has stem the tide of such conflict in that country. Some crucial trends perhaps inform the persistent attacks and Government policy inertia. This includes the alleged control of political power of the venerated northern oligarchy involved in cattle

ownership in northern Nigeria. However, the general call to remedy the herdsmen and their attacks is rather institutional. It remains almost impossible to track the challenges of herdsmen attacks and this will remain problematic within the Nigerian rural farmers' agricultural resilience debate. Except something drastic is done it may not be very easy to check herder's attack. The key argument here is that rural farmers insecurity consistently, dislodge both agricultural food production and the overall volume of food produced in Nigeria. Thus, from this conceptual prognosis and based on the persistent resurgence of herder's attacks, recreating agricultural resilience strategies is both urgent and critical. To capture the crux of this matter is the seemingly policy inertia by the Government in this direction. These advances some resilience strategies, as follows;

Participatory Resilience Strategy: Many practices designed as resilience strategies have not been effective particularly in most rural Areas leading to debates that argue for participatory resilience involving the local people directly through a bottom top approach. The aim is to resist ecological and non -ecological threats. Theories suggestive of resisting ecological threats include the panarchy theory (Holling 2002). Robert Chambers (2010) has argued that participatory methodologies are a people centered bottom top and inclusive approach directly involving the people themselves. Since it is people centered it centers on the needs of the people.

Multi-stakeholder strategy: This suggested that several stakeholders should be involved in strengthening agricultural resilience and this includes synergy of institutions and Governments including Ministries Departments and Agencies (MDAs), Community Based Organization (CBOs) and civil society groups to build and sustain resilience.

Herders and Farmers Dialogue: Dialogue has been an effective strategy deployed in conflict resolution. In the particular case of the study the heads of both parties should be engaged in a dialogue for consensus building to bring lasting end to the conflict. Rural farmers Armed Vigilante Network: the case analysis suggest that the herders are armed. It does not make sense to combat an armed gang with bare hands. There is urgency of herders to be made to drop their arms through dialogue or encourage rural farmers to constitute armed vigilante groups to act as guardians of the farms and resist armed attacks. And to effectively confront and combat the herders who themselves are armed. For instance, the case one reveals that the herdsmen were in possession of Ak47 rifle.

New Legislation is Critical: There is need for a novel legislation restricting illegal grazing or redefine Areas and terms of grazing in particular Anti -grazing legislation is necessary as in most developed societies illegal grazing is a punishable offence. There is need for the Nigerian legislature to adopt effective legislation and implement same on a result-oriented basis. Policy makers should also look at ways in which herdsmen infiltrate the rural Areas and farmlands in the cause of grazing. Environmentalists should examine the environmental impacts of illegal grazing on food crops. Government intervention is both urgent and valuable to check persistent killing of farmers by alleged herders. There is need for remedy of the perceived deficiencies of herdsmen attacks.

2.7 Coping strategies among farmers and herders during post conflicts situation.

The field of stress and coping emerged more than three decades ago from the recognition of the dynamic interaction between person and environment (Lazarus and Folkman, 1984). In recent years, the field has been trying to introduce more realism to stress and coping research, as the

contextual research of the last two decades yielded few solid findings that made a difference in people's lives (Somerfield and McCrae, 2000). One of the most important neglected contexts is culture. We believe that culture is a fundamental context that helps to shape both the individual and the environment.

Scholarly definitions of stress highlight that it is a combination of psychological and physical reactions to events that evoke individual responses (Franken 1994). Research on stress has focused on the physiological expression of stress and its impact on the individual as well as on models of interaction between the environment and the individual coping and resilience (Franken 1994; Somerfield and McCrae 2000). Immediate physiological responses to stress involve reactions from the autonomic nervous system, which is believed to allow a person a chance to react quickly to perceived danger (Mitchell and Everly 1996).

Conflict actors employ coping strategies in order to protect their psychological intactness.

Effective strategies should enhance their psychological adaptation despite the traumatic stress.

Research has not, however, provided a generally valid differentiation between effective and ineffective coping strategies. Some evidence shows that problem-focused and active coping correlates negatively, and emotion-focused coping correlates positively, emotional and behavioral problems (Compas, Worsham, Ey and Howell, 1996). Yet others have not found beneficial effects of problem-focused and active coping in predicting psychological adjustment (Rogers and Holmbeck, 1997). Similarly, the findings on the role of avoidance versus approach coping in enhancing psychological adjustment are somewhat mixed. Some researchers obtained evidence that avoidance coping strategies, especially denial and distraction, are associated with poor psychological and social adjustment (Kliewer *et al.*, 1998), while others maintain that coping effectiveness depends on the nature of stress (Band and Weiss, 1988). Lazarus and

Folkman (1984) conceptualized two broad response dimensions among people facing stress: emotion focused coping involves modifying one's own feelings and controlling distress, and problem-focused coping activities are aimed at changing the stressful situation. Critics have noted that emotion- and problem-focused distinction between coping strategies may be simplistic (Lazarus, 2000). Multidimensional theory, involving the orientation and modality of coping, can correspond more accurately to resource use conflict actors' various efforts to deal with adversities and demands in their lives. Active coping involves direct problem solving, cognitive decision making, and restructuring. Distraction refers to replaced action and physical release of emotions. Avoidance involves behavioral (withdrawal) and cognitive (denial and refusing to think about the trauma) strategies. Support-seeking consists of emotional sharing and solving the problem with the help of others (Umar, 2013).

2.8: Theoretical framework

Karl Marx (1818-1883) once postulated that a society where one group exploited another group economically will certainly produce internal anxieties leading to its own destruction. According to the conflict theory, conflict always rose from two classes of people and these are those that owned most of societal wealth and means of production called the "*bourgeoisie*" and those who are the common people or working class are called the "*proletariat*". Though Karl Marx conflict theory was controversial, it however led to the birth of various theories that could be used in different societies. The modern approach to conflict theory elucidates more on Marxism theory. According to Mills's view, social structures are created through conflict between people with differing interests and resources. These individuals and resources, in turn, are influenced by these structures and by the unequal distribution of power and resources in the society (Knapp, 1994). Mills's assumed that conflicts are caused by policies from the power elite. Musa, Shabu and

Igbawua (2014), proposed that it can be an ethnic one if it involves people with different values, custom, physical and cultural characteristic. While Tonah (2006) thinks a fundamental cause of conflict between two economic agents is basically caused by the continuous competition over scarce resources as (Tonah, 2006). It was worthy to know that all conflicts share common qualities (Ofuoku & Isife, 2010). The first is that there is a kind of contact between the parties that are involved, secondly, the parties in conflict perceive conflicting views and finally, one of the parties always wants to redress existing contradictions (Ekanola, 2004 and Vanderlin, 2005; as cited in Ofuoku & Isife, 2010).

2.9 Conceptual Framework of the Study

The framework conceptualizes the basis of the study by describing the relationship that exists between the dependent, independent and the intervening variables. It addresses itself towards identification of the level of association that may exist between Socio-economic characteristics of the Arable Crops Farmers and the effects of conflict on the livelihoods of rural dwellers in the study Area.

Cousins (1996) observes that academic discussion on conflict usually generates enormous hue as questions usually arise even in “distinguishing between societal problems, disputes and conflicts....” (Cousins, 1996) as cited in Zirra and Garba (2012). As for conflicts relating to land and sundry natural resources, McKee a specialist on conflict sees conflict as a struggle over values or scarce resources in which two contesting groups each seek to impose values or claims on resources over those of the other. To do so, each seeks to maintain or to change the social structure in terms of his or her own interest” (McKee, 1981; Ijirshar, Ker and Terlumun 2015).

The above postulation by Mckee underscores the proneness of men to conflict on land and sundry natural resources. “Land as an indispensable factor of production” (Jhingan, 1997) has been at the centre of several conflicts among men.

The conceptual framework has the following components:

1. The independent variables;
2. The dependent variable; and
3. The intervening variables.

Independent variables: Socio-economic characteristics of the respondents: The variables that was measure**d includes: age, gender, marital status, educational qualification, religion, household size pattern, ethnicity type, membership of the association, primary occupation, farming experience, types of association belonging to, nature of economic activities, stock size, farm size, occupational experience, and annual income.

Dependent variables in this study, Livelihood activities involvement level of the respondents, Extent of causes of conflicts, Key Effect of conflicts, Vulnerability factors to the conflict and the Extent of Coping strategies used will constitute the dependent variables for the studies. The interaction of the dependent variables will give a useful direction to the studies

Intervening variables: these are variables which may likely influence the interaction of both the dependent and independent variables. Variables such Government policies Political instability, Land conflict, Agricultural output, Gain and loss, Socio-economic factors e.g. paying of school fees, building of houses etc.

Various components of the conceptual framework as shown in Figure 1 are technically related.

The conceptual framework of the study is presented in the Figure on the next page.

2.0

CONCEPTUAL FRAMEWORK OF THE STUDY

Antecedents

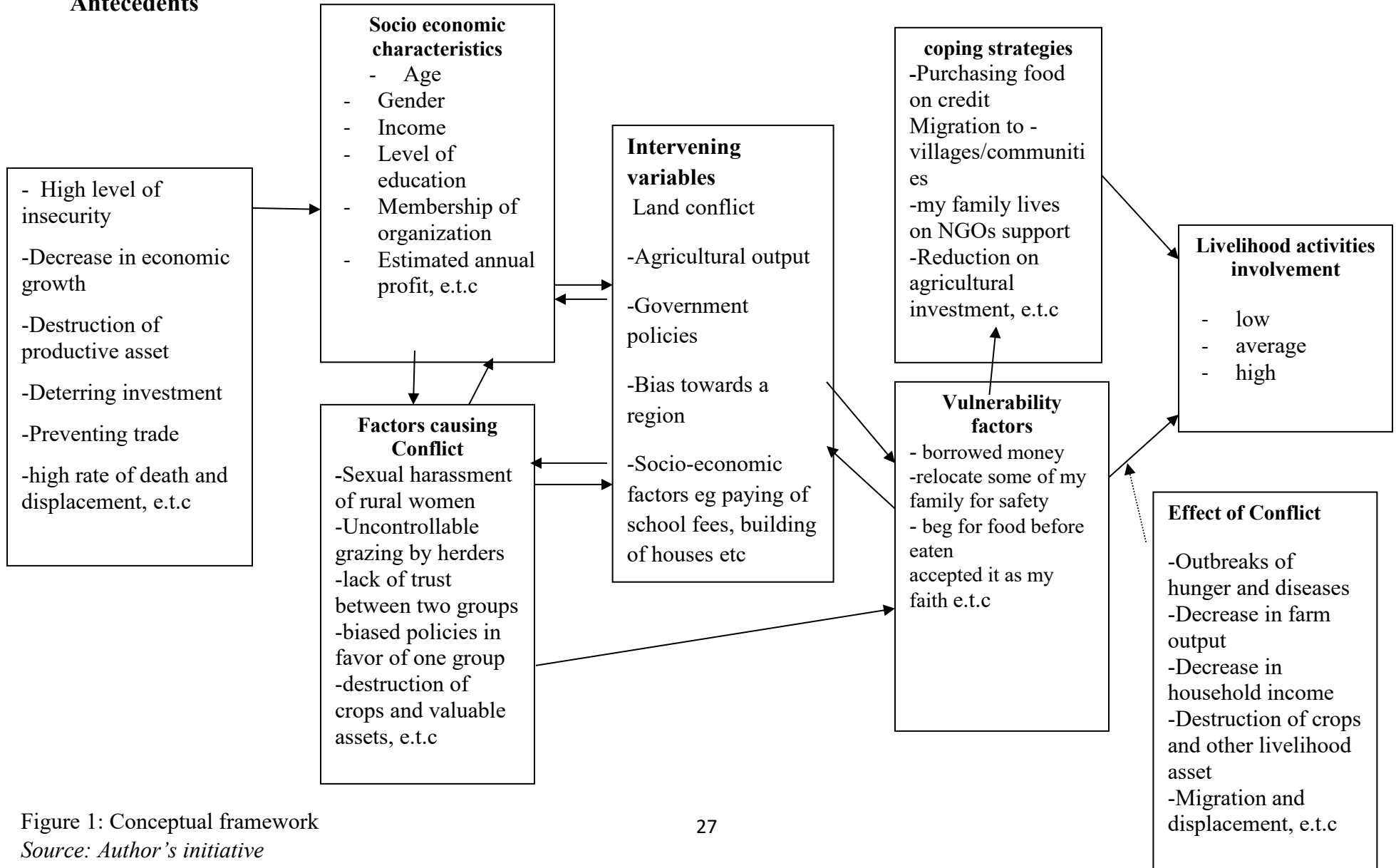


Figure 1: Conceptual framework

Source: Author's initiative

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study Areas and scope

This study was carried out in Benue State; one of the States in North-Central Nigeria. The State lies within the geographical coordinates of latitude 7.3369° N, and longitude 8.7404° E. A total landmass of 34.059km^2 (IamBenue, 2018). The State has an estimated population of 4,253,641 (NPC, 2006) and annual rainfall which ranges from 1,200mm to 1,500mm. Benue State shares boundaries with five other States namely: Nasarawa State to the North, Taraba State to the East, Cross-River State to the South, Enugu State to the South-West and Kogi State to the West. The State also shares a common boundary with the Republic of Cameroon in the South-East, (IamBenue, 2018).

