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Perceived Impact of Farmers-Herders Conflict on Food Availability in North Central Nigeria

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Abstract

The study explored perceived impacts of farmer–herder conflict on food availability in North Central Nigeria from the perspectives of farmers in the region. Specifically, it determined perceived impacts of the conflict on: food production; food distribution; and accessibility of food to households. The study adopted survey research design. Area of the study was North Central Nigeria, including Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau states. Population was made up of 7755000 heads of farming households in the region. A semi-structured interview guide was used for data collection. Data were organized into frequencies and percentages. Findings reveal among others, that majority (94.2%) of participants abandoned their farms due to threats from herdsmen and opportunists; 74.2 percent did not cultivate farmlands in interior places due to fear of attacks; and 94.2 percent experienced reduced farm labour due to youths fleeing conflict areas for safer locations. All participants (100%) reported unsafe roads; food price inflation due to increased transportation fares; and food scarcity. Seven recommendations were made based on the findings.

Keywords: Farmer–herder, Conflict, Food, Availability, Production, Distribution, Security

Introduction

Agriculture plays a vital role in providing food, generating income, and driving economic growth. According to the Food and Agriculture Organization of the United Nations (FAO, 2022) and the National Bureau of Statistics (NBS, 2021), agriculture is a key source of income for most rural households, and a major source of food for Nigeria. This sector, therefore, serves as an important pillar of the economy by supporting food security. However, in recent years, unresolved issues between the farmers and pastoral herders have led to threats to rural stability and productivity in agriculture. This is most certainly the case in North Central Nigeria, where agriculture is the primary economic activity of the people. The increased frequency and intensity of violent farmer-herder conflict are

undermining the food security of the whole country.

A conflict is a situation where the actors involved see their interests diverging. According to Melinda (2024), conflict is a process that begins when one party perceives that the other party has negatively affected something of interest to them. Within a farmer-herder situation, it is the violent clashes between sedentary-crop farmers and nomadic herders, often triggered by competition over grazing land, crop destruction, or encroachment on farmlands (Okoli & Atelhe, 2014). Farmer-herder conflict is rooted in structural tensions surrounding land use, grazing rights, and access to water resources. These tensions have been exacerbated by rapid population growth, climate change, desertification, and weak conflict resolution mechanisms (Audu, 2020; Ezenwa et al, 2022). For centuries, nomadic pastoralism and sedentary crop farming coexisted in Nigeria's Middle Belt. However, shrinking grazing reserves and increasing encroachment on arable land have intensified disputes, often escalating into violent confrontations that leave devastating consequences on farming communities (Bwala & Ogirima, 2020; Okoli & Ogayi, 2018; International Crisis Group, 2017). In North Central Nigeria, often referred to as the nation's "food basket," studies have confirmed that farmer-herder conflict is particularly destructive because it strikes at the heart of agricultural productivity, causing the problem of food availability in the country (Tari, 2021; Udosen, 2021; & Dabo et al., 2024).

Food availability refers to the physical presence of sufficient quantities of food of appropriate quality, supplied through domestic production, imports, or food aid (FAO, 2008). It is the foundation of food security, as it determines whether households and markets can access the food they need. In regions affected by farmer–herder conflict, such as North Central Nigeria, disruptions in agricultural activities due to violence, displacement, and destruction of farmlands have directly reduced local food production and market supply (Abass, 2021). Consequently, these disruptions threaten food availability, making it increasingly difficult for communities to sustain adequate production levels as well as the distribution of food to other areas in need of it.

Food distribution is the processes that move food from production sites to consumers through transportation, storage, and market networks (Maxwell & Smith, 1992). Effective distribution ensures that food produced in one area reaches other regions in need. However, farmer–herder conflict often disrupts these systems, making it hard for food produced to reach markets or consumers. This situation often leads to localised food shortages and price volatility, thereby reducing households' access to food (Audu, 2020).

Access to food refers to the stable ability of individuals or households, through economic, physical, social, and political means, to obtain affordable, nutritious, and culturally acceptable food

(Perez-Escamila, 2024; Sen, 1981). It encompasses both economic and physical dimensions, depending on income levels, market stability, and safety. Farmer–herder conflict negatively affects food access by displacing populations, reducing household incomes, and limiting access to local markets due to insecurity (Mercy Corps, 2015; Blench, 2017; Ogbinyi, 2024). Many households are forced to abandon their farms and relocate to temporary settlements or internally displaced persons (IDP) camps, where food supply is irregular and dependent on aid. Farmer-herder conflicts cause food price inflation, which makes it hard for households to maintain regular access to food (Tuki, 2023).

