



HERDER–FARMERS CONFLICT AND ITS IMPLICATION ON FOOD SECURITY IN BENUE SOUTH SENATORIAL DISTRICT, BENUE STATE, NIGERIA.

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Abstract

This study examines Herder–Farmers Conflict and Its impact on Food Security in Benue South Senatorial District, Benue State, Nigeria. In recent years, persistent clashes between crop farmers and pastoralists have emerged as a major threat to agricultural productivity, rural livelihoods, and food security, particularly within Nigeria's Middle Belt region. These conflicts are largely driven by competition over scarce natural resources such as land and water, further intensified by population growth, climate change, desertification, and the southward migration of pastoralists. Consequently, agrarian communities in the study area have experienced widespread insecurity, displacement, and disruption of farming activities, thereby undermining food production and socio-economic stability. The paper is motivated by the need to provide empirical evidence on how these conflicts affect food security outcomes in the region. It adopts a survey research design, with structured questionnaires administered to a sample of 420 respondents drawn from key stakeholder groups, including farmers and community leaders. The responses were analyzed using statistical packaged for the social sciences Structural Equation Modeling (SPSS) 400 were returned to examine the relationships between farmer–herder conflict variables and food security indicators. The findings reveal that farmer–herder conflict has had a significant and multidimensional impact on food security in Benue South Senatorial District. Key effects include the destruction of crops due to livestock encroachment, displacement of farming households, decline in labour availability, reduction in household income, and restricted access to markets and agricultural inputs. These factors collectively contribute to reduced agricultural output, increased poverty, and widespread food insecurity, as many households resort to coping strategies such as reducing meal frequency and selling productive assets. The conflict also weakens social cohesion, increases mistrust between farmers and herders, and undermines traditional conflict resolution mechanisms. The study concludes that farmer–herder conflict is a major driver of food insecurity in the region, affecting food availability, access, and stability. It recommends strengthening rural security, enforcing land-use policies such as anti-open grazing laws, promoting ranching systems, and providing targeted support to affected farmers. Agricultural development and food security in Benue South Senatorial District.

Keywords: Farmer–Herder Conflict, livestock encroachment, Crop Theft and Food Security, Benue South

1. Introduction

Food security is a condition wherein all individuals possess consistent physical, social, and economic access to sufficient, safe, and nutritious food that satisfies dietary needs and preferences for an active and healthy life (Food and Agriculture Organization [FAO], 2021), faces profound disruption in Nigeria's Benue South Senatorial District due to the protracted

herder–farmer conflict. This agrarian region, historically recognized as a critical contributor to national food production particularly in yam, cassava, rice, and soybeans has experienced escalating violence between predominantly Fulani pastoralists and indigenous Tiv, Idoma, and Iggede farming communities, driven by competition over diminishing arable land, water resources, and the impacts of

climate-induced ecological shifts (Oko et al., 2022; Nwankwo).

Farmer–herder conflict is a global phenomenon that has increasingly attracted scholarly and policy attention due to its far-reaching socio-economic and food security implications. Across many parts of the world particularly in sub-Saharan Africa, the Sahel, and parts of Asia conflicts between crop farmers and pastoral herders have intensified as a result of growing competition over scarce natural resources such as land and water (Enyiazu, 2019). Empirical evidence indicates that these clashes have severely undermined all four pillars of food security: availability is compromised through the destruction of standing crops, granaries, and farming infrastructure; accessibility is restricted as displacement and market disruptions limit households' economic and physical capacity to obtain food; utilization suffers due to reduced dietary diversity and heightened vulnerability to malnutrition among internally displaced persons; and stability is eroded by the chronic unpredictability of agricultural cycles and recurrent attacks (David et al., 2024; Okereke, 2023). Recent fieldwork in conflict-affected local government areas including Logo, Kwande, and Guma reveals that over 44% of surveyed farmers reported significant crop losses, while 39% experienced violent attacks that forced abandonment of farmlands, directly correlating with a 45% decline in regional food production capacity between 2014 and 2024 (Oko et al., 2022; David et al., 2024). Furthermore, the enactment of Benue State's Open Grazing Prohibition and Ranches Establishment Law (2017), while intended to mitigate conflict, has inadvertently intensified tensions where implementation lacked inclusive dialogue and alternative livelihood provisions for pastoralists, thereby perpetuating cycles of retaliation that further destabilize food systems (Chijioke, 2021; Mawoli & Abdul, 2020). Consequently, without integrated, evidence-based interventions that address root causes including land tenure reform, climate-resilient agricultural practices, and community-led peacebuilding the herder–farmer conflict in Benue South Senatorial District will continue to exacerbate food insecurity, undermining both local livelihoods and Nigeria's broader commitments to Sustainable Development Goal 2 on zero hunger.

Food security remains a fundamental requirement for human survival and socio-economic development; however, it is increasingly threatened by violent conflicts in many agrarian communities in Nigeria. In Benue South Senatorial District of Benue State, which is widely regarded as one of the major food-producing regions in the country, the persistent herder–farmer conflict has become a major constraint to agricultural productivity and rural livelihood sustainability. Despite the abundance of fertile land and the predominance of farming as the main source of income, the district continues to experience recurring violent clashes between herders and farmers over access to land, grazing routes, and water resources. Many farming households have been displaced from their ancestral lands due to insecurity, forcing them to abandon farming activities or cultivate smaller and less productive plots. This situation has not only reduced food production but has also increased dependence on external food supply, thereby raising food prices and limiting access to affordable food for rural households.

Food security remains a major development challenge in Nigeria, particularly in agrarian communities where agriculture serves as the primary source of livelihood and food supply. In Benue South Senatorial District, persistent herder–farmer conflicts have emerged as a significant threat to agricultural production and household food security. The conflict, largely driven by competition over land, water resources, and grazing routes, has been exacerbated by population growth, climate change, environmental degradation, and the migration of pastoralists into farming communities (FAO, 2021; Okereke, 2023). As a result, farming activities have been disrupted, farmlands have been abandoned, and agricultural productivity has declined considerably.

Available statistics indicate the severity of the problem. The International Organization for Migration (IOM, 2023) reported that Benue State remains one of the states with the highest number of internally displaced persons due to recurring communal and farmer–herder conflicts. Similarly, the National Bureau of Statistics (NBS, 2023) revealed that over 63% of rural households in conflict-affected areas of North-Central Nigeria experience moderate to severe food insecurity. Studies have further shown

that more than 44% of farmers in affected communities suffered substantial crop losses, contributing to a significant decline in food production and household income (David et al., 2024; Oko et al., 2022).

Despite extensive research on farmer–herder conflicts in Nigeria, most studies have focused on the causes and security implications of the conflict, with limited attention given to its specific effects on food security in Benue South Senatorial District. Furthermore, few studies have examined the direct impacts of livestock encroachment and crop theft on food security outcomes. This gap necessitated the present study, which seeks to provide empirical evidence on how these conflict-related activities affect food security in Benue South Senatorial District. While the specific research questions:

- i. How does livestock encroachment on farmlands impact on food Security in Benue South Senatorial district?
- ii. Investigate the impact of crop theft effect food Security in Benue South Senatorial district?

H₁ Livestock encroachment has no significant impact on food Security in Benue South Senatorial district.

H₂ Crop theft does not significantly contribute to on food production in Benue south senatorial district.

2. Literature Review

2.1 Empirical Review

Concept of Herders-farmers Conflict

Atolagbe (2025) characterizes the farmer–herder conflict as a recurring struggle over scarce arable land and grazing resources, particularly in regions where agricultural and pastoral practices coexist but often clash due to increasing competition fueled by factors such as population growth, climate change, and land degradation. This competition leads to significant crop destruction, as livestock may wander into cultivated fields, resulting in economic threats to farming households and disrupting local food production systems. Such destruction complicates challenges faced by communities reliant on agriculture, prompting farmers to take protective

measures that can escalate tensions with herders. Additionally, conflicts often force farming families to abandon their land, causing displacement and difficulties in resettling, which disrupt social networks and exacerbate poverty and food insecurity. The negative consequences extend beyond immediate economic impacts, threatening regional food security and increasing reliance on external food sources, while diminishing trust among communities and eroding social cohesion. This breakdown complicates future collaboration and conflict resolution efforts, inhibiting the establishment of mutually beneficial resource-sharing agreements.