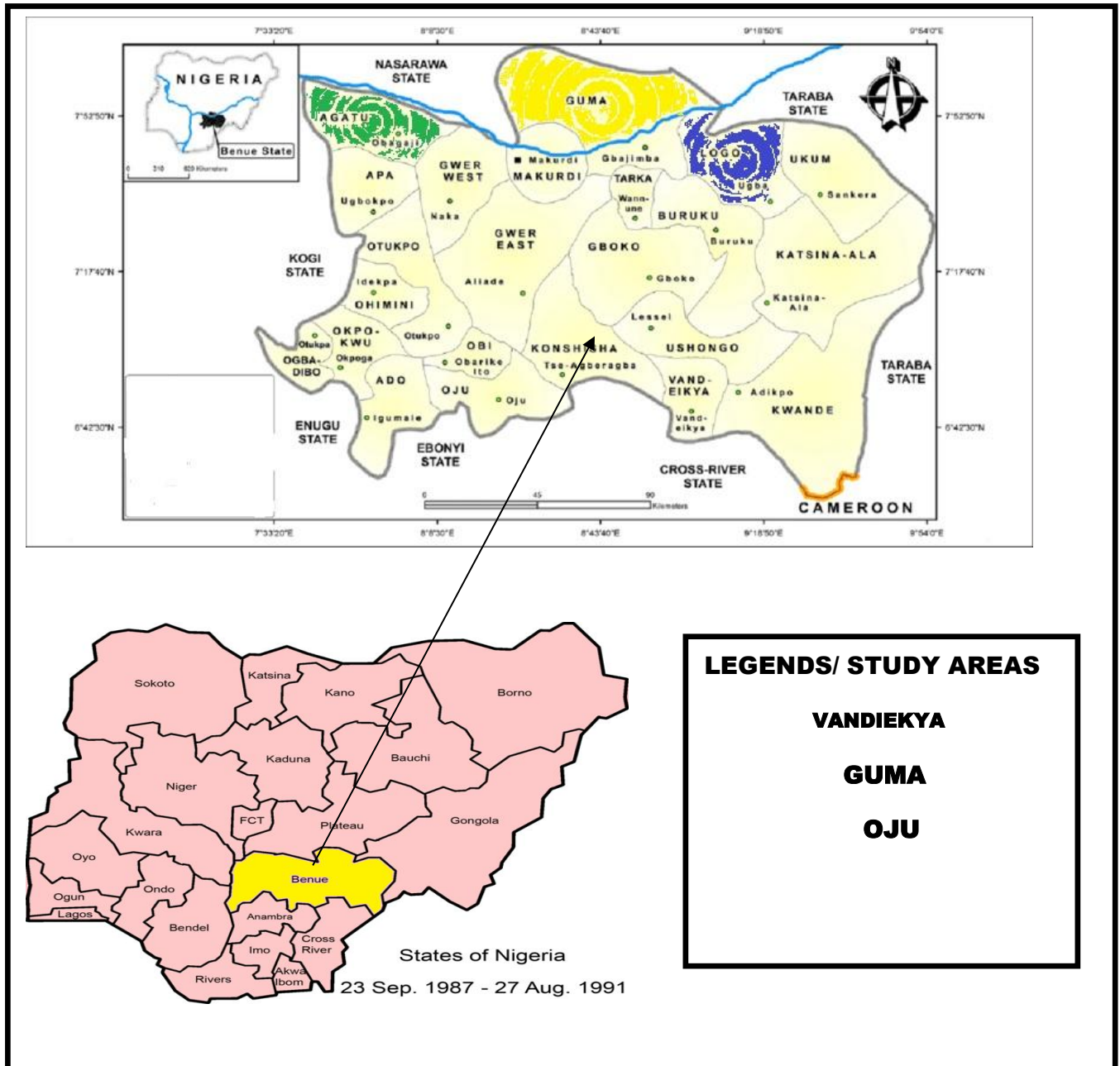
Benue State is made up of twenty-three Local Government Area and they include Ado, Agatu, Apa, Buruku, Gboko, Guma, Gwer-East, Gwer- West, Katsina-Ala, Konshisha, Kwande, Logo, Markurdi, Obi, Gbadibo, Ohimini, Oju, Okpokwu, Otukpo, Tarka, Ukum, Ushongo And Vandeikya, the State is also divided into three Agricultural Zones, Benue South, Benue North-East and Benue North-West (IamBenue, 2018).

Benue State houses Agricultural Institutions which include Benue State Tractor Hiring Agency, BENTHA. Benue State Agricultural and Rural Development, BNARDA. Akperan Orshi College of Agriculture Yandev. Agricultural Training Center, Mbatie. Agricultural Vocational Training Center, Otobi –Otukpa. Accelerated Food Production Programme.

The State is mostly inhabited by the Tiv, Idoma and the Igede people and their major languages are Tiv, Idoma and Igede respectively. The people of the State are mostly farmers and are associated with agricultural activities, the State is blessed with unique geographical and natural features especially the river Benue and other subsisting tributaries which provides the State with sources of water for the entire season, these availabilities of water sources coupled with favourable weather makes the State a destination hub for crop and livestock activities. Crops that are widely cultivated in the State include; potatoes, cassava, soybean, guinea corn, flax, yams, sesame, rice, and groundnuts, Palm Tree and varieties of other tree crops.

The scope of coverage of the study was centred on arable crops farm families in the affected study Area.

Figure 1.1: Map of Benue State Showing the Study Area



3.2 Population of the study

The population for the study includes registered arable crop farmers in Benue State and was obtained from Benue State Agricultural and Rural Development, BNARDA

3.3 Sampling Procedure and Sample Size

A multi-stage sampling method was adopted in selecting the respondents for this study

Stage 1: The first stage involved all the affected Local Government Areas in the State which includes Ado, Agatu, Buruku, Guma, Gwer-East, Gwer- West, Katsina-Ala, Kwande, Logo, Markurdi, Ohimini, Okpokwu, Otukpo, Tarka, Ukum, Vandiekya, and Oju Local Government Area, (World Watch Research,2017).

Stage 2: The second stage involved a purposive selection of three Local Government Areas from the affected seventeen Local Government Area, the selected LGAs are Oju, Guma, and Vandiekya. These Local Government Areas were selected because not only are they representatives of each Agro-ecological zones within the State but also based on evidence of widespread and re-occurrence attacks in these Local Government Areas this was corroborated by World Watch Research, (2017) which reported that seventeen out of the twenty-three Local Government Area (LGAs) in Benue State have experienced farmers and herdsman conflict (2014-2017).

Stage 3: The third stage involved the random selection of farmers from the sample population using a 70 per cent (%) proportionate sampling procedure giving a total of two hundred and thirty-one respondents for the study.

Table 3.1: Distribution of sample size

Agro Ecological Zones	Local Government Areas	LGA Selected	Total number of registered Arable farmers	Numbers of selected respondent using 70% proportion
Benue South	Ado Agatu Apa Obi Ogbadido Ohimini Oju Okpokwu Otukpo	Oju	66	46
Benue North West	Buruku Gboko Guma Gwer East Gwer West Makurdi Tarka	Guma	138	97
Benue North East	Katsina-Ala Konshisha Kwande Logo Ukum Ushongo vandeikya	Vandeikya	126	88
Total			330	231

3.4 Data collection instrument

Primary data was used for this study. A well-structured interview schedule was used to elicit primary information for this study. The questionnaire was made up of six (6) sections in line with the objectives of the study. These sections will solicit respondents' responses on these Areas,

Section A: socioeconomic characteristics of the respondents

Section B: the extent of involvement in livelihood activities by the respondents

Section C: the extents of the causes of farmers and herdsman conflicts in the study Area

Section D: the key effects of conflicts in the study Area

Section E: respondent's vulnerability factors

Section F: extent of coping strategies used

3.4.1 Test of Validity

Face and Content Validity: Face validity is a measure of how representative a research project is at 'face value, and whether it appears to be a good project. While Content Validity is the estimate of how much a measure represents every single element of a construct. The instrument was established by the scrutiny and rational judgment of experts in the Department of Agricultural Economics and Extension Services during the pre-data seminar. The essence was to determine the extent to which the concept wishes to measure is being measured by a particular scale (Akinbile, 2004).

3.5 Measurement of Variables

3.5.1 Independent variables

Socio-economic characteristics of the respondents: The variables that were measured include: age, gender, marital status, educational qualification, religion, household size pattern, ethnicity type, membership of the association, primary occupation, farming experience, types of an association belonging to, nature of economic activities, stock size, farm size, occupational experience, and annual income.

Local Government Area: Respondents were asked to indicate their LGA. Normal values were assigned to differentiate each item.

Community/village: Respondents were asked to indicate their community/village. Normal values were assigned to differentiate each item.

Sex: This was measured as male or female. Male = 1, Female= 0.

Age: This was measured in years

Marital Status: This was measured as Single =1, Married= 2, Divorced=3, and Widowed =4 and separated =5.

Educational qualification: This was measured as No formal education=0, Quranic =1, adult education =2, Primary School Certificate= 3, Secondary School Certificate =4, tertiary= 5

Religion: This was measured as Christian=1, Muslim =2 and Traditional =3

Ethnic Group: this was measured by asking the respondent to indicate the type of ethnic group they belong to

Primary occupation: this was measured as farming =1, livestock rearing =2, civil servant =3, mining =4.

Farming type: crop farming =1, livestock farming =2.

Farm size: this was measured in hectare. (100 lines =1 hectare)

Farming experience: this was measured in years

Household size: This is the total number of people living and eating from the same pot and under the same roof in a given house.

Membership of association: This was measured by asking the respondents to indicate whether or not they are members of any association. Options “yes” =1 and “no” =0.