Despite the growing body of research on the economic and security implications of the farmer–herder conflict in Nigeria, limited attention has been given to how affected communities experience its impact on food availability. (Mustapha, 2023; Kanu et al., 2024). Existing studies, such as Adisa (2012), Kanu (2019), and Blench (2017), largely focused on the causes and socio-political dimensions of the conflict, leaving significant gaps in understanding its consequences on the components of food availability - production, distribution, and access.

This study is anchored on the Resource Scarcity Theory proposed by Homer-Dixon (1999), which posits that the struggle for limited resources like land and water is likely to lead to violent conflict. This theory helps explain the conflict between farmers and herders, especially in resource-poor areas, and the adverse effects on food supply. The findings of the study could assist policymakers, researchers, and development practitioners to develop strategies and mechanisms for better resource management, conflict resolution initiatives to enhance food security promote peaceful coexistence among farming and herding communities.

Objectives of the Study

This study investigated perceived impact of farmer-herder conflict on food availability in North Central Nigeria. Specifically, it determined perceived ways farmer-herder conflicts impact:

1. food production
2. food distribution
3. access of households to food

Methodology

Design of the study: This study adopted a phenomenological research design to explore the lived experiences of farmers affected by the farmers–herders' conflicts regarding their impact on food availability in North Central Nigeria. Phenomenology focuses on understanding and describing how individuals experience and interpret a particular phenomenon in their daily lives (Creswell & Poth, 2018).

Area of the Study: The study was carried out in North Central Nigeria. The area comprises six states, namely: Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau states. The area's economy is largely agrarian, leveraging its rich soil and favorable climatic conditions to support robust agricultural activities (North

Central Development Commission, 2022). In the region, farming households cultivated 2,8 million plots (Niger), 6.1 million plots (Benue), 2,4 million plots (Plateau). 1.4 million plots (Kogi), 1.2 million plots (Kwara), and 1.3 million plots (Nasarawa), making a total of 15.2 million plots (NBS, 2023). The North Central region has historically served as a hub for the production of staple foods such as yam, cassava, maize, sorghum, rice, beans, and groundnuts. Some farmers in the region also engage in vegetable farming and tree crops such as mango, cashew, and oranges. In addition to crop farming, many households keep livestock, particularly goats, sheep, poultry, and in some cases, cattle (NBS, 2023) as a form of supplementary livelihood and savings.

Population for the Study: The population for the study comprised 7755000 heads of farming households in the region (NBS, 2023). The farmers are largely smallholder farmers, cultivating between one and five hectares of land. This implies that agriculture in the region is still at the subsistence level (North Central Development Commission, 2022). A majority of smallholder farm-household heads have completed only primary or secondary schooling, while a non-trivial share has informal or no formal education (Ajah & Okorie, 2021).

***Sample for the Study*:** purposive and snowball sampling techniques were used to select a total of 35 farmers who were heads of farming households in Benue (6), Kogi (6), Kwara (5), Nasarawa (6), Niger (6), and Plateau (6). The participants were chosen based on their direct experience of the farmers–herders conflict and their involvement in farming activities. This sample size was not predetermined statistically but was guided by the principle of thematic saturation, which occurs when additional interviews no longer yield new insights or themes (Guest et al., 2006)**.** Thus, data collection continued until the researchers observed repetition in responses, indicating that saturation had been reached at 35 participants.

***Instrument for Data Collection*:** Data were collected using an interview guide. It was developed based on a literature review and the objectives of the study. Each main question was followed by relevant **probing questions** to encourage participants to elaborate on their experiences, perceptions, and challenges. The interview guide was validated by five experts in agriculture and conflict management. The interview guide was pilot tested among five farmers outside the study area. The interview guide was tested to ensure content clarity and relevance, cultural appropriateness, and the generation of sequential data (Creswell & Poth, 2018). Feedback from the pilot confirmed the instrument's ability to elicit rich qualitative data.

Data Collection Techniques: Interviews were conducted by researchers at participants' homes or neutral community spaces to ensure comfort and privacy. All interviews were audio-recorded with the prior informed consent of participants, with transcripts and notes kept for contextual details. Transcripts were

transcribed verbatim. Confidentiality and data security were maintained through pseudonymous codes and stored on encrypted, password-protected drives accessible only to the core research team. The interviews were conducted between April and June 2024.

Data Analysis Techniques: All interviews were recorded and transcribed verbatim. Information was summarized and organized based on the specific objectives of the study. responses were summarized into frequencies and percentages, then presented as Tables.

Results

Demographic Characteristics of participants: The majority of the participants were male (24, 68.6%), while females were 11 (31.4%). The mean age was 44.3 years, suggesting that most respondents were in their productive years. Almost half (40%) of the participants had only primary education. 37.1 percent had secondary education, while 22.9 percent had tertiary education.