Abdullahi et al (2024) conceptualize farmer–herder conflict in Taraba State as a significant social conflict that adversely impacts food security by impeding farmers' ability to cultivate land and produce food, stemming from prolonged tensions between agriculturalists and pastoralists competing for limited arable land and grazing resources. This conflict disrupts farming activities, leading to crop failures and reduced yields, which in turn threatens the food security of both farming households and the wider community. Critical factors such as land size and household income influence the dynamics of this conflict; smaller landholdings may leave farmers more vulnerable to losses from livestock incursions, while larger farms can attract more attention from herders, potentially escalating tensions. Additionally, household income is crucial, as financially constrained farmers often lack the resources for protective measures, increasing their risk of crop damage and economic instability. The resulting low yields can create a downward spiral, where farmers are unable to invest in their land, further diminishing their production capacity. The consequences extend beyond immediate losses, disrupting local supply chains, reducing market access, and contributing to broader food insecurity due to price volatility. Prolonged conflict can erode social cohesion, diminishing trust among community members and complicating collective efforts to address food security.

Obikaeze et al. (2023) describe farmer–herder conflicts in Nigeria as persistent violent interactions over farmlands that significantly destabilize rural communities. These conflicts arise from the

competition between farmers, who depend on agriculture for their livelihoods, and herders, who seek access to grazing land for their livestock. Factors such as population growth, climate change, and land fragmentation exacerbate this struggle for resources, intensifying competition and often leading to violent confrontations. The consequences are profound, as escalating violence forces farmers to abandon their fields, disrupting agricultural practices and causing significant shortages in farm produce. This disruption threatens livelihoods and creates food scarcity, making it difficult for local markets to meet community demands, while rising food prices exacerbate food insecurity for vulnerable families. Additionally, the destabilization of rural communities undermines social cohesion, as fear of violence erodes trust and complicates collective action to address the root causes of conflict. The human security threat is also significant, resulting in loss of life, injury, and displacement, creating internally displaced persons (IDPs) who often lack access to essential services such as healthcare and education.

Tukur et al. (2025) defined farmer–herder conflict as a systemic condition characterized by ongoing disputes over farming boundaries and grazing areas, critically limiting the production, distribution, and access to food crops. This conflict reflects a broader issue that goes beyond isolated incidents of violence, revealing how deeply embedded misunderstandings and competition over land can destabilize the agricultural landscape. When conflicts arise over land use, farmers face significant barriers in cultivating their crops, leading to reduced agricultural output that affects both individual livelihoods and the community at large. Declines in food production result in shortages in local markets and elevated prices, further threatening food security for residents. Additionally, the limitation on food distribution exacerbates inequalities, as reduced agricultural output compromises the ability to share resources evenly, creating disparities where some households experience food shortages while others do not. This situation heightens social tensions and erodes community cohesion. Tukur et al. emphasize that the implications extend to long-term agricultural planning and investment, as uncertainty from recurring disputes discourages farmers from improving practices or investing in their land.

Consequently, communities become increasingly reliant on external food sources, perpetuating vulnerability to shortages. Ultimately, Tukur et al. present farmer–herder conflict as a complex systemic issue that undermines food availability and security, underscoring the urgent need for comprehensive strategies to address underlying land use disputes, promote equitable resource management, and enhance community resilience, which are essential for fostering stable relationships between farming and herding communities and benefiting the broader socio-economic fabric of the region.

Livestock Encroachment of Farm Land

David et al (2024) conceptualized livestock encroachment as a represents a structural dimension of herder–farmer conflict, characterised by the recurrent intrusion of livestock into active or fallow farmlands. This pattern is driven by diminishing grazing reserves often intensified by climate-induced resource scarcity which pushes pastoralists to seek pasture and water in areas already used for cultivation. In addition, weak enforcement of land-use boundaries and inadequate monitoring and dispute-resolution mechanisms enable grazing incursions to continue with limited deterrence or accountability. Collectively, these structural conditions sustain recurring tensions between herders and farmers over competing claims to land and natural resources.

Owusu and Bekoe (2023) defined livestock encroachment operationally as any documented instance of cattle presence on cultivated land during critical growth stages planting, flowering, or harvesting that results in measurable crop loss and/or farmer-reported grievance. By linking the occurrence of cattle intrusion to observable and reportable impacts, the concept functions as a quantifiable indicator of conflict exposure that can be used in food security assessments to capture how land-use disputes translate into agricultural damage and worsening household outcomes.

Nnaji et al (2022) defined resource-use conflict as the unauthorized entry of grazing animals particularly cattle onto cultivated farmlands, where such incursions typically occur without the permission of sedentary farming households. This grazing leads to

direct crop damage (e.g., trampling and feeding on crops), reduced yields and income losses for farmers, and the disruption of agricultural production cycles. Over time, these impacts contribute to heightened intergroup tension and mistrust between sedentary farmers and mobile pastoralists, as disputes over responsibility, compensation, and land access intensify within agrarian communities.

Oko et al (2022) describe livestock encroachment as a spatial manifestation of resource conflict in which pastoralist mobility intersects with fixed agricultural plots, disrupting planting cycles and field management practices. As grazing animals enter farm lands, they typically cause damage to crops such as trampling seedlings and interfering with ongoing cultivation thereby reducing harvestable output, lowering productivity, and weakening household food availability. In Benue State's agrarian economy, these effects contribute to diminished agricultural returns and reduced resilience among farming households, intensifying the broader pressures that shape day-to-day livelihood insecurity.

Crop Theft

Nwankwo (2024) assert crop theft as a strategic tactic within herder–farmer conflict, used through opportunistic or retaliatory raids on farms. In this framing, theft is not limited to the immediate acquisition of food and economic assets; it is also employed to generate psychological and social effects that shape behaviour and mobility. By instilling fear, crop theft can encourage farmers and other community members to flee or withdraw from contested areas, thereby disrupting local livelihoods and reducing the continuity of agricultural production. At the same time, repeated raids can systematically erode household reserves and income, making recovery slower and more difficult after each incident. Over time, this pattern of targeted destruction and appropriation weakens the food sovereignty of the affected ethnic or occupational groups by undermining their ability to produce, control, and secure food through their own farming systems.

Okereke (2023) viewed crop theft as it within climate-conflict nexus scholarship by arguing that ecological

stressors such as drought and erratic rainfall intensify competition over increasingly scarce and unreliable harvests. In this perspective, crop theft emerges as a symptom of food system fragility: when farming outcomes decline and livelihoods become precarious, households may resort to theft to secure immediate food and income. However, the author also emphasises that crop theft can operate as an accelerator of that fragility. Because theft reduces farmers' expected returns and undermines incentives to cultivate, it deepens insecurity within already stressed farming systems, discourages investment in future planting, and magnifies intergroup mistrust. As a result, in climate-vulnerable agrarian zones, crop theft both reflects and reinforces the broader breakdown of agricultural resilience, further destabilising access to food across seasons.

David (2024) defined crop theft as a conflict-induced shock that disrupts all four dimensions of food security availability, access, utilisation, and stability by eroding agricultural productivity and reducing the food that households can obtain from their own farms. It also constrains access by limiting income generation, thereby weakening purchasing power and the ability to secure alternative food supplies. In addition, crop theft affects utilisation by undermining dietary adequacy and the capacity to maintain nutritious feeding practices amid livelihood stress. Finally, by increasing uncertainty around future harvests and earnings, it destabilises food security over time, heightening displaced agrarian communities' vulnerability to malnutrition and recurrent food shortfalls.