Annual income: This was measured in Naira (average income)

Dependent variables

Livelihood activities involvement level of the respondents: This was measured using a four-point rating scale: Not involved =1, casually involved =2, involved =3, and highly involved =4 to decide their level of livelihood involvement in the conflict, a mean benchmark of 2.5 was established; such that any livelihood involvement level with a mean score of 2.5 or above was regarded as very often, and a mean score of below 2.5 was regarded as Not at All. The benchmark score was derived below

$$1+2+3+4=10/5=2.5$$

The extent of causes of conflicts: This was measured using a 5-point Likert scale which is the extent of agreement to the Stated variables, not at all =1. Small extent 2, some extent =3,

moderate extent =4 and great extent =5. A mean benchmark of 3.0 was established such that any Statement with a mean of 3.0 and above was highly regarded as the cause of the conflict while a mean lesser than 3.0 was regarded as likely or not to cause the conflict. The benchmark score is derived below

$$1+2+3+4+5=15/5=3$$

Key Effect of conflicts: This was measured using a 5-point Likert scale which is the level the respondents consider the Stated variables has impacted them. not at all =1. Small impact=2, some impact =3, moderate impact =4 and great impact =5. A mean benchmark of 3.0 was established such that any Statement with a mean of 3.0 and above was regarded as a high impact of the conflict while a mean lesser than 3.0 was regarded as likely or no effect of the conflict. The benchmark score is derived below

$$1+2+3+4+5=15/5=3$$

Vulnerability score: A rating scale of 1 to 5 was used to elicit responses toward questions on the vulnerability factors to the conflict and it was recorded as given strongly disagree=1. Disagree =2, Undecided =3, Agree =4 and Strongly Agree =5. A minimum score of 27 and a maximum score of 135 was used, A mean benchmark of 3.0 was established such that any Statement with a mean of 3.0 and above was highly regarded as high vulnerability while a mean lesser than 3.0 was regarded as likely or not as no vulnerability of the respondents to the conflict. The benchmark score is derived below

$$1+2+3+4+5=15/5=3$$

The extent of Coping strategies used: This was measured using a five (5) point Likert scale of not used =1. Fairly used = 2, moderately used =3, greatly used =4 and always used =5. A

mean benchmark of 3.0 was established such that any Statement with a mean of 3.0 and above was highly regarded as the main coping strategies used while a mean lesser than 3.0 was regarded as likely or not the coping strategies used by the respondents. The benchmark score is derived below

$$1+2+3+4+5=15/5=3$$

Percentage Response Rate of The Questionnaire

Table 3.2 shows that 99.3% of the questionnaire were filled and returned hence they were used for the analysis.

Table 3.2 percentage response rate of questionnaire

Items	Oju	Guma	Vandiekya	Pooled
Total questionnaire	46	97	88	231
Valid questionnaire	46	96	87	229
Invalid questionnaire	0	1	1	0
Percentage success rate	100%	98.9%	98.9%	99.3%

3.6 Data Analysis

Objectives 1-6 were described using descriptive statistics such as frequency count, percentage, mean, standard deviation and appropriate charts.

Hypotheses were tested using appropriate test statistics such as the Wald statistics in Binary Logistic Regression and F-test in Analysis of Variance as modelled in the next page.

3.7 Analytical Techniques

Hypothesis 1: Relationship between selected socio-economic characteristics of respondents and effects of conflicts

This hypothesis was tested with a t- statistic in Binary Logistic Regression. The model specification is specified thus:

$$P_i (Y = 1/X_i) \frac{P_i}{1 - p_i} = e^{(\beta_0 + \beta_1 X_1 + \beta_n X_n + u)} \dots\dots\dots \text{EQ. 1}$$

The explicit function is given as

$$P_i (Y = 1/X_i) \frac{P_i}{1 - p_i} = e^{(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + u)} \dots\dots\dots \text{EQ. 2}$$

Where:

α = Constant/intercept

β = Slope (Regression coefficient)

Y = Dependent variable for the study (effects of conflicts dichotomized into low (0), and high (1) using mean; and

X₁= Age (in years)

X₂= Married (Married=1, otherwise = 0)

X₃= Sex (Male= 1, Otherwise = 0)

X₄= Education (Educated = 1, otherwise = 0)

X₅= Ethnic group (Tiv = 1, otherwise =0)

X₆= Years of farming experience (as given)

X₇= farm size (in hectare)

X₈ = Primary occupation (farming = 1, Otherwise = 0)

Hypothesis 2: Difference in the effects of conflicts across the three Local Government

This hypothesis was tested using F-test and Duncan range test as modelled below:

Source of Variance	Sum of Squares	Degree of freedom	Mean Square	F-ratio (F-statistics)
Regression	SSReg	K	MSReg = SSReg/k	F = MSReg/MSE
Error	SSE	N-K-1	MSE =SSE/N-k-1	
Total	SST= SSReg + SSE	N-1		

Hypothesis 3: Difference in the vulnerability factors of respondents in the three Local Government Areas

This hypothesis was tested using F-test and Duncan Range Test as specified below:

Source of Variance	Sum of Squares	Degree of freedom	Mean Square	F-ratio (F-statistics)
Regression	SSReg	K	MSReg = SSReg/k	F = MSReg/MSE
Error	SSE	N-K-1	MSE =SSE/N-k-1	
Total	SST= SSReg + SSE	N-1		

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

4.1 Socio-Economic Characteristics of the respondents are presented in Table 4.1

Sex

Result in Table 4.1 shows 62.4% of the respondents were male while only 37.6% were female. This shows a preponderance of males over the females in the study Areas, this is because the study Areas were mainly dominated by male-headed household. This may be connected to the gender gap in rural communities, this result is comparable to the findings of Adepoju Abimbola and Obayelu Oluwakemi (2013) that male-headed households are more predominant in agriculture rural communities compared to female-headed households.

Age

Result of age distribution in Table 4.1 shows that 37.6% and 31.4% of the farmers were between 30 and 39 and 40-49 years of age respectively, 17.5% of the respondents were between 20 and 29 years of age, while only 3.5% were 60 years and above. The mean age of farmers was obtained as 38 years with a standard deviation of 11 years. This means the farmers were still very active in terms of their age category. The implication of this is that they will be very conversant with the records and consequent effects of farmers-herdsmen conflicts in their localities. Also, the fact that the majority of the respondents who are farmers are within productive ages could be used to explain the assertions in the report of Abonu (2016) which Stated that many of the people killed, mostly male and female in the Agatu massacre of 2016 in Benue State were active farmers. This shows that the farmers-herdsmen crisis in the affected States discourages farmers to involve in arable crop production. Hence, Nigeria stands at losing so much in our Gross Domestic Product (GDP) concerning the agricultural sub-sector of the economy.

Marital Status

Results from the studies in Table 4.1 shows that 69.0% were married only 14.9% of the sampled respondents were single while 3.9% and 6.6% were divorced and widowed, respectively. The findings showed that the majority of the respondents were married. This review documented by Abbass (2012) explained that farmers in rural communities were mostly married and maintain polygamy lifestyle because they use family labour to support the hired labour and most times, wives constitute part of their family labour used to carry out farm work.

Education status

Results in Table 4.1 further shows 39.7% had primary education, 3.9% of the respondents in this study had non-formal education, 12.2% had a quranic form of education while 16.2% had secondary education with about 12.7% indicated that they had other forms of education. The finding shows that respondents in the study Area were fairly educated with insignificant proportions having non-formal education. The 12.7% with other forms of education were mainly post-secondary school education which includes university, polytechnic, or colleges of education within the State and Nigeria. Generally, the study of Agbegbedia (2015) further confirmed this which submitted that farmers in Benue State, Nigeria were relatively educated with most of them having between primary and secondary education. The study further asserted that this has given them leverage in the adoption of improved farm practices as Agricultural Development Programme (ADP) extension services were confirmed to be effective.

Religion

Results in Table 4.1 also show that 90.0% of the respondents were Christians while 4.3% and 5.7% were Muslims and traditional practitioners respectively. This shows that majority of the respondents were Christians. This is because Benue State has been documented as one of the States with a high proportion of Christians based on the reports from many works of literature such as Agbegbedia (2015), Abonu (2016) and Musa, Tarwase and Igbawu, (2016), This finding implies that Christians dominated Areas were the most ravage when it comes to farmers and herdsman conflict.

Ethnic Groups

Results in Table 4.1 show that 74.7%,8.7%, and 8.7% of the respondents each were Tiv, Idoma and Igede ethnic groups respectively while 7.0% and 0.8% of the respondents were Hausa and Igbo by origin. The findings show that a higher proportion of Benue State is of the Tiv ethnic origin. This finding is in line with the report of Ibrahim (2012) that submitted Tiv constituted the major ethnic group and they are spread across the entire geographical zones of the State.

Primary occupation

The result in Table 4.1 shows 97.4% of the respondents indicated farming as their primary occupation while only 0.4% and 2.2% of the respondents were into livestock rearing and civil service, respectively. The findings show that farming was the major occupation among the people in the study Area. This conforms to the studies of Ibrahim (2012), Agbegbedia (2015) and Abonu (2016) which Stated that agricultural activities specifically farming were the primary occupations in many households in Benue State. The fact that most of the respondents are involved in farming and farming-related activities, means the effects of farmers-herdsman conflicts will be disastrous on the farm families.

Type of farming

On the type of farming activities, the respondents engaged in, it was discovered from the studies that 96.9% of the respondents engaged in crop farming while only 3.1% were involved in the production of different kinds of animals. This means that farming is the predominant occupation among the people. The findings corroborate the study of Adetula (2009) which asserted that crop farming is the predominant occupation of the people in Benue State.

Membership of Association

Based on the findings of this study, it was observed that 52.8% of the respondents belonged to the social association. This finding implies that farmers stand to benefit from the organizations to which they belong as the motive behind the establishment of most social organizations is to help them achieve goals that may be too difficult for an individual to achieve. At the same time, an association may also be good as a platform to confront some of the challenges that may result from the conflicts between farmers and herdsmen. They may assist farmers whose crops were destroyed or experience certain losses as a result of clashes between farmers and herdsmen based on the assertion of Hussaini (2018) which Stated that farmers association assisted in giving relief materials to victims of pastoralists and farmers' crisis in Nigeria.

Farm size

Results from Table 4.1 also show that about 69.4% of the farmers had less than 5 hectares of farmland, 26.6% had between 5 and 9 hectares while only 3.9% had 10 hectares and above. The mean farm size was 4 hectares. This shows that most of the farmers practised subsistence farming. This finding was supported by Okuneye, (2001) which revealed that the average farm size in arable crop production in Nigeria was 4.58 ha which is less than 5 hectares. This may be because the majority of their farmlands are destroyed especially during harvest time and as such in order not to incur huge losses the hectares of farming are been reduced. These findings

support the assertions of Agbegbedia (2015) that reported that most of the farmers-herdsmen conflicts that occurred in Benue State before 2015 were between smallholders' farmers and herdsmen and the consequence of this crisis were a chronic shortage of food as a result of short supply of food produced by the farmers.

Farming Experience

Results from Table 4.1 show 13.5% of the respondents had less than 10 years of farming experience, 37.1% had between 10 and 19 years while a little less than average (49.3%) had 20 years and above. The mean farming experience of 19 years was recorded. This means that farmers in the study Area had relatively high years of experience. This finding implies that this Farming experience has been established to influence the types of strategies used by farmers to mitigate issues between them and herdsmen based on the report of Agbegbedia (2015).

Household size

On the household size, it was observed that about 25.8% and 55.5% of farmers, had less than 5 and between 5 to 9 persons per households, respectively while 18.8% had 10 persons and above as the number of people living under the same roof and eating from the same pot. The mean household size of approximately 4 persons per house was obtained. The findings show that farmers in the study Area had a small household size. This may be because parents fear losing their children to the conflict if they stay with them in the rural Area

Table 4.1: Socio-economic characteristics of respondents

Variable	Frequency	Percentage	Mean	Std. Dev
Sex				
Female	86	37.6		
Male	143	62.4		
Age (Years)				
20 – 29	40	17.5		
30 - 39	86	37.6		
40 – 49	72	31.4	38yrs	10.91
50 – 59	23	10.0		
60+	8	3.5		
Marital Status				
Single	34	14.9		
Married	158	69.0		
Divorced	9	3.9		
Widowed	15	6.6		
Separated	13	5.7		
Educational Status				
Non-Formal	9	3.9		
Quranic	28	12.2		
Adult Education	35	15.3		
Primary	91	39.7		
Secondary	37	16.2		
University/polytechnic/college education	of 29	12.7		
Religion				
Christianity	206	90.0		
Islam	9	4.3		
Traditional	13	5.7		
Ethnic Group				
Hausa	16	7.0		
Igbo	2	0.8		
Tiv	171	74.7		
Idoma	20	8.7		
Igede	20	8.7		
Primary Occupation				
Farming	223	97.4		
Livestock rearing	1	0.4		
Civil Service	5	2.2		

Type of Farming				
Crop Farming	222	96.9		
Livestock Farming	7	3.1		
Membership of Association				
	121	52.8		
Farm Size (Hectares)				
<5	159	69.4		
5 – 9	61	26.6	4.10ha	2.84
10+	9	3.9		
Experience in farming (years)				
<10	31	13.5		
10 – 19	85	37.1	19yrs	9.95
20+	113	49.3		
Household Size (no. of people)				
<5	59	25.8		
5 – 9	127	55.4	4 persons	7.01
10+	43	18.8		

Source: Computed from Field Survey, 2019.