Table 1: Frequencies and Percentage (%) Responses of Farmers on Ways Farmer-herder Conflicts Impact Food Production in North-Central Nigeria

S/N	Formulated Meanings from Significant Statements Made by Participants	F	%
1	Farmers abandoned their farms due to verbal threats from herdsmen and other opportunists.	33	94.2
2	Social media news on conflicts made farmers abandon their farms.	16	42.9
3	Farms were abandoned due to herdsmen settling on farms, making the farms unsafe	31	88.5
4	Farms were completely taken over by herdsmen or some opportunistic groups.	23	65.7
5	Farmers did not cultivate farm lands in more interior places due to fear of conflicts	26	74.2
6	Farmland was not cultivated due to the displacement of farmers	28	80
7	Farmers completely stayed away from the farming business	19	54.2
8	Investors in agriculture withdrew their investments from insecure areas	21	60
9	Grazing on farms led to reduced outputs	31	88.5
10	Trampling and destroying of crops by animals disrupted plant growth and yield.	32	91.4
11	Reduced visits to farms for weeding, fertilising, etc, due to fear of attack, led to lower yield	32	91.4
12	Fear and attacks prevented timely planting, plant care (fertilising, weeding), and harvesting.	18	51.4
13	Agricultural inputs such as seeds and fertilizers were scarce as sellers avoided unsafe areas.	21	60
14	Reduced farm labour as youths fled from conflict areas.	33	94.2

F = Frequencies; % = Percentages.

Table 1 shows that almost all the farmers (94.2%) abandoned their farms due to verbal threats. In addition, almost all the farmers (94.2%) reported that they did not have adequate farm labour as a result of the relocation of youths from conflict areas to more peaceful areas. In addition, a large majority (91.4%) reported that trampling and destroying of crops by animals and reduced visits to farms for weeding, fertilising, and other crop maintenance activities due to fear of attack led to lower crop yield. All the other items had response rates above 50%, except for the impact of social media news, which had a response rate of 42.9%.

Table 2: Frequencies and Percentage (%) Responses of Farmers on Ways Farmers-herders Conflicts Impact Food Distribution in North-Central Nigeria

S/N	Formulated Meanings from Significant Statements made by Participants	F	(%)
1	Roads were unsafe, making it hard for farmers and traders to convey goods to market.	35	100
2	There were roadblocks as some roads were totally taken over by some opportunistic individuals.	23	65.7
3	Most people travelled with their goods on alternative, safer but longer routes.	19	54.2
4	Transporters charged higher due to increased fuel consumption from taking longer, safer routes.	28	80
5	Transporters charged more for taking the risk of travelling along unsafe roads	33	94.2
6	Transporters withdrew from going to some markets in high-conflict areas.	18	51.4
7	Local markets in conflict areas were totally closed.	29	82.8
8	Fear of attacks discouraged traders from going to some local markets.	28	80
9	Disruption of market days made markets unreliable and kept buyers away.	25	68.5
10	Abandonment of storage facilities in conflict areas led to limited storage and increased food waste.	22	62.8
11	Destruction of storage facilities during crises led to increased food waste and scarcity	27	77.1
12	Looting of stored food during crises by opportunistic individuals discouraged farmers from storing food.	16	45.7

F = Frequencies; % = Percentages.

Table 2 shows that for all the participants, roads were unsafe, making it hard or impossible for farmers and traders to travel. Most of the other items recorded response rates above 50%. The high response rates across the items suggest that these experiences were prevalent among participants.

Table 3: Frequencies and percentage (%) responses of farmers on ways farmers-herders conflicts impact access to food by households in North-Central Nigeria.

S/N	Formulated meanings from significant statements made by participants	F	(%)
1	Fear of attack prevented people from going to local markets.	28	80
2	The cost of transportation prevented buyers and sellers from going to local markets.	30	85.7
3	The rise in transportation fares increased the cost of food.	35	100
4	Prices of staple foods rose very high due to scarcity.	35	100
5	Fewer traders come to the market and have the chance to raise prices unfairly.	23	65.7
6	Reduced productivity and income due to destroyed crops.	26	74.2
7	No income due to the abandonment of farmlands and farming business.	22	45.7
8	Nutritious foods perished on long travel routes to market.	19	54.2
9	Poor storage facilities did not allow for proper storage of perishable food.	24	68.5

F = Frequencies; % = Percentages.

Table 3 shows that all participants reported that they experienced food price inflation resulting from an increase in the cost of transportation and food scarcity. All the other items recorded response rates above 50%. The high response rates across the items suggest that these experiences were prevalent among participants.