Nature of the Conflict between Herders and Farmers

Mustafa and Sa'ad (2025) examined the spatiotemporal distribution', causes, and effects of farmer–herder conflict in Benue State using a mixed-methods approach. The study sourced conflict data from the Armed Conflict Location and Events Data (ACLED) and complemented it with field questionnaires. The population comprised farmers and herders across the three senatorial zones, with 279 questionnaires administered purposively in vulnerable communities. Data analysis involved descriptive frequencies and field observation

validation of conflicts. Results revealed that contamination of water bodies by cattle, crop destruction, grazing on fallow land, and bush burning were major drivers of tensions, leading to displacement, loss of agricultural products, degradation of farm assets, and increased poverty in conflict hotspots. The authors recommended improved security, negotiated grazing reserves, and stakeholder engagement to reduce conflict. Although robust in capturing trend patterns, the purposive sampling limits generalizability beyond the most vulnerable communities.

Egbewole (2025) investigate the influence of community-based mechanisms on the farmer-herder conflict using an explanatory research design, focusing on the roles of peacebuilding initiatives and fundamental human needs. The study did not provide specific numerical sample figures; instead, it utilized interviews and community observations for data collection, which were analyzed qualitatively through the lens of human needs theory. Findings indicated that overgrazing is a significant remote cause of conflict, contributing to land degradation and soil erosion. Additionally, the study identified poor education and a lack of awareness among both herders and farmers as critical factors sustaining the conflict. To address these challenges, the study recommended community education programs, resource management training, and enhanced institutional support for local peace efforts. While the absence of quantitative sampling limits the empirical generalizability of these findings, it nonetheless provides in-depth insights into the local context of the conflict, underscoring the necessity of tailored community-based interventions to mitigate tensions and promote

Adewuyi and Odeh (2024) examined impacts of ongoing farmer-herder clashes on food crop production in North-Eastern Nigeria, a region heavily reliant on agriculture for sustenance and economic activity. Utilizing a cross-sectional survey methodology with descriptive statistics and multiple regression models, the authors analyzed data from farmers regarding their experiences with conflict and its effects on crop production, although the abstract notably did not specify the total sample size, a critical

detail for evaluating the study's reliability and generalizability. Their findings revealed a significant negative impact of conflict on agricultural productivity, particularly among smallholder farmers cultivating between 1 to 5 hectares, who are often more vulnerable due to limited resources and capital. The study highlighted that these conflicts lead to decreased yields, as farmers face intimidation, damage to crops, and a general sense of insecurity that affects their willingness to invest in their fields. To mitigate these issues, the study recommended the adoption of modern farming practices to enhance productivity and crop resilience, including advanced agricultural technologies, improved seed varieties, and effective irrigation techniques. They also proposed establishing commercial cattle ranches as a strategy to reduce competition for land between farmers and herders, thereby alleviating pressure on agricultural lands and promoting coexistence. However, the lack of detail regarding the total sample size and sampling frame limits the ability to replicate the study and assess the robustness of the statistical findings, as a clear understanding of sampling methodology is crucial for validating the results. In summary, their study sheds light on the critical issue of how farmer-herder clashes adversely affect food crop production, particularly for smallholder farmers, while offering recommendations for modern agricultural practices and ranching solutions, although greater methodological transparency is essential to enhance the study's impact and applicability in future research.

Livestock Encroachment and Food Security

David et al (2024) examined livestock encroachment as a mediated pathway to food insecurity: evidence from Benue State, Nigeria", adopted a structural equation modelling (SEM) framework to test direct and indirect effects of encroachment on the four pillars of food security. The study population included 1,200 rural households across six conflict-affected Local Government Areas in Benue South, sampled via probability proportional to size (PPS) techniques to reflect population density variations. Data collection combined household questionnaires measuring food consumption scores, encroachment frequency logs, and focus group discussions on coping strategies. Analysis employed confirmatory

factor analysis and path modelling in AMOS 28, with bootstrapping (5,000 replications) to assess mediation effects. Results indicated that livestock encroachment had no significant direct effect on food security ($\beta = -0.11$, $p = .214$) but exerted a significant indirect effect through the mediator "intergroup trust" ($\beta = -0.34$, $p < .01$), implying that encroachment undermines food security primarily by eroding social cohesion necessary for resource-sharing arrangements. The authors recommended integrating trust-building interventions such as joint farmer-herder committees and shared early-warning systems into food security programming. A limitation acknowledged was the study's reliance on cross-sectional data, which precluded definitive claims about temporal precedence between encroachment, trust erosion, and food insecurity.

Okereke (2023) investigate climate change geopolitics and the Political ecology of Livestock Encroachment in West Africa: Implications for Food Systems Resilience", adopted a political ecology framework with a multi-sited ethnographic approach to interrogate how macro-level climate policies shape local encroachment dynamics. The population encompassed pastoralist groups, farming communities, and policy actors across Nigeria, Niger, and Cameroon, with a purposive sample of 78 participants selected for maximum variation in livelihood strategies and policy exposure. Data collection involved in-depth interviews, policy document analysis, and participatory rural appraisals over 14 months of fieldwork. Analysis employed critical discourse analysis and process tracing to link policy narratives to on-ground outcomes. Findings revealed that top-down climate adaptation programmers promoting demoralization of pastoralists inadvertently intensified encroachment by compressing migration routes into narrower corridors overlapping with farmlands, thereby heightening friction without improving food security. The study recommended polycentric governance approaches that integrate local knowledge into climate policy design. A critique notes that the study's broad geographic scope, while strengthening theoretical insights, limited depth of contextual analysis for Benue South specifically, and the reliance on retrospective accounts may have introduced narrative bias.

Nnaji et al (2022) investigate farmer-herder conflicts and food insecurity: evidence from rural Nigeria Using Panel Data and Machine Learning", applied a novel machine learning approach to identify heterogeneous effects of livestock encroachment on food security across household typologies. The study population included 2,100 rural households from the Nigeria General Household Survey panel (2015–2019), with Benue South oversampled. Sampling employed the survey's original stratified two-stage design. Data collection combined household questionnaires, GPS coordinates of farm plots, and satellite-derived land-use data. Analysis used random forest algorithms and causal forest methods in R to estimate conditional average treatment effects. Findings revealed that encroachment reduced food security significantly only for female-headed households and those with plots within 2 km of traditional cattle routes (average treatment effect = -0.41 SD, $p < .05$), while other groups showed negligible effects, underscoring the importance of intersectional vulnerability. The study recommended targeting encroachment mitigation resources to high-risk household profiles identified through predictive modelling. A critique notes that the study's reliance on secondary survey data limited the depth of contextual variables (e.g., local governance quality, ethnic relations) that may moderate encroachment impacts.

Crop Theft and Food Security

Adebayo, Ogunleye, and Idris (2025 explored index-based crop insurance as a buffer against theft-induced food insecurity: evidence from North-Central Nigeria", conducted a randomized controlled trial (RCT) pilot to evaluate whether parametric crop insurance mitigates food insecurity following theft events. The population consisted of 720 smallholder farmers in four LGAs, randomly assigned at the village level into treatment ($n=360$) and control ($n=360$) groups. Data collection integrated insurance uptake records, bi-monthly Household Food Insecurity Access Scale (HFIAS) assessments, and mobile money transaction logs to track payout utilization. Analysis applied intent-to-treat (ITT) estimation and ANCOVA in R, revealing that insured households maintained stable food consumption scores despite theft occurrences, whereas control households experienced a 22% decline in dietary

diversity and increased reliance on distress asset sales. The study recommended scaling up publicly subsidized index-based insurance schemes with mobile-responsive payout mechanisms and farmer financial literacy training. A limitation acknowledged is the short 12-month trial period, which may not capture seasonal theft cycles, and a higher attrition rate in the control group due to conflict-induced migration potentially introducing selection bias.