4.1.2: Income from crop and livestock production in two consecutive periods(years)

Income from crop production from two consecutive growing periods was observed as presented in Table 4.1.2. It was observed that the average income of the farmers from yam production only in the last two years was ₦270,789.47 and this was reduced to about ₦137,451.33 in a year after. The analysis shows that farmers' income from yam production got reduced by approximately 49% within a year. Also, in cassava production, farmers' income was reduced by 54.80% while in maize, their income was reduced by 55.85%. For sesame production, farmers' income was reduced by 75.28% and sweet potatoes income was reduced from ₦57,686.41 in the last two years to ₦24,739.78 in last year's production. This represents a reduction of 57.11%. In groundnut production, there was a reduction of about 44.65% in farmers' income within the last year while for rice, their income was reduced by 47.21%, this shows a negative effect of the conflict on farmers productivity.

In addition, there was a drastic reduction in the incomes of guinea corns and livestock production by 56.92% and 46.74%, respectively while a 40.68% reduction in the farmers' income for non-arable crop production and 49.08% reduction in non-agricultural activities. Cumulatively, a total reduction of a little above average (56.20%) reduction in the total income of farmers in all the arable crops, non-agricultural activities, and livestock production within the stipulated year. The reduction was attributed to the attacks by the herdsmen in the study Area. This shows that the negative effects of herdsmen-farmers conflicts in the study Area are enormous as farmers lost more than 50% of their income within a year and the trend in the reduction was quite significant. The findings aligned with the study of Dalhatu (2012) which Stated that the negative consequence in food production of farmers-herdsmen conflicts in Nigeria cannot be measured as it has a serious impact on farmers' income. Also, Bhatti (2015) submitted that war is a major

threat to development and this is manifested in the economic, social, and political development aspects of society. Similarly, if disputes between farmers and herders are reduced to near zero, Mercy Corps (2016) claims that the typical household touched by the conflict will see a rise in income of at least 64% and a possible boost in people's livelihood patterns. Furthermore, Adetula (2016) shown that conflict has a significant influence in areas where farming and herding are the primary vocations of the people.

Table 4.1.2: Average estimated annual income from common arable crops and livestock in two consecutive farming seasons

Annual Income	Mean Amount (₦) (2018)	Mean Amount (₦) (2016/2017)	Percentage Change
Yam production	137,451.33	270,789.47	- 49.24
Cassava production	52,218.75	115,535.11	- 54.80
Maize production	43,188.34	97,798.85	- 55.84
Sesame production	98,201.99	397,405.94	- 75.28*
Sweet potatoes production	24,739.78	57,686.41	- 57.11
Groundnut production	75,228.04	135,901.47	- 44.65
Rice production	118,779.82	225,018.35	- 47.21
Guinea corn production	49,345.45	114,568.02	- 56.92
Livestock production	41,466.02	77,861.90	- 46.74
Non-arable crop activities	52,333.33	88,222.22	- 40.68
Non-agricultural activities	104,313.43	204,865.67	- 49.08
Total Income	797,266.28	1,785,653.41	- 56.20

Source: Computed from Field Survey, 2019.

***= highest % change**

4.2: Level of Livelihood activities involvement of respondents in the study Area

Results in Table 4.2 show the various livelihood activities level among respondents in the study Area. It was revealed that they recorded high involvement in yam production ($\bar{x} = 3.68$), cassava farming ($\bar{x} = 3.22$), sesame farming ($\bar{x} = 3.25$), rice farming ($\bar{x} = 3.25$), groundnut farming ($\bar{x} = 3.11$), soya bean ($\bar{x} = 2.94$) and guinea corn farming ($\bar{x} = 2.93$), This means that farmers predominantly involved in the farming of arable crops while they had low involvement in other non-agricultural activities such as trading ($\bar{x} = 1.20$), public service ($\bar{x} = 1.08$), barbing ($\bar{x} = 1.04$) among others.

These findings showed that farming specifically arable crop farming is the predominant occupation of the people of Benue State and the crops with high involvement indicate the predominately grown crops in the study Area. This finding conforms with Edeoghon and Koyenikan (2010) that other livelihood activities aside crop farming are greatly affected or unexplored during conflicts, also Benue State Ministry of Agriculture, (2013) cited in Abah, Roland & Petja, Brilliant. (2016) posited that major arable crop are heavily grown in most Local Government in Benue State, the finding also conforms to the study of Terdoo, Gyang and Iorlamen (2016) that farming is the predominant occupation of the citizen of Benue State and this gives the State the slogan, the Food Basket of the nation. Furthermore, farmers in the State usually practice mixed cropping where many crops are planted on the same piece of farmland and when attacked will lead to heavy loss. Also, Genyi (2017) opined that farmer in Benue State are involved highly in the production of arable crops and farming is the main occupation of the inhabitants of the State.

Table 4.2: Respondent's level of involvement in livelihood activities

Activity	Highly Involved	Involved	Casually Involved	Not Involved	Mean
Yam planting	158 (69.0)	68 (29.7)	3 (1.3)		3.68*
Cassava farming	74 (32.3)	137 (59.8)	13 (5.7)	5 (2.2)	3.22*
Sweet potatoes farming	33 (14.4)	58 (25.3)	91 (39.7)	47 (20.5)	2.34*
Soya beans farming	54 (23.6)	125 (54.6)	33 (14.4)	17 (7.4)	2.94*
Guinea corn farming	56 (24.5)	126 (55.0)	23 (10.0)	24 (10.5)	2.93*
Sesame farming	124 (54.1)	61 (26.6)	22 (9.6)	22 (9.6)	3.25*
Rice farming	154 (67.2)	60 (26.2)	3 (10.3)	12 (5.2)	3.58*
Groundnut farming	79 (34.5)	117 (51.1)	12 (5.2)	21 (9.2)	3.11*
Tree crop farming	2 (0.9)	22 (9.6)	31 (13.5)	174 (76.0)	1.35
Small ruminant animals	3 (1.3)	88 (38.4)	50 (21.8)	88 (38.4)	2.03
Large ruminant animals	1 (0.4)	4 (1.7)	5 (2.2)	219 (95.6)	1.07
Fishing	2 (0.9)	3 (1.3)	5 (2.2)	219 (95.6)	1.07
Hunting	3 (1.3)	10 (4.4)	3 (1.3)	213 (93.0)	1.14
Agro-input dealership		1 (0.4)	1 (0.4)	227 (99.1)	1.06
Beekeeping	1 (0.4)	4 (1.7)	3 (1.3)	221 (96.5)	1.01
Forest produces harvesting		1 (0.4)	6 (2.6)	222 (96.9)	1.03
Processing	1 (0.4)	1 (0.4)	4 (1.7)	223 (97.4)	1.04
Welding	1 (0.4)	4 (1.7)	1 (0.4)	223 (97.4)	1.05
Okada riding	5 (2.2)	14 (6.1)	7 (3.1)	203 (88.6)	1.22
Carpentry	2 (0.9)	9 (3.9)	2 (0.9)	216 (94.3)	1.11
Public service	4 (1.7)	2 (0.9)	2 (0.9)	221 (96.5)	1.08
Trading	1 (0.4)	20 (8.7)	3 (1.3)	205 (89.5)	1.20
Barbering/Plaiting		3 (1.3)	4 (1.7)	222 (96.9)	1.04
Vulcanizing		2 (0.9)	3 (1.3)	224 (97.8)	1.03
Tailoring	1 (0.4)	4 (1.7)	2 (0.9)	222 (96.9)	1.06
Laundry		1 (0.4)	2 (0.9)	226 (98.7)	1.02
Bricklaying		5 (2.2)	1 (0.4)	223 (97.4)	1.05
Shoemaking		3 (1.3)	3 (1.3)	223 (97.4)	1.04
Private salary Jobs	2 (0.9)	2 (0.9)	1 (0.4)	224 (97.8)	1.05
Driving	2 (0.9)	12 (5.2)	2 (0.9)	213 (93.0)	1.14
Gatekeeping		1 (0.4)	1 (0.4)	227 (99.1)	1.02

Source: Computed from Field survey, 2019.

Figures in parentheses are the percentages

$\bar{x} \geq 2.5$ = High Involvement

***=significant values**

4.2.2 Cumulative Level of involvement in livelihood activities

Further analysis was conducted to analyze the cumulative level of involvement in the entire livelihood activities identified in the three Local Government s using the Equal Interval Approach model. Data in Figure 2 show that 78.2% of the respondents had a low level of involvement while only 1.3% had high involvement level. The reasons for this are because many non-agricultural livelihood activities rarely exist in the communities this is against the earlier identified livelihood activities which showed that agricultural-based, particularly arable crops livelihood activities recorded high involvement among the respondents. The finding is inconsonant with the studies of Abonu (2016), and Alabi (2018) that Stated that Benue State is known for her production of arable crops in Nigeria and it is one of the agrarian regions of the country with over 78% of the population involving in agriculture and agricultural related profession. Similarly, cassava, maize, corns, rice and other arable crops are produced by farmers in the State.

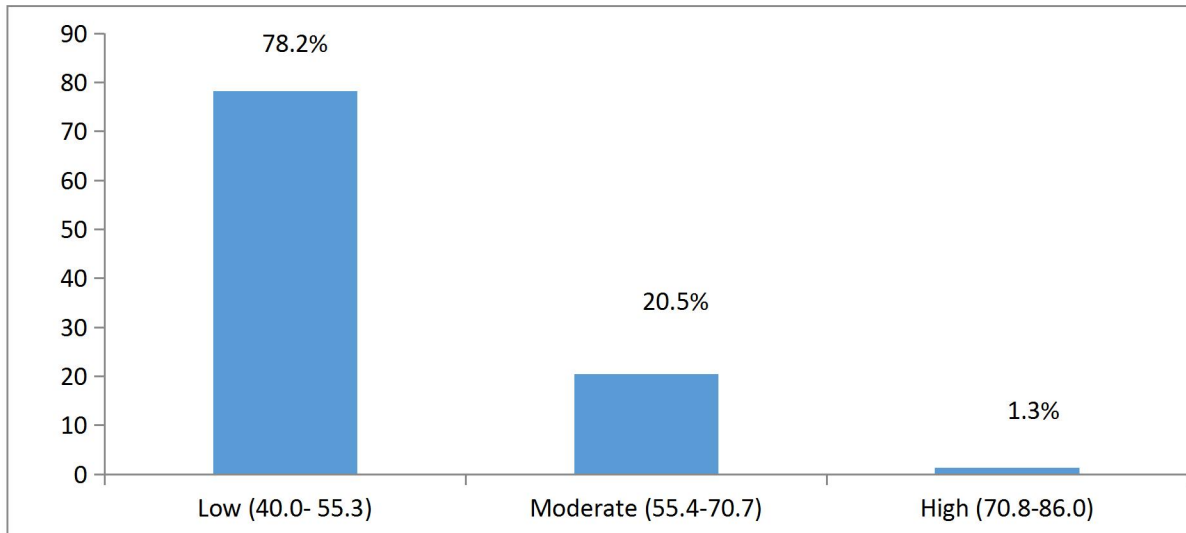


Figure 2: Cumulative Level of involvement in livelihood activities

Source: Computed from Field survey, 2019.