Discussion of Findings

Findings from data analysis show that farmer-herder conflict has had profound consequences on food production in North Central Nigeria. Major impacts of the conflicts include the abandonment of farms due to fear of attack; reduced cultivated land and crop yield reduction due to grazing, trampling, and poor crop maintenance. These findings align with earlier observations by Mustapha (2023), who noted that fear-driven land abandonment has curtailed agricultural productivity across conflict-prone communities. The findings are also consistent with Tari (2021), who reported that persistent farmer–herder violence forced many farmers in Benue, Nasarawa, and Plateau States to flee their communities, resulting in large areas of uncultivated and abandoned farmland. Further, the results of this study are consistent with Dabo et al (2024), who found, from a study conducted in Taraba state, that conflict and insecurity undermine the ability of farmers to maintain stable agricultural production. The findings of this study, along with those of Dabo (2024), corroborate Okoli and Ogayi's (2018) assertion that forced migration caused by the conflict disrupted farming cycles, reduced labour availability, and contributed to prolonged food scarcity in affected regions. The findings of this study reinforce FAO's (2021) warning that prolonged conflicts in

agrarian societies directly undermine national food supply systems and support the narration of the International Crisis Group (2017) about how cattle encroachments and retaliatory attacks destroyed standing crops, weakened food systems, and heightened food insecurity across conflict-prone communities in North Central Nigeria.

Findings also revealed that conflicts disrupted food distribution networks as roads were deemed unsafe and often blocked, making local markets inaccessible. Respondents reported that the conflict made traders, investors, and transporters avoid markets in conflict-prone areas and caused food wastage and scarcity as storage facilities were abandoned, destroyed, or looted. These findings align with the assertions of the International Crisis Group (2017) that conflict-affected areas in central Nigeria experienced disruptions in food logistics due to threats, road blockages, and unpredictable attacks. The findings resonate with Ofuoku and Isife (2025), who stated that conflict disrupts transportation and leads to damage to storage infrastructure. It also aligns with Nnaji (2022), who reported that violent conflict in agrarian regions significantly disrupts food supply chains, limiting the movement of goods and reducing market activity. Similar to the findings of this study, Udosen (2021) found that insecurity along major agricultural routes in Nigeria discourages traders, increases transport risks, and restricts market inflows while Ojo and Adebayo (2022) found that poor warehousing infrastructure in conflict zones directly increases spoilage of perishable produce and disrupts food supply chains Furthermore, the findings of this study aligns with a study conducted by Umeoka and Sakurai (2025), which found that conflict causes market and economic shocks and farm theft. Overall, insecurity disrupts food distribution, and as Dabo et al (2024) noted, insecurity is a major constraint to food security.

Analysis of data on accessibility of food to households shows that fear of attacks and increased cost of transportation prevented people from going to local markets. It was also found that the conflicts resulted in food price pressures arising from natural inflation and opportunistic pricing; decreased purchasing power; and loss of perishable food products due to long travel hours and poor storage facilities. These findings are in line with Tuki (2023), which states that conflict-driven inflation is one of the most devastating indirect outcomes of the farmers–herders' crisis. The findings also resonate with Ogbinyi et al (2024), which states that herder-farmer conflicts impact food security by reducing access to markets. The findings of this study are also consistent with Mercy Corps (2015), which confirmed that insecurity causes households to travel longer distances to access food, exacerbating economic burdens and exposing consumers to higher market prices. Together, these findings reveal how conflicts undermine not only physical access to food but also economic and logistical conditions necessary for stable household food

security. Overall, the findings show that the farmer–herder conflict in North Central Nigeria undermines food availability and highlight the urgent need for integrated, multi-level responses that combine security enforcement, agricultural support, and dialogue-driven peace building.

Conclusion

The findings of the study reveal that farmer–herder conflict has had far-reaching consequences that systematically undermined food security in Nigeria. The conflict reduced agricultural production as farmers abandoned their farmlands, and crops were destroyed and poorly maintained. It also restricted food distribution by disrupting transportation and market networks. These disruptions in food production and distribution collectively led to food shortages, reduced purchasing power, and increased food prices, making it more difficult for households to access food. These multidimensional impacts highlight the pressing need for sustainable conflict-resolution strategies, improved security, and inclusive land-use policies to restore stability and safeguard national food security.

Recommendations

Based on the findings, the following recommendations are made:

1. Government and security agencies should provide more security for farmlands and storage facilities to restore confidence among farmers and encourage renewed investment in agriculture.
2. Provide compensation, insurance, and input support to help displaced farmers return to production.
3. Relevant Government agencies and NGOs should rehabilitate rural roads, markets, and storage facilities damaged or abandoned due to conflict.
4. Federal and state Governments should invest in safe rural road networks and local market systems to improve food distribution efficiency and reduce losses.
5. Establish clear grazing policies to control the movement of cattle and minimize open-grazing conflicts.
6. ECOWAS, the Nigerian government, and civil society organizations should facilitate structured dialogue platforms between farmers and herders to address grievances, foster trust, and promote peaceful coexistence.
7. Local communities should be involved in designing and implementing conflict resolution and food security interventions. Grassroots participation ensures legitimacy and sustainability.

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