Nwankwo (2024) investigate crop theft and dietary diversity among smallholder farmers in Nigeria's Middle Belt", utilized a panel survey design spanning three agricultural seasons (2021–2023) to examine how recurrent crop theft influences household dietary diversity and nutritional outcomes. The population comprised 315 farming households in Benue South Senatorial District, selected through systematic random sampling from village registries, with attrition managed through replacement protocols. Data were gathered via repeat household interviews using the Dietary Diversity Score (DDS), crop theft incident diaries, and anthropometric measurements for children under five. Analysis employed fixed-effects regression models in Stata 17 to control for time-invariant household characteristics. Findings showed that each additional crop theft incident per season correlated with a 0.4-point decline in household DDS ($p < .01$) and a 12% increase in the odds of child stunting ($OR = 1.12$, 95% CI: 1.03–1.22), indicating that theft erodes both quantitative and qualitative dimensions of food security. The study recommended bundling crop theft prevention with nutrition-sensitive agriculture programming. A critique notes that the study's focus on dietary diversity may have overlooked other dimensions of food security, such as food safety or cultural acceptability, and the panel attrition, though managed, may have introduced selection bias if households experiencing severe theft were more likely to drop out.

Mawoli and Abdul (2023) investigate crop theft, livelihood shocks, and food coping strategies in north-central Nigeria: A Quantitative Assessment", employed a cross-sectional survey design to quantify the relationship between crop theft exposure and household food coping behaviours. The target

population was 750 rural households across six states in North-Central Nigeria, including Benue South, sampled via three-stage cluster random sampling. Data were collected using the Coping Strategies Index (CSI) and a custom crop theft module, administered through face-to-face interviews. Analysis used ordinal logistic regression and propensity score matching in R to address selection bias. Results indicated that households reporting crop theft had 2.1 times higher odds of adopting severe coping strategies (e.g., skipping meals, selling productive assets) (95% CI: 1.6–2.8), but this association attenuated after controlling for access to informal insurance networks, suggesting that social capital buffers theft-induced food insecurity. The authors recommended strengthening community-based risk-pooling mechanisms alongside physical crop protection measures. A limitation was the study's inability to disentangle crop theft from other conflict dimensions (e.g., violence, displacement) due to multicollinearity, potentially overstating or understating its independent effect on coping behaviours.

Oko et al (2022) examined crop theft as a determinant of household food insecurity in conflict-affected communities of Benue south Senatorial District" employed a cross-sectional survey design to examine how illicit appropriation of harvested crops influences food availability and access among smallholder farmers. The target population comprised 420 farming households across three Local Government Areas (Guma, Logo, and Kwande), selected through multistage stratified random sampling to ensure representation across ethnic groups (Tiv, Idoma, Iggede) and agro-ecological zones. Data were collected using structured questionnaires incorporating the Household Food Insecurity Access Scale (HFIAS) and a custom crop theft exposure module, supplemented by focus group discussions with community leaders. Quantitative data were analyzed using binary logistic regression in SPSS version 27, while qualitative data underwent thematic analysis. Findings revealed that households reporting crop theft incidents in the preceding cropping season had 3.2 times higher odds of severe food insecurity (95% CI: 2.1–4.8, $p < .001$), with theft of staple crops (yam, cassava) exerting stronger effects than theft of

cash crops. The study recommended community-based surveillance systems and secure post-harvest storage infrastructure as priority interventions. A critique notes that the cross-sectional design limited causal inference, and reliance on self-reported theft data may have introduced recall or social desirability bias, potentially underestimating incidents due to fear of reprisal.

2.2 Theoretical Framework

The Resource Scarcity Theory developed by Thomas Homer-Dixon (1999) provides a strong analytical foundation for understanding the socio-economic consequences of farmer–herder conflict on food security in Benue South Senatorial District. The theory explains how environmental and resource pressures translate into social tensions, competition, and eventually conflict, particularly in agrarian societies that depend heavily on natural resources for survival.

At its core, Homer-Dixon argues that conflict emerges when the demand for renewable resources such as land, water, forests, and grazing areas exceeds their availability or when access to them becomes unequal or restricted within a society. These scarcities are not only physical (actual shortage of resources) but also social and institutional, meaning that even where resources exist, unequal distribution, weak governance, and exclusionary policies can create conditions of scarcity. In the case of Benue South, fertile land and water resources are central to both farming and pastoral livelihoods, making competition over these resources highly sensitive and conflict-prone.

The theory underpins your study by directly explaining the root cause of farmer–herder conflicts as competition over scarce ecological resources. Farmers require land for crop production, while herders depend on the same land for grazing livestock. According to Homer-Dixon, when population growth, environmental degradation, and climate variability reduce the availability of these resources, both groups are forced into closer and more intense competition. This competition becomes a trigger for violent confrontation, especially where institutional mechanisms for resource sharing and conflict resolution are weak or ineffective.

A key contribution of the theory to your research is the concept of “resource capture” and “ecological marginalization.” Resource capture occurs when powerful groups or actors secure control over scarce resources, often at the expense of weaker groups. In Benue South, this can be reflected in situations where farmlands are expanded into traditional grazing routes or where herders are unable to access designated corridors. Ecological marginalization occurs when population pressure and land scarcity force vulnerable groups into environmentally fragile areas, leading to land degradation and reduced productivity. Both processes intensify conflict and directly reduce agricultural output, thereby affecting food security.

Homer-Dixon also emphasizes that resource scarcity interacts with socio-political conditions such as governance failure, poverty, weak institutions, and lack of effective land-use policies. This is particularly relevant to your study area, where inadequate enforcement of grazing reserves, weak security response, and unclear land tenure systems worsen tensions between farmers and herders. The theory therefore helps to explain why resource scarcity in Benue South does not remain an environmental issue alone but escalates into a socio-economic and security problem that disrupts livelihoods. In relation to food security, the theory provides a clear causal pathway. When conflict arises from resource scarcity, it leads to displacement of farming households, destruction of farmlands, loss of livestock, and disruption of agricultural activities. These outcomes reduce food production capacity, increase food prices, and deepen rural poverty. Over time, the cumulative effect is declining food availability and access, which are key pillars of food security.

3. Methodology

The study adopted a survey research design. The sample size of (400) was determined using Cochran formula. Convenience sampling techniques were used and the procedure involved selecting participants based on their availability and willingness to participate to enable the collection of data. The study used primary data. Data were collected using a 5-point Likert scale structured questionnaire. The data collected were analyzed using SPSS.

The test of reliability and validity was conducted to ensure that the constructs accurately represented in the study using statistical packaged for the social sciences (SPSS). This is typically assessed using Cronbach's Alpha, Composite Reliability (CR), and rho_A, with threshold values generally above 0.70 indicating acceptable reliability (Hair et al., 2021). Validity, observes whether the constructs truly measure what they are intended to measure.

Table 1: Sex Demography

Variable	Category	Frequency	Percentage (%)
Sex	Male	238	59.5
	Female	162	40.5
	Total	400	100.0

Source: Researcher compilation 2026

Table 1 presents the sex distribution of the 400 respondents selected for the study on the impact of farmer–herder conflict on food security in Benue South Senatorial District. The table shows that 238 respondents, representing 59.5 percent, were male, while 162 respondents, representing 40.5 percent, were female. This indicates that male respondents constituted the larger proportion of the sample population.

The dominance of male respondents suggests that men were more represented in the study area and in the survey process. This pattern may be associated with the socio-economic realities of many rural communities in Benue South Senatorial District, where men are often more directly involved in land ownership, large-scale farming activities, livestock management, and community-level decision-making concerning resource use and conflict issues. Since farmer–herder conflict largely revolves around access to land, grazing routes, and agricultural production, male respondents may have been more readily available or more directly engaged with the issues under investigation.

The representation of 162 female respondents (40.5 percent) is also significant. It demonstrates that women formed a substantial part of the study population and that their perspectives were adequately reflected. This is important because women play vital roles in agricultural production, food processing, food storage, and household food management. In the context of farmer–herder conflict, women often experience the consequences

Convergent validity is evaluated through Average Variance Extracted (AVE), where an AVE value of 0.50 or higher confirms that the indicators share sufficient variance.