Range = 46

Min. Involvement score = 40.0

Max. Involvement score = 86.0

4.3: Extent of Causes of farmers-herdsmen conflicts

The result in Table 4.3 shows that many causes of conflicts were identified as responsible for the farmer-herdsmen conflict in Benue State. Among the prominent ones were destruction of crops ($\bar{x} = 4.77$), contaminations of streams by cattle and other animals ($\bar{x} = 4.19$), overgrazing of fallow land ($\bar{x} = 3.96$), lack of trust ($\bar{x} = 3.83$), language barriers ($\bar{x} = 3.77$), disregards for traditional authority ($\bar{x} = 3.69$). Also, lack of jobs ($\bar{x} = 3.53$), indiscriminate bush burning ($\bar{x} = 3.51$), sexual harassment ($\bar{x} = 3.41$), reprisal attacks from both groups ($\bar{x} = 3.41$), stray cattle ($\bar{x} = 3.33$) and high population ($\bar{x} = 3.23$), harassment of nomads ($\bar{x} = 3.21$), were among the high causes of conflicts by the respondents. Others were access and control of natural resources ($\bar{x} = 3.12$)

The findings showed that destruction of farmland by the herds of the pastoralists, overgrazing of fallow land and contaminations of streams by cattle and other animals is a major cause of conflicts between farmers and herdsmen as this is commonly recorded in many works of literature such as Gefu (2003), Chikaire, Atala, Akpoko, and Nnadi (2011) and Alabi (2018). Similarly, sexual harassment and lack of trust have equally been reported as a major cause of crisis between cattle herders and farmers in many parts of Nigeria as reported by Blench (2004) and Arene & Anyaeji (2010), Adisa (2012) and Gbeyi (2017),

Table 4.3: Extent of Causes of farmers-herdsmen conflicts

Causes of conflicts	Great Extent	Moderate Extent	Some Extent	Small Extent	Not at all	Mean
Destruction of crops	186 (81.2)	37 (16.2)	3 (1.3)	3 (1.3)		4.77*
Sexual harassment	44 (19.2)	85 (37.10)	45 (19.7)	32 (14.0)	23 (10.0)	3.41*
Contamination of streams by cattle's and other animals	90 (39.3)	110 (48.0)	17 (7.4)	7 (3.10)	5 (2.2)	4.19*
Disregards for traditional authority	62 (27.1)	92 (40.2)	33 (14.4)	25 (10.9)	17 (7.4)	3.69*
Harassment of nomads	51 (22.3)	72 (31.4)	25 (10.9)	35 (15.3)	46 (20.1)	3.21*
Reprisal attacks from both groups	45 (19.7)	91 (39.7)	25 (10.9)	50 (21.8)	18 (7.9)	3.41*
Lack of jobs or idleness	68 (29.7)	70 (30.6)	30 (13.1)	37 (16.2)	24 (10.5)	3.53*
Access or control of natural resources	17 (7.4)	81 (35.4)	65 (28.4)	44 (19.2)	22 (9.6)	3.12*
Language barriers	63 (27.5)	92 (40.2)	44 (19.2)	19 (8.3)	11 (4.8)	3.77*
High population growth	30 (13.1)	66 (28.8)	84 (36.7)	24 (10.5)	25 (10.9)	3.23*
Lack of trust between the two groups	64 (27.9)	106 (46.3)	25 (10.9)	23 (10.0)	11 (4.5)	3.83*
Stray cattle	55 (24.0)	74 (32.3)	29 (12.7)	34 (14.8)	37 (16.2)	3.33*
Cattle rustling/ theft	37 (16.2)	65 (28.4)	46 (20.1)	9 (3.9)	72 (31.4)	2.94
Over grazing of fallow land	87 (38.0)	86 (37.6)	32 (14.0)	8 (3.5)	16 (7.0)	3.96*
Indiscriminate bush burning	57 (24.9)	47 (20.5)	90 (39.3)	25 (10.9)	10 (4.4)	3.51*

Source: Computed from Field survey, 2019.

Figures in parentheses are the percentages

$\bar{x} \geq 3.0$ = High Extent

*= significant variable

4.4: Perceived Effects of the conflicts

The perceived effects of the conflicts were analysed using variables in Table 4.4. Results show that crops destruction ($\bar{x} = 4.72$), stoppage of developmental projects ($\bar{x} = 4.37$), burning of valuable properties ($\bar{x} = 4.43$), economic activities affected ($\bar{x} = 4.30$), increased in the prices of foodstuff ($\bar{x} = 4.31$), displacement ($\bar{x}=4.27$), houses were burnt ($\bar{x} =4.25$), reduction in profits from sales ($\bar{x} =4.19$), increased numbers of widows, widowers and orphans ($\bar{x}=4.19$), outbreaks of diseases and hunger ($\bar{x} =4.18$), lack of access to farm-land ($\bar{x} =4.10$), the shutdown of markets in my community ($\bar{x} =4.27$), people left the community ($\bar{x} =4.53$), killings and personal properties were destroyed ($\bar{x} =4.48$) were among the various effects observed with high impact. Others where Government infrastructure was destroyed ($\bar{x} =3.77$), the hostility of community members towards strangers ($\bar{x} =3.87$), people abandoned their lands and never returned ($\bar{x} =3.88$), jobs were lost ($\bar{x} =3.88$), people sold their properties and migrated to other safer communities ($\bar{x} =3.90$) and many others were also identified. The findings showed that the effects of farmers-herdsmen conflicts are enormous ranging from farm destruction to a hike in the price of foodstuff, hence, making life difficult for farmers and their families. Many farmers were displaced from their communities, thereby seeking refuge in other places far away from their original place as this was the reason for the internally displaced (IDP) camps scattered across the State. This finding implies that farmers' hardship will be increased and people will pay higher in purchasing foodstuffs as the destruction of farms and relocation of farm families were the identified associated effects of farmers-herdsmen conflicts. In addition, the destruction of social amenities would also affect farmers' stability and their productivity with the attendance hike in food prices. This is also known to encourage the relocation of farmers that have the required

capital and resources; leaving behind the vulnerable ones who may not have what is required to relocate. This assertion is supported by Yusuf and Buhari (2018) and Ajuwon (2004) that opined that destruction of lives and properties were the common effects of farmers-herdsmen conflicts in many parts of Nigeria.

Table 4.4: Perceived Effects of conflicts on the respondents

Effects	Not at all	Small impact	Some impact	Moderate impact	Great impact	Mean
Crops were destroyed during the conflicts	2 (0.9)			57 (24.9)	170 (74.2)	4.72*
Rural developmental projects were halted during the crises	7 (3.1)			124 (54.1)	98 (42.8)	4.37*
During the crises my family valuable properties were burnt	1 (0.4)	1 (0.4)	1 (0.4)	121 (52.8)	105 (45.9)	4.43*
Economic activities were affected by the crises	2 (0.9)	2 (0.9)	1 (0.4)	144 (62.9)	80 (34.9)	4.30*
Increased in prices of food stuffs	1 (0.4)	6 (2.6)	2 (0.9)	131 (57.2)	89 (38.9)	4.31*
Displacement of persons and families during the family	1 (0.4)	7 (3.1)	11 (4.8)	120 (52.4)	90 (39.3)	4.27*
My house was burnt in the crises	3 (1.3)	22 (9.6)	2 (0.9)	89 (38.9)	113 (49.3)	4.25*
people left this community because of crises	2 (0.9)			102 (44.5)	125 (54.6)	4.53*
Killings and Personal Properties were destroyed during the crises	3 (1.3)	2 (0.9)		101 (44.1)	123 (53.7)	4.48*
Infrastructures and other amenities of Governments were destroyed	22 (9.6)	24 (10.5)	1 (0.4)	119 (52.0)	63 (27.5)	3.77*
My community members are now hostile to strangers	9 (3.9)	30 (13.1)	2 (0.9)	128 (55.9)	60 (26.2)	3.87*
People left their lands and never returned to it due to the crises	10 (4.4)	31 (13.5)	4 (1.7)	115 (50.2)	69 (30.1)	3.88*
People lost their jobs after the conflict	12 (5.2)	31 (13.5)	1 (0.4)	114 (49.8)	71 (31.0)	3.88*
People sold their properties and migrated to other communities	14 (6.1)	22 (9.6)	2 (0.9)	126 (55.0)	65 (28.4)	3.90*
Schools were closed down and children stop going to school	6 (2.6)	1 (0.4)	1 (0.4)	115 (50.2)	106 (46.3)	4.37*
The crises led to the shutdown of markets in my community	3 (1.3)	8 (3.5)	5 (2.2)	124 (54.1)	89 (38.9)	4.27*
Lack of access to farm lands	1 (0.4)	19 (8.3)	2 (0.9)	138 (60.3)	69 (30.1)	4.10*
Outbreaks of diseases and hunger	3 (1.3)	18 (7.9)	1 (0.4)	120 (52.4)	78 (38.0)	4.18*
Break down of law and order in my community	9 (3.9)	29 (12.7)	8 (3.5)	132 (57.6)	51 (22.3)	3.82*
Absence of agriculture labour force	10 (4.4)	14 (14.4)	8 (3.5)	115 (50.2)	63 (27.5)	3.82*
My family have to harvest early	13 (5.7)	60 (26.2)	15 (6.6)	85 (37.1)	56 (24.5)	3.48*

to avoid destruction						
Increased teenage pregnancy in my community	27 (11.8)	61 (26.6)	9 (3.9)	80 (34.9)	52 (22.7)	3.30*
Increased number of widows, widowers and orphans	8 (3.5)	15 (6.6)	2 (0.9)	105 (45.9)	99 (43.2)	4.19*
Indebtedness as a result of the conflict	31 (13.5)	33 (14.4)	5 (2.2)	93 (40.6)	67 (29.3)	3.58*
Reduction in profits from sales	4 (1.7)	8 (3.5)	10 (4.4)	126 (55.0)	81 (35.4)	4.19*

Source: Computed from Field survey, 2019.

Figures in parentheses are the percentages

$\bar{x} \geq 3.0$ = High extent of Effect

4.5: Vulnerability factors to the conflict

Vulnerability factors to conflicts between farmers and herdsmen were observed. Results show that non-respect for traditional rulers ($\bar{x} = 3.75$), distance to the nearest hospital ($\bar{x} = 3.75$), there were few exit routes in the communities ($\bar{x} = 3.53$), a feeling of no consequence of an action by one group ($\bar{x} = 3.64$), faulty ideology ($\bar{x} = 3.71$), lack of needed skills to protect ourselves ($\bar{x} = 3.97$) and the bias of security forces ($\bar{x} = 3.73$), was the highly vulnerable factors experienced by the respondents. Also, the leaders have not been able to resolve the conflicts ($\bar{x} = 4.04$), non-fence that could ward off stray animals ($\bar{x} = 4.03$), inability to curtail animals from straying into farmland ($\bar{x} = 4.06$), no access to safe water point ($\bar{x} = 4.08$), anxiety over re-occurrence of conflict ($\bar{x} = 4.06$) and lack of ranching ($\bar{x} = 4.03$) were highly vulnerable factors associated with farmers-herdsmen conflicts.

In addition, no means of livelihood ($\bar{x} = 4.17$), the ineffectiveness of security structure ($\bar{x} = 4.24$) and inability to access local markets ($\bar{x} = 4.12$), high level of poverty ($\bar{x} = 4.19$), and proliferation of arms and ammunition ($\bar{x} = 3.64$) were also highly vulnerable factors that influenced conflicts between farmers and herdsmen in the study Area.

The findings showed that several vulnerable factors were found to be associated with the conflicts between farmers and herdsmen and these are issues that could fuel the reoccurrence of the crisis which may make Nigeria records uncountable losses every time conflicts occur between the herders and the farmers. The vulnerability factors must critically be looked into if the State is to restore its glory of being the food basket of Nigeria. This could be done when the traditional rulers, for instance, regain their respect from the populace by focussing on traditional affairs without allowing politics to influence their decisions and activities as the custodians of traditional rites. Similarly, lack of means of livelihood was also a critical vulnerable factor that

may fuel crisis between farmers and herdsmen as supported by the findings of Ogebe, Daniel and Ligom (2019), Durojaiye (2014) and Nweze (2005) that variously worked on issues in conflicts between cattle herders and farmers across Nigeria. The studies pointed to the fact that conflicts were fuelled by the inability of the community leaders and traditional leaders to mediate amicably in resolving crises related to farm destruction, resulting from the conflicts. Furthermore, poverty and joblessness among people were found to be responsible for the conflict.