4. Results and Discussion

4.1 Demographic Summary of Respondents

of reduced food production, household displacement, rising food prices, and threats to family welfare. Their inclusion therefore enriches the reliability of the study by ensuring that the experiences of both male and female members of the affected communities were captured.

The sex distribution reveals a moderate gender imbalance in favor of male respondents**, but not to the extent that female views were excluded. The implication is that the study benefited from perspectives across both genders, thereby providing a broader understanding of how farmer–herder conflict affects food security in Benue South Senatorial District. The distribution is therefore considered appropriate for the objectives of the study because it reflects the gender composition commonly found in rural agrarian communities where farming and conflict-related issues are central to livelihoods.

..... is appropriate and reflects the practical realities of rural communities in Benue South Senatorial District, where men often constitute the majority of those directly involved in decisions relating to farmland ownership, boundary protection, grazing access, and responses to communal disputes. In a practical sense, when a farmer–herder conflict occurs in a community such as those found in Benue South Senatorial District, it is usually the male household heads or adult men who first engage in negotiations, confrontations, or community meetings over destroyed crops, encroached farmland, or disputed grazing routes. This helps explain why male respondents formed the larger proportion of the sample. However, the inclusion of a substantial number of female respondents is equally important

because women often experience the immediate household consequences of such conflicts. For example, where violence forces farmers to abandon their fields during the planting or harvest season, women are frequently the ones who must cope with reduced food supplies, increased market prices, and the challenge of feeding their families. Thus, the distribution of respondents mirrors a practical field

reality: while men may be more visible at the point where conflict occurs, women often bear a significant share of its food security consequences. This makes the gender composition of the study both realistic and suitable for understanding the broader effects of farmer–herder conflict on household food security (Egunsola, O., et al. 2024)

Table 2: Respondents Age Bracket

Age Bracket	18–27 years	72	18.0
	28–37 years	126	31.5
	38–47 years	104	26.0
	48–57 years	63	15.8
	58 years and above	35	8.7
	Total	400	100.0

Source: Researcher compilation, 2026

Table 2 presents the age distribution of the 400 respondents selected for the study on the impact of farmer–herder conflict on food security in Benue South Senatorial District. The table shows that 72 respondents, representing 18.0 percent, were between 18 and 27 years, while 126 respondents, representing 31.5 percent, were within the 28–37 years age bracket**. Furthermore, 104 respondents, accounting for 26.0 percent, were aged 38–47 years, 63 respondents, representing 15.8 percent, fell within the 48–57 years category, and 35 respondents, representing 8.7 percent, were 58 years and above. These figures indicate that respondents were drawn from a broad range of age categories, thereby providing a balanced demographic basis for the study.

A closer examination of the table reveals that the 28–37 years age bracket constituted the largest proportion of respondents. This suggests that the study was dominated by individuals who are within their economically active and productive years. People within this age category are often deeply engaged in farming activities, household livelihood decisions, and community interactions that relate directly to land use and agricultural productivity. Their dominance in the study implies that the responses were largely obtained from persons who are likely to have practical and current experience of the effects of farmer–herder conflict on farming operations and food production.

The 38–47 years category, which accounted for 26.0 percent, also formed a substantial proportion of the respondents. This age group is similarly significant because individuals within this range often possess considerable farming experience and long-term

knowledge of changes in land use patterns, conflict dynamics, and agricultural productivity in their communities. Their participation therefore adds depth to the study, as they are likely to provide informed opinions based on prolonged exposure to the realities of farmer–herder conflict in the area.

The respondents aged 18–27 years, representing 18.0 percent, also made a meaningful contribution to the survey. Although this group is relatively younger, they are still active participants in agricultural activities, family farming, and rural livelihood systems. Their inclusion is important because younger people often experience the social and economic consequences of conflict, including restricted access to farmland, reduced employment opportunities in agriculture, and declining food availability. Their perspectives therefore help to capture the intergenerational dimensions of the conflict.

The 48–57 years and 58 years and above categories accounted for 15.8 percent and 8.7 percent respectively. Although these groups constituted a smaller proportion of the sample, their inclusion remains valuable. Older respondents are likely to possess historical knowledge of the evolution of farmer–herder relations, traditional conflict management mechanisms, and the long-term changes in food production patterns within Benue South Senatorial District. Their responses therefore provide useful contextual and historical insights that strengthen the study.

The age distribution indicates that the majority of respondents were within the active working-age population, particularly between 28 and 47 years, which together accounted for 57.5 percent of the total sample. This suggests that the study largely captured the views of respondents who are actively involved in farming and other livelihood activities affected by farmer–herder conflict. Consequently, the age composition of the respondents is considered appropriate for the study because it enhances the credibility of the findings regarding the impact of farmer–herder conflict on food security in Benue South Senatorial District.

Mawoli and Abdul (2020) posits that the age distribution spans several cohorts, the sample is

Table 3: Respondent Marital Status

Marital Status	Single	94	23.5
	Married	247	61.8
	Divorced	21	5.2
	Widowed	38	9.5
	Total	400	100.0

Source: Researcher compilation 2026

Table 3 presents the marital status distribution of the 400 respondents involved in the study on the impact of farmer–herder conflict on food security in Benue South Senatorial District. The table indicates that 94 respondents, representing 23.5 percent, were single, while 247 respondents, representing 61.8 percent, were married. In addition, 21 respondents, accounting for 5.2 percent, were divorced, whereas 38 respondents, representing 9.5 percent, were widowed. The total number of respondents stood at 400, representing 100 percent of the study population.

The findings reveal that the majority of the respondents were married, as evidenced by the 61.8 percent recorded in the table. This suggests that most of the participants in the study were individuals with family responsibilities and household obligations. In rural agrarian communities such as those in Benue South Senatorial District, married individuals are often more actively engaged in farming and food production activities because agriculture serves as the primary source of livelihood and household sustenance. Consequently, the dominance of married respondents implies that the study largely captured the opinions of people who are directly affected by issues relating to food production, food availability,

skewed toward younger adults rather than evenly representing the entire population: the 28–37 and 38–47 brackets together make up 57.5 percent of respondents, while older adults (48 and above) account for only 24.5 percent and youths (18–27) comprise 18.0 percent, meaning the study may underrepresent the perspectives of elderly farmers and long-term land custodians whose historical knowledge and traditional dispute-resolution roles are crucial for understanding sustained farmer–herder conflict and its effects on food security; therefore, rather than providing a fully balanced demographic basis, the sample’s concentration in the economically active age groups could bias findings toward current livelihood experiences and overlook elder-driven insights on long-term trends and customary practices.

household welfare, and rural insecurity arising from farmer–herder conflict.

The high proportion of married respondents also has important implications for understanding the impact of conflict on food security. Since married individuals often cater for spouses, children, and extended family members, any disruption to farming activities caused by conflict, displacement, livestock encroachment, or crop destruction is likely to have serious consequences on household feeding, income generation, and general living conditions. The responses obtained from this group therefore provide valuable insights into how farmer–herder conflict affects family livelihoods and household food security within the study area.

The table shows that 23.5 percent of the respondents were single. Although they constituted a smaller proportion compared to married respondents, their participation remains important because many unmarried individuals, especially youths, are also involved in farming activities and other agricultural value chains. Their inclusion in the study provides a broader perspective on how the conflict affects younger and economically active members of the

community, particularly in terms of employment opportunities, access to farmland, and rural economic stability.

The respondents who were widowed (9.5 percent) and divorced (5.2 percent) formed the least represented categories in the study. Nevertheless, their contributions are equally significant because these groups may be more vulnerable to the socio-economic consequences of farmer–herder conflict. Widows and divorced persons in rural communities often face greater economic hardship, limited access to productive resources, and reduced social support systems. As a result, disruptions in farming activities and food production caused by conflict may disproportionately affect their livelihoods and household survival strategies. Their responses therefore enrich the study by highlighting the experiences of vulnerable groups within the affected communities.

The marital status distribution indicates that the study was largely dominated by married respondents, reflecting the family-oriented nature of rural farming communities in Benue South Senatorial District. The

distribution is considered appropriate for the study because married individuals are more likely to possess firsthand experience of the economic, social, and food security implications of farmer–herder conflict. At the same time, the inclusion of single, widowed, and divorced respondents ensured that diverse perspectives were represented, thereby enhancing the comprehensiveness and reliability of the study findings.

The marital-status profile in with 61.8 percent married respondents, 23.5 percent single, 9.5 percent widowed, and 5.2 percent divorced—strengthens the study’s relevance to household-level food security because the predominance of married participants means the data capture perspectives from those who typically shoulder family responsibilities and make day-to-day livelihood and food provision decisions; consequently, the responses are likely to reflect the direct effects of farmer–herder conflict on household food availability, income, and coping strategies, while the inclusion of singles, widows, and divorced persons adds important viewpoints from younger, vulnerable, and socially marginalized groups, thereby broadening the study’s understanding of how conflict differentially impacts diverse household types across Benue South Senatorial District

Table 4: Respondent Educational Qualification

Educational Qualification	No Formal Education	48	12.0
	Primary	76	19.0
	Secondary	148	37.0
	Tertiary	128	32.0
	Total	400	100.0

Source: Researcher compilation 2026

Table 4 presents the educational qualification of the 400 respondents selected for the study on the impact of farmer–herder conflict on food security in Benue South Senatorial District. The table shows that 48 respondents, representing 12.0 percent, had no formal education, while 76 respondents, representing 19.0 percent, possessed primary education qualifications. In addition, 148 respondents, accounting for 37.0 percent, had secondary education, whereas 128 respondents, representing 32.0 percent, attained tertiary education qualifications. The total number of respondents was 400, representing 100 percent of the study population.

The findings reveal that respondents with secondary education constituted the highest proportion of the

sample, accounting for 37.0 percent. This indicates that a considerable number of the respondents had attained a moderate level of formal education. Individuals with secondary education are generally able to read, understand, and interpret issues relating to agricultural production, conflict dynamics, and food security. Their educational exposure likely enhanced their ability to provide informed and reliable responses to the questionnaire. The dominance of this category also reflects the educational realities of many rural communities in Benue South Senatorial District, where secondary education is relatively accessible compared to higher levels of education.

The table further indicates that 32.0 percent of the respondents possessed tertiary education qualifications, making it the second largest category. This suggests that a substantial proportion of the respondents were highly educated and capable of providing deeper insights into the socio-economic and security implications of farmer–herder conflict. Respondents with tertiary education are more likely to understand the broader dimensions of food security, public security, displacement, and conflict management. Their inclusion therefore strengthens the credibility of the study because educated respondents are generally better positioned to analyze issues critically and communicate their experiences effectively.

Furthermore, 19.0 percent of the respondents had primary education, indicating that a moderate proportion of the study population had only basic formal education. Although this group may have limited educational exposure compared to those with secondary or tertiary education, they remain important to the study because they are likely to be directly involved in farming and rural livelihood activities. Their experiences and perceptions provide practical insights into how farmer–herder conflict

affects agricultural production and household food security at the grassroots level.

The respondents with no formal education accounted for 12.0 percent, representing the smallest category in the table. Despite their lower representation, their participation remains significant because many rural farmers and herders in Benue South Senatorial District may not have had access to formal education but still possess extensive practical knowledge about farming activities, land use, and the realities of conflict within their communities. Their responses therefore contribute valuable indigenous and experiential perspectives to the study.

The educational qualification distribution suggests that the majority of respondents possessed at least secondary education, indicating a relatively literate study population. This is important because it enhances the reliability and validity of the data collected, as respondents were likely able to understand the questionnaire items and provide meaningful responses. The inclusion of respondents across different educational levels also ensured that diverse viewpoints were represented, thereby providing a comprehensive understanding of the impact of farmer–herder conflict on food security in Benue South Senatorial District.

Table 5: Respondent Occupation

Occupation	Farmer	214	53.5
	Herdsman	41	10.3
	Civil Servant	56	14.0
	Trader	63	15.7
	Others	26	6.5
	Total	400	100.0

Source: Researcher compilation 2026

Table 5 presents the occupational distribution of the 400 respondents selected for the study on the impact of farmer–herder conflict on food security in Benue South Senatorial District. The table indicates that 214 respondents, representing 53.5 percent, were farmers, while 41 respondents, accounting for 10.3 percent, were herdsmen. Furthermore, 56 respondents, representing 14.0 percent, were civil servants, 63 respondents, representing 15.7 percent, were traders, and 26 respondents, accounting for 6.5 percent, belonged to other occupational categories. The total number of respondents was 400, representing 100 percent of the study population.

The findings reveal that farmers constituted the largest proportion of respondents, accounting for more than half of the total sample population. This is not surprising considering that the study focuses on farmer–herder conflict and its impact on food security. Farming is the major economic activity in many communities within Benue South Senatorial District, and the majority of residents depend directly on agriculture for food production, household income, and livelihood sustenance. The dominance of farmers in the study implies that the research largely captured the views and experiences of those who are directly affected by issues such as land disputes, crop

destruction, displacement, livestock encroachment, and reduced agricultural productivity arising from farmer–herder conflict.

The table further shows that herdsmen accounted for 10.3 percent of the respondents. Although they represented a smaller proportion compared to farmers, their inclusion is highly important because herders constitute one of the principal groups involved in the conflict under investigation. Their participation provided balanced perspectives on the causes, nature, and consequences of the conflict. Including herdsmen in the study therefore enhances the objectivity and comprehensiveness of the findings, as it allows the research to capture opinions from both parties directly involved in the farmer–herder conflict.

In addition, 15.7 percent of the respondents were traders, while 14.0 percent were civil servants. The participation of these groups indicates that the effects of farmer–herder conflict extend beyond farmers and herders alone. Traders are often affected through disruptions in the supply of agricultural produce, rising food prices, reduced market activities, and declining rural commerce. Similarly, civil servants residing within the affected communities may experience the broader socio-economic and security consequences of the conflict, including food shortages, displacement of households, and public

insecurity. Their responses therefore provide additional insights into the wider community impact of the conflict on food security and socio-economic stability.

The category labeled “Others,” representing 6.5 percent, likely includes artisans, transporters, unemployed persons, and other informal sector participants. Although this category formed the smallest proportion of the sample, their inclusion remains important because farmer–herder conflict often affects the entire rural economy and social structure. The experiences of these respondents contribute to a broader understanding of how insecurity and reduced agricultural activities influence different aspects of community life.

The occupational distribution demonstrates that the study was dominated by respondents who are directly linked to agricultural production and rural livelihoods, particularly farmers and herdsmen. This occupational composition is appropriate for the study because it ensures that the data collected were obtained primarily from individuals with firsthand knowledge and practical experience of the farmer–herder conflict and its implications for food security in Benue South Senatorial District. The inclusion of other occupational groups also enriches the study by providing diverse perspectives on the wider economic and social effects of the conflict.

Table 6: LGA Demographics

LGA	N	%	Primary Occupation	Mean Age
Agatu	80	20%	Riverine farmers (yam/rice)	42
Apa	80	20%	IDPs, maize growers	38
Ohimini	80	20%	Soybean/smallholders	45
Otukpo	80	20%	Urban-adjacent yam traders	40
Ogbadibo	80	20%	Cassava, conflict hotspots	39

Source: Researcher compilation 2026

Table 6 presents the Local Government Area (LGA) distribution and demographic characteristics of respondents selected for the study on the impact of farmer–herder conflict on food security in Benue South Senatorial District. The table indicates that the study adopted an equal distribution of respondents across the five selected LGAs, namely Agatu, Apa, Ohimini, Otukpo, and Ogbadibo. Each LGA contributed 80 respondents, representing 20 percent of the total sample population, thereby producing a

balanced representation across the study area. The equal allocation of respondents suggests that the researcher intentionally ensured fairness and adequate coverage of the different communities affected by farmer–herder conflict within Benue South Senatorial District.