Table 4.5: Vulnerability factors to conflicts between farmers and herdsmen

Variable	SD	D	U	A	SA	Mean
Non-respect for the traditional rulers	19 (8.3)	32(14.0)		115 (50.2)	63 (27.5)	3.75*
The local leaders have not been able to resolve the conflict	14 (6.1)	15 (6.6)		118 (51.1)	82 (35.2)	4.04*
Few exit routes in my community	18 (7.9)	41(17.9)	8 (3.5)	126 (55.0)	36 (15.7)	3.53*
The non-existence of grazing law	20 (8.7)	69(30.1)	6 (2.6)	89 (38.9)	45 (19.7)	3.35*
Non-provision of ranching system	8 (3.5)	18 (7.9)	5 (2.2)	126 (55.0)	72 (31.4)	4.03*
Long-distance to nearest hospital	24(10.5)	22 (9.6)	3 (1.3)	119 (52.0)	61 (26.6)	3.75*
Non-provision of local fences that could war off stray animals from the farms	8 (3.5)	14 (6.1)	6 (2.6)	(137) 59.8	64 (27.2)	4.03*
Inability to curtail animals straying into farmlands	2 (0.9)	14 (6.1)	13 (5.7)	139 (60.7)	61 (26.6)	4.06*
Anxiety over re-occurrence of conflict	3 (1.3)	22 (9.6)	6 (2.6)	126 (55.0)	72 (31.4)	4.06*
No means of livelihood	5 (2.2)	9 (3.9)	7 (3.1)	128 (55.9)	80 (34.9)	4.17*
Ineffectiveness of security structure	5 (2.2)	11 (4.8)	4 (1.7)	113 (49.3)	96 (41.9)	4.24*
Increasing deforestation	26(11.4)	92(40.2)	10 (4.4)	61 (26.6)	40 (17.5)	2.99
Faulty ideologies/customs that does not encourage peaceful cohabiting	16 (7.0)	37(16.2)	4 (1.7)	113 (49.3)	59 (25.8)	3.71*
No access to safe water point	5 (2.2)	11 (4.8)	12 (5.2)	134 (58.5)	67 (29.3)	4.08*
Inability to access local market	3 (1.3)	18	7 (3.1)	122 (53.3)	79 (34.5)	4.12*
Lack of needed skills to protect ourselves	5 (2.2)	33(14.4)	2 (0.9)	114 (49.8)	75 (32.8)	3.97*
Lack of political will to end the conflict	23(10.0)	104(45.4)	4 (1.7)	60 (26.2)	38 (16.6)	2.94
The bias of security forces toward one group	12 (5.2)	44(19.2)	1 (0.4)	110 (48.0)	62 (27.1)	3.72*
High level of poverty	5 (2.2)	15 (6.6)	1 (0.4)	119 (52.0)	89 (38.9)	4.19*
A feeling of no consequence of an action by one group	12 (5.2)	37(16.2)	10 (4.4)	112 (48.9)	58 (25.3)	3.73*
The proliferation of arms and ammunition	16 (7.0)	46(20.1)	6 (2.6)	98 (42.8)	63 (27.5)	3.64*
Lack of proper intelligence gathering on the part of the security agencies	13 (5.7)	75(32.8)	6 (2.6)	86 (38.0)	48 (21.0)	3.36*
Blockage of grazing route by farmers	38(16.6)	94(41.0)	8 (3.5)	66 (28.8)	23 (10.0)	2.75
Unable to resist attacker because of ill health	32(14.0)	92(40.2)	10 (4.4)	67 (29.3)	28 (12.2)	2.86
A natural disaster such as flood	11 (4.8)	63(27.5)	22 (9.6)	93 (40.6)	40 (17.5)	3.38*
Excessive migration	10 (4.4)	40(17.5)	14 (6.1)	106 (46.3)	59 (25.8)	3.72*

Source: Computed from Field survey, 2019.

Figures in parentheses are the percentages

$\bar{x} \geq 3.0 = \text{High}$

SD = Strongly disagree, D = Disagree, U = Undecided, A = Agree, and SA = Strongly Agree

4.6: Coping strategies use by the Respondents

Coping strategies to farmers-herdsmen conflicts were observed and results in Table 4.6 indicated that, the problem-oriented coping strategies used by the respondents includes, borrowing money ($\bar{x} = 3.59$), working harder ($\bar{x} = 3.34$), taking up another jobs ($\bar{x} = 3.68$), begging for food ($\bar{x} = 3.76$), planting fewer crops to avoid losses ($\bar{x} = 3.81$) and relocating some family members ($\bar{x} = 3.58$). These variables recorded great extent in their rating of coping with the menace of the conflicts. Also, reduction in agricultural investment ($\bar{x} = 3.31$), preaching by the religious leaders ($\bar{x} = 3.63$), not feeling safe by the community members ($\bar{x} = 4.02$), increased in out of school's children ($\bar{x}=4.26$) and using children for labour ($\bar{x} = 4.09$) were variables that contributed to high problem-oriented coping strategies among the respondents in the study Area. The findings show increased out of school children is the component of problem-oriented coping strategy with the highest mean score of 4.26, This is an indication of the fact that farmers-herdsmen conflicts have a serious impact on the increasing number of out of school children seen in the study Area, this is due to the fear of the children been attacked or kidnap of molested on their way to school, so the parent deems it safer to keep the children at home.

On the emotional orientation, it was observed that always prayed for peace ($\bar{x} = 3.87$) was the only variable under emotional orientation that was high while accepting one's faith, pretended it was not that bad, using drugs to forget the damage and taking it out on others were all low. This implies that farmers addressed their emotional coping strategies by often praying for peace.

However, none of the variables under the social support-seeking strategy was significant. The findings conform to Adebo and Olotu (2018) that Stated that farmers living farming for another job and relocating family members were the common coping strategies used among farmers. Furthermore, Umar *et al.* (2013) posited that farmer used problem-oriented, emotional and social-oriented strategies used to cope with the conflicts between farmers and herdsmen in Kebbi

State, Nigeria, this was contrary to the findings in this work as the majority of the people use emotional and problem coping strategies, the study further showed that problem-oriented coping strategy was more prominent among the other types of strategies used. While the rate of usage of problem-oriented was as high as 51.0%, the social usage was rated fewer than 30.0% according to the study. The finding was at variance with the study of Baba and Abeysinghe (2017) that posited that religious tolerance was an effective strategy to combat the farmers and herdsmen crisis in Nigeria.

Table 4. 6: Coping strategies used by the respondents

PROBLEM-ORIENTED COPING STRATEGIES	Not at all	Small exten	Some extent	Moderate extent	Great extent	Mean
Borrowed money	10 (4.4)	53 (25.3)	4 (1.7)	101 (44.1)	56 (24.5)	3.59*
Worked harder now	14 (6.1)	75 (32.8)	2 (0.9)	96 (41.9)	42 (18.3)	3.34*
Had to take another job	11 (4.8)	43 (18.8)	5 (2.2)	120 (52.4)	50 (21.8)	3.68*
Beg for food before i eat	10 (4.4)	43 (18.8)	4 (1.7)	106 (46.3)	66 (28.8)	3.76*
Plant less crop on my farm to avoid huge losses during conflict	6 (2.6)	40 (17.5)	4 (1.7)	121 (52.8)	58 (25.3)	3.81*
Relocate some of my family for safety	10 (4.4)	57 (24.9)	3 (1.3)	108 (47.2)	51 (22.3)	3.58*
Have tightened the Security around my farm	32 (14.0)	155 (67.7)	4 (1.7)	22 (9.6)	16 (7.0)	2.28
Always prepared for the worst	48 (21.0)	128 (55.9)	7 (3.1)	27 (11.8)	19 (8.3)	2.31
Communities are heavily guarded by armed officers	64 (27.9)	123 (53.7)	5 (2.2)	17 (7.4)	20 (8.7)	2.15
Community people are now told to protect themselves/farms and family	54 (23.6)	75 (32.8)	3 (1.3)	52 (22.7)	45 (19.7)	2.82
Reduction in agricultural investments	35 (15.3)	49 (21.4)	4 (1.7)	91 (39.7)	50 (21.8)	3.31*
Ranching is been considered in my community	53 (23.1)	101 (44.1)	2 (0.9)	45 (19.7)	28 (12.2)	2.54
We now pay herdsmen to guide our farms from encroachment	49 (21.4)	129 (56.3)	4 (1.7)	35 (15.3)	12 (5.2)	2.27
Religious leaders from both groups preach peace	7 (3.1)	49 (21.4)	9 (3.9)	120 (52.4)	44 (19.2)	3.63*
My community members do not feel safe anymore	5 (2.2)	21 (9.2)	9 (3.9)	124 (54.1)	70 (30.6)	4.02*
My children are withdrawn from school	5 (2.2)	7 (3.1)	8 (3.5)	112 (48.9)	97 (42.4)	4.26*
Our children are now involved in child labor	9 (3.9)	21 (9.2)	3 (1.3)	103 (45.0)	93 (40.6)	4.09*
EMOTION ORIENTED COPING STRATEGIES						
Accepted it as my faith	32 (14.0)	98 (42.8)	5 (2.2)	55 (24.0)	39 (17.0)	2.87
Always Prayed for peace	11 (4.8)	27 (11.8)	3 (1.3)	128 (55.9)	60 (26.2)	3.87*
We pretended it was not that bad	33 (14.4)	108 (47.2)	8 (3.5)	44 (19.2)	36 (15.7)	2.75
Using drugs to forget about the damage done	36 (15.7)	101 (44.1)	9 (3.9)	38 (16.6)	45 (19.7)	2.80
Always take out anger on	36 (15.7)	97 (42.4)	8 (3.5)	66 (28.8)	22 (9.6)	2.74

others

**SOCIAL SUPPORT-
SEEKING COPING
STRATEGIES**

Received help from community	35 (15.3)	90 (39.3)	5 (2.2)	73 (31.9)	26 (11.4)	2.85
Received interventions from friends and families	18 (7.9)	58 (25.3)	4 (1.7)	107 (46.7)	42 (18.3)	2.58
Received help from Local Government	29 (12.7)	123 (53.7)	14 (6.1)	42 (18.3)	21 (9.2)	2.41
Received help from social unions	33 (14.4)	134 (58.5)	12 (5.2)	36 (15.7)	14 (6.1)	2.59
Many NGOs have come to my aid	29 (12.7)	123 (53.7)	11 (4.8)	44 (19.2)	22 (9.6)	2.68
Received help from State Government	38 (16.6)	100 (43.7)	15 (6.6)	47 (20.5)	29 (12.7)	2.67

Source: Computed from Field survey, 2019.

Figures in parentheses are the percentages

$\bar{x} \geq 3.0 = \text{High}$

4.7: Hypothesis testing

4.7.1: Relationship between selected socio-economic characteristics of respondents and the effects of conflicts

Results in Table 4.6 shows that sex (Wald = 18.06), age (Wald = -10.36), education (Wald = 8.12), religion (Wald = 27.14), type of farming (Wald = 17.06), farm size (Wald = 14.67) and experience (Wald = -0.51) were the determinants of the effects of farmers-herdsmen conflicts. The identified variables were significant at 0.01 level. Also, the primary occupation was significant at 0.05 level. Interpreting the odds ratio, the findings revealed that the relative probability of a farmer experiencing high effects of conflicts rather than the low effects is about 35.0% higher for male farmers compared to the female farmers. For the age which was also significant, it means that older farmers feel the effects of conflicts higher than the younger one by about 56.0% while farmers with education had about 18.0% probability of having a higher effect compared to the uneducated farmers. Similarly, being a Christians has the probability of about 34.0% tendency to experience the effect higher than belonging to other forms of religious affiliation. More so, having mixed farming has the probability of about 10.0% of experiencing higher effects of conflicts than the other types of farming. The findings show that all the identified significant variables could be used to explain the level of effects of conflicts between farmers and cattle herders in the study Area. The findings agree with a study conducted by Nformi *et al.* (2014) which Stated that age, sex and education were the critical factors that explained the level of effects of pastoralist and farmers conflicts in Nigeria. Furthermore, Baba and Abeysinghe (2017) Stated that farmers and herdsmen are divided along religious lines in the North Central Region of Nigeria. The majority of the farmers are Christian while few others are Animist. Herdsmen are predominantly Muslims. This has made friction between them to quickly assume religious nomenclature. And except for Plateau State, the other five States in the region

have no established forum or organization promoting religious tolerance among persons of different religious backgrounds. As a result of age-long insurgency in the North East Region of Nigeria as well as those in neighboring countries and the rebellions in Northern Mali, arms illegally find their ways into civilian possession even more than money and food in Nigeria. In addition, Umar *et al.* (2013) submitted that the educated farmers feel the effects of conflicts between farmers and herdsmen more compared to uneducated farmers. This is because they have a higher investment in farming compared to the uneducated ones.

Table 4.7.1: Results of Binary Logistic Regression showing the determinants of the effects of conflicts

Variable	B	S.E.	Wald	Sig.	Exp(B)
Sex	2.30	0.54	18.06	0.00	1.35
Age	-3.01	0.93	-10.36	0.00	1.56
Marital status	-0.15	0.28	-0.29	0.59	0.86
Education	2.16	0.76	8.12	0.00	1.18
Religion	3.22	0.62	27.14	0.00	31.34
Ethnic group	1.19	0.71	2.82	0.09	3.29
Primary occupation	2.32	1.31	3.09	0.05	60.98
Type of farming	3.96	0.96	17.06	0.00	0.10
Farm size	3.15	0.82	14.67	0.00	1.16
Experience	-0.02	0.04	-0.51	0.00	0.98
Household size	-0.09	0.07	-1.23	0.22	0.91
Membership of association	0.37	0.72	0.51	1.00	0.07
Constant	-54.19	8.41	-6.44	1.00	0.00

Source: Field survey, 2019.

-2 Log likelihood = 107.428, Nagelkerke R Square= 0.35

4.7.2: The difference in the effects of conflicts across the three Local Government s

It was revealed in Table 4.6.2 that significant difference exists across the three LGAs in the study Area with respect to the effects of conflicts with the F-test value of 28.58 df (2) 226 at 0.01 significant level. This shows that the effects of conflicts were differently experienced across the Local Government Areas. The implication of this finding is that there is a variation in the effects of conflicts across the State. Posthoc test using Duncan range test was used to determine the location of the differences in the effect of conflicts between farmers and herdsmen as shown in Table 4.6.2. It was observed that farmers in Oju Local Government Area experienced more of the effects than farmers in Guma while Vandiekya farmers experienced least of the effects. This means that havoc caused by the conflicts might be more in Oju than the other LGAs as documented in table 4.6.2 below. The findings corroborated the study of Umar *et al.* (2013) that Stated that the effects of conflicts vary across the North Central zone of Nigeria.

Table 4.7.2a: Results of Analysis of Variance showing significant difference in the effects of conflicts

Effect's score/LGAs	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8571.25	2	4285.62	28.58*	0.00
Within Groups	33886.00	226	149.94		
Total	42457.24	228			

Source: Computed from Field survey, 2019.

Table 4.7.2b: Results of Post-hoc Test

LGA	N	Subset for alpha = 0.05		
		1	2	3
Vandiekya	87	103.41 ^a		
Guma	96		112.55 ^b	
Oju	46			119.59 ^c
Sig.		1.000	1.000	1.000

Source: Computed from Field survey, 2019.

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 68.728.

4.7.3: The difference in the vulnerability factors of respondents in the three Local Government Areas

Vulnerability factors to the conflict were analyzed across the three LGAs in the study Area. Results in Table 4.6.3 shows that a significant difference exists in the vulnerability factors across the three Local Government Areas with the F-test values of 4.176 df (2) 226 at the 0.05 significant level. This shows that vulnerability factors differ in the three LGA. Specifically, results in Table 4.6.3b show that farmers in Guma were more vulnerable to the conflicts than those in the other two LGAs. This might be due to the nature of attacks on the farmers specifically the topography of the Local Government as it is surrounded by high mountain which is believe to be where the militias herdsmen resides and lunch their attacks from and also the category of farmers and investment may determine the vulnerability factor experienced by farmers.

Table 4.7.3a: Results of Analysis of Variance showing a significant difference in the vulnerability of respondents to conflicts across three LGAs

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1259.416	2	629.708	4.176*	0.017
Within Groups	34080.29	226	150.798		
Total	35339.7	228			

Source: Computed from Field survey, 2019.

***Significant at 0.05 level of significance**

Table 4.7.3b: Results of Duncan Post-Hoc Test showing differences in vulnerability to conflict across three LGAs

LGA	N	Subset for alpha = .05	
		1	2
Vandiekya	87	88.8966 ^a	
Oju	46	90.4783 ^a	90.4783 ^a
Guma	96		94.0521 ^b
Sig.		0.451	0.089

Source: Computed from Field survey, 2019

CHAPTER FIVE

5.0: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1: Summary

The farmers-herdsmen conflict has been a major problem confronting peace and stability in many parts of Nigeria in recent times, it's devastating nature has been very conspicuous and has taken several dimensions across the central parts of Nigeria particularly, Benue State where 17 out of the 23 Local Government Area of the State had experienced this peace disturbing crisis between 2014 and 2017 and it is wide spreading and taken different disturbing dimension. Interestingly, the State is predominantly occupied by farmers, producing both crops and animals. Farmers-herdsmen conflict is about land-based resource control and this has resulted in loss of lives and properties with a significant effect on growth and development. Therefore, the study was conducted to assessed the effect of farmers and herdsmen conflict on the livelihood activities of arable crop farmers in Benue State. Specifically, it describes the socioeconomic characteristics of the respondents in the study Area, identified the livelihood activities involvement of respondents, identified the causes of farmers-herdsmen conflicts, examined the key effect of the conflict on the respondents, ascertained perceived vulnerability factors to the conflict, and identified the coping strategies used by the respondents.

The study was carried out in Benue State, Nigeria, a multi-stage sampling procedure was used to select the sampled LGAs which includes Oju, Guma, and Vandiekya with a sample size of 231 and a response rate of 99.3% (229). A structured questionnaire administered through an interview schedule was used to collect data for this study. Data collected were analysed with descriptive statistics like frequency, percentages, mean, standard deviation. T-statistics in Binary

Logistic Regression and F-statistics in Analysis of Variance and posthoc range test were used to make inferences.

Results showed that 62% of the respondents were male who are still in their productive age with a cumulative mean of 38 years, over 60% of them are married. Respondents were fairly educated with over 62% of the respondents has passed through one form of western education. From the results Christianity and Tiv was their major religion and ethnic affiliation with 90% and 74.7% respectively. Farming was the respondent's dominant primary occupation as at the time of this study as majority cultivated less than 5 hectares as their average farm size, this means that they were small scale farmers. Respondents had a fairly high farming experience of about 19 years, it was also recorded that the respondents have a mean household size of 4 persons and below average of 47% do not belong to any association.

It is worthy of note that respondents lost more than 50% of the income from farming and non-farming activities within a year as sesame farming recorded the highest percentage income loss within a year (75.28%), followed by guinea corn (56.92%), maize (55.84%), cassava (54.80%) and yam production (49.24%).

The studies showed that respondents were highly involved yam production ($\bar{x} = 3.68$), cassava farming ($\bar{x} = 3.22$), sesame farming ($\bar{x} = 3.25$), rice farming ($\bar{x} = 3.25$) and groundnut farming ($\bar{x} = 3.11$). soya bean ($\bar{x} = 2.94$), guinea corn farming ($\bar{x} = 2.93$), but cumulatively it was found out that majority of the farmers had a low level of involvement 78.2% in farming and non-farming activities, this was attributed to the non-availability of non-agricultural livelihood activities and farmers and herdsman conflict in the study Area.

Result from the studies showed that destruction of crops ($\bar{x} = 4.77$), contaminations of streams by cattle and other animals ($\bar{x} = 4.19$), overgrazing of fallow land ($\bar{x} = 3.96$), lack of trust ($\bar{x} =$

3.83) disregards for traditional authority ($\bar{x} = 3.69$), indiscriminate bush burning ($\bar{x} = 3.51$), sexual harassment ($\bar{x} = 3.41$), Also, lack of jobs ($\bar{x} = 3.53$), reprisal attacks from both groups ($\bar{x} = 3.41$) access and control of natural resources ($\bar{x} = 3.12$), language barriers ($\bar{x} = 3.77$), high population ($\bar{x} = 3.23$), and stray cattle ($\bar{x} = 3.33$) were among the causes of conflicts that were indicated to be high causes by the respondents.

Results from the studies showed that crops destruction ($\bar{x} = 4.72$), stoppage of developmental projects ($\bar{x} = 4.37$), burning of valuable properties ($\bar{x} = 4.43$), reduction in profits of sales ($\bar{x}=4.19$), increased numbers of widows, widowers and orphans ($\bar{x}=4.19$), outbreaks of diseases and hunger ($\bar{x}=4.18$), lack of access to farm land ($\bar{x}=4.10$), shutdown of markets in my community($\bar{x}=4.27$), economics activities affected ($\bar{x} 4.30$), increased in the prices of food stuffs ($\bar{x} 4.31$), displacement ($\bar{x}=4.27$), houses were burnt ($\bar{x}=4.25$), people left the community ($\bar{x}=4.53$), killings and personal properties were burnt ($\bar{x}=4.48$) were observed as the key impact of the conflict.

On the Vulnerability factors to conflicts between farmers and herdsmen. Results showed that no ineffectiveness of security structure ($\bar{x} = 4.24$) no means of livelihood ($\bar{x} = 4.17$), inability to access local markets ($\bar{x} = 4.12$), high level of poverty ($\bar{x} = 4.19$), no access to safe water point ($\bar{x} = 4.08$), non-fence that could ward off stray animals ($\bar{x} = 4.03$), inability to curtail animals from straying into farmland ($\bar{x} = 4.06$), the leaders have not been able to resolve the conflicts ($\bar{x} = 4.04$), anxiety over re-occurrence of conflict ($\bar{x} = 4.06$), lack of needed skills to protect ourselves ($\bar{x} = 3.97$), bias of security forces ($\bar{x} = 3.73$), a feeling of no consequence of an action by one group ($\bar{x} = 3.64$) and proliferation of arms and ammunition($\bar{x}=3.64$),non-respect for traditional rulers ($\bar{x} = 3.75$), there were few exit routes in the communities ($\bar{x} = 3.53$), lack of ranching

(\bar{x} =4.03) distance to the nearest hospital (\bar{x} = 3.75), were the highly vulnerable factors experienced by the respondents.

From the results on coping strategies used, not feeling safe by the community members (\bar{x} = 4.02), increased out of school's children (\bar{x} =4.26) and using children for labour (\bar{x} = 4.09) were variables that contributed to high problem-oriented coping strategies among the respondents in the study Area. On the emotional orientation, it was observed that I always prayed for peace (\bar{x} = 3.87) was the only variable under emotional orientation that was high while accepting one's faith, pretended it was not that bad, using of drugs to forget the damage and taking it out on others were all low. However, none of the variables under the social support-seeking strategy was found high.

5.1.2: The Results of the hypothesis

1. Hypothesis one: there is no significant Relationship between selected socio-economic characteristics of respondents and the effects of conflicts

Results of the binary logistic regression show that sex (Wald = 18.06), age (Wald = -10.36), education (Wald = 8.12), religion (Wald = 27.14), type of farming (Wald = 17.06), farm size (Wald = 14.67) and experience (Wald = -0.51) were the determinants of the effects of farmers-herdsmen conflicts. The identified variables were significant at 0.01 level. Also, the primary occupation was significant at 0.05 level.