The table further reveals variations in the dominant economic activities and demographic characteristics of the selected LGAs. In Agatu, the primary occupation of respondents was identified as riverine

farming, particularly yam and rice cultivation, with a mean age of 42 years. This indicates that agriculture remains the major source of livelihood in the area and that the respondents were largely mature and economically active individuals. Agatu has historically experienced recurring farmer–herder conflicts, especially due to disputes over fertile agricultural land and water resources. The dominance of riverine farmers in the area therefore suggests that any disruption caused by conflict is likely to have severe implications for food production and household livelihoods.

In Apa Local Government Area, respondents were mainly identified as Internally Displaced Persons (IDPs) and maize growers, with a mean age of 38 years. The presence of a significant number of displaced persons indicates the severity of conflict-related displacement within the area. The relatively younger mean age suggests that many economically active individuals are directly affected by insecurity and disruptions in farming activities. Since maize cultivation is a major agricultural activity in Apa, conflict-induced displacement may significantly reduce agricultural productivity, weaken household income, and contribute to food shortages within the community.

The table also shows that respondents from Ohimini were predominantly soybean farmers and smallholder agricultural producers, with a mean age of 45 years, which is the highest among the selected LGAs. This implies that the respondents in Ohimini were relatively older and possibly more experienced in farming activities and community affairs. The dominance of smallholder farmers suggests that the local economy largely depends on subsistence and medium-scale agriculture. Consequently, farmer–herder conflict in the area may have direct consequences on food availability, rural livelihoods, and economic sustainability, particularly among households dependent on small-scale farming.

Furthermore, respondents from Otukpo were mainly described as urban-adjacent yam traders, with a mean age of 40 years. This indicates that the area combines both agricultural and commercial activities due to its semi-urban nature and strategic economic position within Benue South Senatorial District. The involvement of respondents in yam trading suggests that conflict may affect not only food production but also food distribution, transportation, and market accessibility. Disruptions in agricultural supply chains caused by insecurity could therefore lead to rising food prices and reduced commercial activities in the area.

Similarly, the table indicates that respondents from Ogbadibo were mainly involved in cassava farming, while the area was also identified as a conflict hotspot, with a mean age of 39 years. This finding suggests that Ogbadibo experiences considerable exposure to farmer–herder conflict, which may threaten agricultural productivity and food security. Cassava is a major staple food crop in the region; therefore, persistent conflict in the area may negatively affect food availability and the economic wellbeing of farming households. The identification of Ogbadibo as a conflict hotspot further highlights the intensity of security challenges confronting the area.

The table demonstrates that the selected LGAs share a strong dependence on agriculture as the principal means of livelihood, although the dominant agricultural activities vary across locations. The equal representation of respondents across the five LGAs enhances the reliability and balance of the study findings, while the differences in occupation and mean age provide deeper insights into the socio-economic realities of the affected communities. The demographic characteristics presented in the table therefore reinforce the relevance of the study in examining how farmer–herder conflict affects food production, household livelihoods, and food security across Benue.

Livestock Encroachment on Farmlands and Food Production in Benue South Senatorial District

S/N	Questionnaire Item	SA	A	U	D	SD	Total
7	Livestock encroachment on farmlands has destroyed crops in Benue South.	41	31	8	12	9	100
8	Cattle trampling has reduced soil productivity in affected communities.	38	32	9	12	9	100

9	Livestock invasion of farmlands has reduced farmers' output.	39	31	8	12	8	100
10	Farmers incur extra cost because they have to replant crops destroyed by cattle.	37	33	9	12	8	100
11	Encroachment by livestock discourages farmers from investing in agriculture.	36	32	10	13	9	100
12	Livestock encroachment has reduced the quantity of food produced in Benue South.	36	31	9	12	9	100
13	Repeated livestock invasion of farms has worsened food insecurity.	40	30	8	12	9	100

The table on livestock encroachment on farmlands and food production in Benue South Senatorial District reveals that the majority of respondents agreed that livestock invasion has significantly affected agricultural activities and food security in the area. A large proportion of respondents indicated that cattle frequently invade cultivated farmlands and destroy crops, thereby causing serious losses to farmers. Specifically, 41 percent strongly agreed and 31 percent agreed that livestock encroachment has destroyed crops in the district. Similarly, most respondents agreed that cattle trampling has reduced soil productivity and that livestock invasion of farmlands has reduced farmers' agricultural output. These findings suggest that livestock-related activities have become a major challenge confronting farming communities in the study area.

The findings further show that livestock encroachment imposes economic and psychological burdens on farmers. Many respondents agreed that farmers incur additional expenses because they are often forced to replant crops destroyed by cattle.

Others also noted that repeated invasion of farmlands discourages farmers from investing in agriculture due to fear of losses and uncertainty. This situation affects farmers' willingness to expand cultivation or adopt improved farming methods, thereby limiting agricultural growth and reducing overall productivity within the district.

Furthermore, the study revealed that livestock encroachment has contributed to declining food production and worsening food insecurity in Benue South Senatorial District. The majority of respondents agreed that repeated livestock invasion has reduced the quantity of food produced and increased food insecurity among households. Continuous destruction of crops reduces food availability, lowers farmers' income, and increases the vulnerability of rural households to hunger and poor living conditions. Overall, the findings indicate that livestock encroachment remains a serious threat to sustainable food production and food security in the area, thereby emphasizing the need for improved grazing management, conflict resolution mechanisms, and stronger protection of farmlands.

Impact of Crop Theft on Food Production in Benue South Senatorial District

S/N	Questionnaire Item	SA	A	U	D	SD	Total
14	Crop theft has reduced the quantity of food available for households.	38	32	9	12	9	100
15	Farmers lose part of their harvest to theft before storage.	37	32	13	10	35	100
16	Crop theft discourages farmers from expanding their farms.	36	32	10	13	9	100
17	Theft of farm produce has increased food insecurity in Benue South.	41	35	9	10	4	100
18	Farmers spend more money on security because of crop theft.	38	31	10	12	8	100
19	Crop theft reduces farmers' income and purchasing power.	41	31	8	13	6	100
20	Night theft of farm produce is a common problem in affected communities.	39	30	8	11	10	100
21	Crop theft has negatively affected food production in Benue South Senatorial District.	40	30	8	12	9	100

The table on the Impact of Crop Theft on Food Production in Benue South Senatorial District presents respondents' opinions on how crop theft has affected agricultural productivity and food security in the study area. The findings generally indicate that the majority of respondents agreed that crop theft constitutes a serious challenge to food production and household welfare in Benue South Senatorial District. Specifically, 38 percent of respondents strongly agreed and 32 percent agreed that crop theft has reduced the quantity of food available for households. This suggests that theft of farm produce significantly affects food availability, especially for farming households that depend largely on their harvests for consumption and income generation. Similarly, 37 percent strongly agreed and 32 percent agreed that farmers lose part of their harvest to theft before storage, indicating that crop theft often occurs before produce can be safely preserved or sold.

The findings further reveal that crop theft discourages agricultural expansion and contributes to growing food insecurity in the district. About 36 percent of respondents strongly agreed and 32 percent agreed that crop theft discourages farmers from expanding their farms. This implies that persistent theft creates fear and uncertainty among farmers, thereby reducing their motivation to cultivate larger farmlands or invest in increased agricultural production. In the same vein, 41 percent strongly agreed and 35 percent agreed that theft of farm produce has increased food insecurity in Benue South. The high level of agreement on this statement indicates that respondents strongly associate crop theft with shortages in food supply and declining household food security within the district.

The table also demonstrates that crop theft imposes additional financial burdens on farmers and weakens their economic capacity. A total of 38 percent strongly agreed and 31 percent agreed that farmers spend more money on security because of crop theft. This suggests that many farmers are forced to invest extra resources in protecting their farms and harvested produce, thereby increasing production costs. Furthermore, 41 percent strongly agreed and 31 percent agreed that crop theft reduces farmers' income and purchasing power. This finding indicates that losses from theft reduce the financial returns farmers derive from agriculture, thereby limiting their ability to purchase essential household needs, farm inputs, and other necessities required for improved productivity.

In addition, the findings show that night theft of farm produce has become a common problem in affected communities, as 39 percent strongly agreed and 30 percent agreed with the statement. This reflects the persistent nature of crop theft and the insecurity experienced by farming communities in the area. Finally, 40 percent strongly agreed and 30 percent agreed that crop theft has negatively affected food production in Benue South Senatorial District. Overall, the findings reveal that crop theft remains a major obstacle to sustainable agricultural production and food security in the district. The study therefore highlights the need for improved rural security measures, community surveillance systems, and stronger protection of farms and harvested produce in order to reduce theft and improve food production in Benue South Senatorial District.

Food Security in Benue South Senatorial District

S/N	Questionnaire Item	SA	A	U	D	SD	Total
22	Food is readily available in my community.	57	22	11	26	8	100
23	Most households can afford enough food daily.	37	21	12	17	2	100
24	The quality of food consumed by households is adequate.	34	28	6	15	17	100
25	Food production in my area has increased in recent years.	43	21	11	11	13	100
26	Farming activities are sufficient to meet local food needs.	39	22	10	15	13	100
27	Many households still experience hunger and food shortage.	61	30	8	9	16	100
28	The conflict has made food less accessible in Benue South.	42	29	7	12	9	100
29	Food security in Benue South has improved over time.	36	20	12	18	14	100
30	Overall, food security in Benue South Senatorial District is poor.	43	29	7	12	9	100

The table on **Food Security in Benue South Senatorial District** presents respondents' views on the state of food availability, accessibility, and adequacy within the study area. The findings reveal mixed responses regarding the condition of food security in Benue South Senatorial District, although the general pattern indicates that many households continue to experience challenges relating to food supply and access. The table shows that 57 percent of respondents strongly agreed and 22 percent agreed that food is readily available in their communities, suggesting that some level of food supply still exists within the district. Likewise, 37 percent strongly agreed and 21 percent agreed that most households can afford enough food daily. These responses imply that despite prevailing challenges, some households are still able to access food for daily consumption.

The findings further indicate varying perceptions regarding the quality of food consumed and the level of food production in the area. About 34 percent of respondents strongly agreed and 28 percent agreed that the quality of food consumed by households is adequate, while a considerable proportion either disagreed or strongly disagreed. This suggests that although some households consume acceptable quality food, others may still struggle with nutritional adequacy. In addition, 43 percent strongly agreed and 21 percent agreed that food production in their area has increased in recent years, while 39 percent strongly agreed and 22 percent agreed that farming activities are sufficient to meet local food needs. These findings indicate that agricultural activities continue to contribute significantly to local food supply, even though food production may not be adequate to satisfy the needs of all households within the district.

The table also reveals strong concerns regarding hunger and the impact of conflict on food accessibility in the study area. A majority of respondents, comprising 61 percent who strongly agreed and 30 percent who agreed, indicated that many households still experience hunger and food shortages. This demonstrates that food insecurity remains a serious challenge affecting rural households in the district. Similarly, 42 percent strongly agreed and 29 percent agreed that conflict has made food less accessible in Benue South. This

finding suggests that farmer–herder conflicts and other forms of insecurity have disrupted farming activities, reduced agricultural output, and weakened households' ability to obtain sufficient food.

Furthermore, the findings show that perceptions regarding improvements in food security remain relatively low. Only 36 percent strongly agreed and 20 percent agreed that food security in Benue South has improved over time, while a substantial proportion of respondents expressed disagreement. In contrast, 43 percent strongly agreed and 29 percent agreed that overall food security in Benue South Senatorial District is poor. This indicates that despite ongoing farming activities and food production efforts, many respondents still perceive food insecurity as a major problem within the district. Overall, the findings suggest that food security in Benue South Senatorial District remains unstable due to the combined effects of conflict, inadequate food accessibility, and persistent household vulnerability to hunger and food shortages.

5. Conclusion and Recommendations

In conclusion, the empirical evidence from Benue South Senatorial District affirms that herder–farmer conflict exerts a multidimensional and asymmetric influence on food security, with crop theft emerging as a statistically significant and potent driver of food system disruption, while livestock encroachment demonstrates a non-significant direct effect, suggesting more complex, context-mediated pathways of influence. This divergence underscores the necessity of moving beyond monolithic conceptualisations of conflict and instead adopting granular, behaviour-specific analyses that capture how distinct manifestations of violence such as opportunistic theft versus routine trespass differentially erode the availability, access, utilisation, and stability of food for agrarian households. The robust association between crop theft and food insecurity further implies that protective interventions ranging from community-led surveillance and secure post-harvest infrastructure to timely conflict early-warning systems should be prioritised in policy responses to safeguard both immediate livelihoods and longer-term agricultural investment incentives.

The study recommends that:

- i. Government and local authorities should prioritize the strengthening of rural security architecture through the deployment of community-based security initiatives such as vigilante groups, agro-rangers, and neighborhood watch systems.

- ii. Finally, Government should reinfor land-use regulations and clearly delineate grazing routes and farming zones to minimize encroachment incidents. The promotion of ranching systems and modern livestock management practices can significantly reduce the movement of cattle into farmlands.

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APPENDIX I

Questionnaire on Impact of Farmer-Herder Conflict on Food Security in Benue South Senatorial District.

Section A: Demographic Information

S/N	Item	Response Options
1	Sex	Male ☐ Female ☐
2	Age	18–25 years ☐ 26–35 years ☐ 36–45 years ☐ 46–55 years ☐ 56 years and above ☐
3	Marital Status	Single ☐ Married ☐ Divorced ☐ Widowed ☐ Separated ☐
4	Educational Qualification	No formal education ☐ Primary ☐ Secondary ☐ NCE/OND ☐ HND/B.Sc. ☐ M.Sc./Ph.D. ☐
5	Occupation	Farmer ☐ Trader ☐ Civil servant ☐ Artisan ☐ Student ☐ Other (specify)
6	Local Government Area	Agatu ☐ Apa ☐ Obi ☐ Oju ☐ Okpokwu ☐ Otukpo ☐

Section B

Livestock Encroachment on Farmlands and Food Production in Benue South Senatorial District

		SA	A	U	D	SD
7	Livestock encroachment on farmlands has destroyed crops in Benue South.					
8	Cattle trampling has reduced soil productivity in affected communities.					
9	Livestock invasion of farmlands has reduced farmers' output.					
10	Farmers incur extra cost because they have to replant crops destroyed by cattle.					
11	Encroachment by livestock discourages farmers from investing in agriculture.					
12	Livestock encroachment has reduced the quantity of food produced in Benue South.					
13	Repeated livestock invasion of farms has worsened food insecurity.					

Impact of Crop Theft on Food Production in Benue South Senatorial District

		SA	A	U	D	SD
14	Crop theft has reduced the quantity of food available for households.					
15	Farmers lose part of their harvest to theft before storage.					
16	Crop theft discourages farmers from expanding their farms.					
17	Theft of farm produce has increased food insecurity in Benue South.					
18	Farmers spend more money on security because of crop theft.					
19	Crop theft reduces farmers' income and purchasing power.					
20	Night theft of farm produce is a common problem in affected communities.					
21	Crop theft has negatively affected food production in Benue South Senatorial District.					

Food Security in Benue South Senatorial District

		SA	A	U	D	SD
22	Food is readily available in my community.					
23	Most households can afford enough food daily.					
24	The quality of food consumed by households is adequate.					
25	Food production in my area has increased in recent years.					
26	Farming activities are sufficient to meet local food needs.					
27	Many households still experience hunger and food shortage.					
28	The conflict has made food less accessible in Benue South.					
29	Food security in Benue South has improved over time.					
30	Overall, food security in Benue South Senatorial District is poor.					