2. There is no significant difference in the effects of conflicts across the three Local Government s

Results from the analysis of variance (F-test) shows that significant difference exists across the three LGAs in the study Area with respect to the effects of conflicts with the F-test value of

28.58 df (2) 226 at 0.01 significant level. This shows that the effects of conflicts were differently experienced across the Local Government Areas. Posthoc test using Duncan range test was used to determine the location of the differences in the effect of conflicts between farmers and herdsmen. It was observed that farmers in Oju Local Government Area experienced more of the effects than farmers in Guma while Vandiekya farmers experienced least of the effects. This means that havoc caused by the conflicts might be more in Oju than the other LGAs as documented below

3. There is no significant difference in the vulnerability factors of respondents in the three Local Government Areas

Results of this hypothesis show that a significant difference exists in the vulnerability factors across the three Local Government Area with the F-test values of 4.176 df (2) 226 at the 0.05 significant level. This shows that vulnerability factors differ in the three LGA. Specifically, results of posthoc range test show that farmers in Guma were more vulnerable to the conflicts than those in the other two LGAs.

5.2: Conclusion

Based on the findings of the study it can be concluded that

1. The study shows that farmers cumulatively had an estimated 56.20% decrease in their livelihood income within 2017 to 2018.
2. The most affected religion in these farmers and herdsmen conflict are the Christians as it is believed to have a more religious undertone.
3. The respondents have a high level of livelihood involvement activities in major arable crop production such as yam production, rice farming, sesame farming and groundnut farming. Moreover, the cumulative livelihood activities involvement of the farmer was greatly affected by the conflict which saw cumulatively over 70% low involvement.
4. The major contributor to the causes of the conflict as revealed by the results includes destruction of crops, contamination of streams by cattle.
5. The study revealed that the following were among the highest key effect of the conflict on the rural dwellers in the study Area and they include, destruction of crops, people left the community during the crises, killings and valuable properties were burnt, were among the highest key effect of the conflict on the rural dwellers in the study Area. The effect of the conflict varies across the three Local Government Area, but was greatly felt in Oju Local Government.
6. The respondents complained about not ineffectiveness security structure or biasness of the security operatives and this was confirmed as some of the security on ground as at the

time of this research were engage in extortion and intimidation of the people, they were sent to protect

7. The vulnerability of the respondents to the conflict also varies across the three Local Government but the people of Guma Local Government are highly vulnerable to the re-occurrence of the conflict, reason being the community is surrounded with mountain that is believe to house the militia herdsmen

5.3: Recommendations

Based on the findings of this study, the following recommendations were put forward:

1. Adequate security should be provided by both the Federal and State Government especially in the interior Areas which are highly susceptible to this farmers and herdsmen conflict as this will provide optimum security for the farmers and aid there return to their means of livelihood which has been destroyed by the conflict.
2. The study unveiled that major livelihood activities that were greatly affected by the conflict which result in over 50% decrease in farmers income and production capacity. To this effect more should be done by the State and Federal Government to provide financial assistance, seeds and other help needed by the affected farmers as this will help to restore there already lost confidence in the Government and at the same time reduce the severe impact of the conflict on the people.
3. The study revealed ineffectiveness of security structure as one of the major vulnerability factors to the conflict and as such more to be done to re-orientate and educate the security structures deployed to the affected areas on the need to carry out their responsibilities of effectively protecting people and livelihood without bias

4. Local leaders should always remind their followers that reprisal attacks only trigger the re-occurrence of the conflict and that amicable resolution without bloodshed is the key to a peaceful coexistence.
5. The study contributes to the literature by identifying critical vulnerability factors which includes ineffectiveness of the security structure, high-level poverty, local leaders have not been able to resolve the conflict and Inability to access local market, reducing these factors will help mitigate the reoccurrences of this conflict
6. Despite almost all Local Government Areas in Benue States been affected by this conflict. the study unveiled the Local Government that is highly vulnerable to the reoccurrence of this conflict and the most affected one which includes Oju, Guma, and Vandiekya, as this knowledge will help Government and Non-Government Organization to plan effectively to remediate the severe consequences of the conflict

Agriculture that Benue State and other States within the Benue valleys boast off will soon be a thing of the part if speedy and appropriate measure are not taken by the authorities involve to curb this farmers and herdsmen conflict that is fast transforming into a bigger national menace and embarrassment.

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APPENDIX
RESEARCH QUESTIONNAIRE
UNIVERSITY OF BENIN
Department of Agricultural Economics & Extension Services

September, 2019

Dear Sir/Madam

I am EHEBHA EMMANUEL, a Postgraduate student of the Department of Agricultural Economics and Extension Services in the University of Benin City. I am conducting a research on **EFFECT OF FARMERS AND HERDSMEN CONFLICT ON LIVELIHOOD ACTIVITIES OF ARABLE CROP FARMERS IN BENUE STATE, NIGERIA**. This is a requirement for the partial fulfillment for the award of a Master's degree in science.

Please I hereby solicit your accurate responses by answering the asked questions below as correctly as possible, which will enable me to have a reliable data for the study. Also I wish to State that this research is strictly for academic purpose and I assure you that your responses to the questions will be treated with full confidentiality.

Nevertheless, I wish to thank you for your anticipated cooperation in supporting this study.

Best Regards,

EHEBHA EMMANUEL

SECTION A: SOCIO ECONOMIC CHARACTERISTICS

Please kindly answer this section accurately as possible

Personal characteristics

Nationality:

State:

Local Government Area:

Community/ Village:

1. Sex: (a) Male (b) Female
2. Age (years):
3. Marital status: (a) single (b) Married (c) Divorce (d) Widow (e) Separated
4. What is your educational qualification? (a) No formal education (b) Quranic (c) adult education (d) Primary School Certificate (e) Secondary School Certificate (f) Tertiary (g) Others please specify.....
5. Religion: (a) Christian (b) Muslim (c) Traditional (d) Others please specify.....
6. What is your ethnic group? (a) Hausa (b) Igbo (c) Tiv (d) Idoma (e) Igede (f) others please specify
7. What is your primary occupation? (a) Farming (b) livestock rearing (c) civil servant (d) mining (e) others specify.....
8. What type of farming? (a) crop farming (b) livestock farming
9. What is your Farm size? (Hectares).....
10. How many years of Farming Experience?
11. Household size (numbers)
12. Do you belong to any association? (a) Yes (b) No
13. Below estimates the farmers annual income of two planting seasons

Items (Unit)	Amount (₦) last year	Amount (₦) last two years
Annual income from yam production		
Annual income from cassava production		
Annual income from maize production		
Annual income from sesame production		
Annual income from sweet potatoes production		
Annual income from groundnut production		
Annual income from rice production		
Annual income from guinea corn production		
Annual income from livestock production		
Annual income from non-arable crop activities		
Annual income from non-agricultural activities		

SECTION B: LIVELIHOOD ACTIVITIES INVOLVEMENT LEVEL

Activity	Highly involved	Involved	Casually involved	Not involved
Yam planting				
Cassava farming				
Sweet potatoes farming				
Soya beans farming				
Guinea corn farming				
Sesame farming				
Rice farming				
Groundnut farming				
Tree crop farming				
Small ruminant animals				
Large ruminant animals				
Fishing				
Hunting				
Agro-input dealership				
Beekeeping				
Forest produce harvesting				
Processing				
Welding				
Okada riding				
Carpentry				
Public servants				
Trading				
Barbering/Plaiting				
Vulcanizing				
Tailoring				
Laundry				
Bricklaying				
Shoe making				
Private salary Jobs				
Driving				
Gate keeping				
Fabrication				
Others specify				

SECTION C: CAUSES OF CONFLICT IN THE STUDY AREA

Please kindly indicate to what extent you agree that the listed items cause conflict between farmers and herdsmen

Items	Great Extent	Moderate Extent	Some Extent	Small Extent	Not at all
	Destruction of crops				
Sexual harassment					
Contamination of streams by cattle's and other animals					
Disregards for traditional authority					
Harassment of nomads					
Reprisal attacks from both groups					
Farming on grazing route					
Lack of jobs or idleness					
Access or control of natural resources					
Language barriers					
High population growth					
Lack of trust between the two groups					
Stray cattle					
Cattle rustling/ theft					
Over grazing of fallow land					
Indiscriminate bush burning					
Bush burning					

SECTION D: EFFECT OF CONFLICTS:

Kindly indicate your level of agreement that the following occurred during the farmers-herdsmen conflicts:

Statements	Level of agreements				
	Not at all	Small impact	Some impact	Moderate impact	Great impact
Crops were destroyed during the conflicts					
Rural developmental projects were halted during the crises					
During the crises my family valuable properties were burnt					
Economic activities were affected by the crises					
As farmers it was difficult to access the farmland during the crises					
Increased in prices of food stuffs					
Displacement of persons and families during the family					
My house was burnt in the crises					
people left this community because of crises					
Personal Properties were burnt during the crises					
Infrastructures and other amenities of Governments were destroyed					
My community members are now hostile to strangers					
People left their lands and never returned to it due to the crises					
People lost their jobs after the conflict					
People sold their properties and migrated to other communities					
Schools were closed down and children stop going to school					
The crises led to the shutdown of markets in my community					
Lack of access to farm lands					
Outbreaks of diseases and hunger					
Break down of law and order in my community					
Absence of agriculture labour force					
My family have to harvest early to avoid destruction					
Increased teenage pregnancy in my community					
Increased number of widows, widowers and orphans					
Indebtedness as a result of the conflict					
Reduction in profits from sales					

SECTION E: VULNERABILITY FACTORS

Kindly indicate your level of agreement to the following Statement as it pertains the key factors enabling vulnerability to the conflict in your Area

Please note that: *D is Disagree, SD is Strongly Disagree, U is Undecided, A is Agree, and SA is Strongly*

Statements	SD	D	U	A	SA
The traditional rulers are not respected					
The local leaders have not been able to resolve the conflict					
Few exit route in my community					
The non-existence of grazing law					
Non-provision of ranching system					
Long-distance to nearest hospital					
Non-provision of local fences that could war off stray animals from the farms					
Inability to curtail animals straying into farmlands					
Anxiety over re-occurrence of conflict					
No means of livelihood					
Ineffectiveness of security structure					
Increasing deforestation					
Faulty ideologies/customs that does not encourage peaceful cohabiting					
No access to safe water point					
Inability to access local market					
Lack of needed skills to protect ourselves					
Lack of political will to end the conflict					
The bias of security forces toward one group					
High level of poverty					
A feeling of no consequence of an action by one group					
The proliferation of arms and ammunition					
Lack of proper intelligence gathering on the part of the security agencies					
Blockage of grazing route by farmers					
Unable to resist attacker because of ill health					
A natural disaster such as flood					
Excessive migration					

SECTION F: COPING STRATEGY:

Kindly indicate your level of agreement to the following Statement on how well you have been able to cope effectively with the conflict

Statements					
	Not at all	Small extent	some extent	Moderate extent	Great extent
PROBLEM ORIENTED COPING STRATEGIES					
borrowed money					
Worked harder now					
had to Take another job					
beg for food before eaten					
plant less crop on my farm to avoid huge losses during conflict					
relocate some of my family for safety					
have tighten the Security around my farm					
always prepared for the worst					
community are heavily guarded by armed officers					
community people are now told to protect themselves/farms and family					
Reduction in my agricultural investments					
Ranching is been considered in my community					
paying herdsmen to guide our farms from encroachment					
Religious leaders from both groups preach peace					
community members do not feel safe anymore					
Our children are withdrawn from school					
children are now involved in child labor					
EMOTION ORIENTED COPING STRATEGIES					
accepted it as my faith					
always Prayed for peace					
We pretended it was not that bad					
use drugs to forget about the damage done					
always take it anger on others					
SOCIAL SUPPORT- SEEKING COPING STRATEGIES					
Received help from community					
Received interventions from friends and families					
Received help from Local Government					
Received help from social unions					
NGOs have come to my aid					
Received help from State Government					