

## From Grazing to Grieving: How Herders-Farmers Clashes Fuel Food Insecurity in South-East Nigeria

<sup>1</sup>Eyo Etim AKPANDEM, <sup>2</sup>Itojong Anthony AYAMBA, <sup>3</sup>Melford Ochang ECHADU  
<sup>4</sup>Edet Etim AKPANDEM

<sup>1,2,3</sup>Department of Public Administration, Faculty of Administration and Management Science, University of Calabar- Calabar, Nigeria

<sup>4</sup>Department of Business Management, Faculty of Administration and Management Science University of Calabar- Calabar, Nigeria

### Abstract

*The paper presents the effect of clashes between herders and farmers to food insecurity in South-East Nigeria, based on two dimensions of food security namely food availability and food accessibility. These violent confrontations disrupt farming activities, causing farmers to abandon their lands or hinder crop cultivation, thereby reducing available food resources. Additionally, the paper explores how climate change amplifies resource competition, leading to more frequent and intense conflicts over land and water. The migration of pastoralists, particularly from the Sahel region, further complicates the situation and intensifies food insecurity. Using theoretical frameworks like eco-violence and frustration-aggression, the paper highlights the nexus between ecological pressures, resource scarcity, and violent conflict. Moreover, these clashes hinder food accessibility by driving up food prices and disrupting trade and distribution channels. In response, the study recommends that the federal government implement climate change mitigation strategies, such as afforestation initiatives under the Great Green Wall, and promote cattle domestication through the enforcement of anti-open grazing laws and the establishment of ranches. Peaceful coexistence through education and local association with traditional institutions is also needed and should be nurtured as much as possible. These integrated policy interventions are essential to address the root causes of the conflict and mitigate its effects on food security in South-East Nigeria.*

**Keywords:** Conflict, Food Insecurity, Herders-Farmers, Nigeria, South-East

### 1. Introduction

The world is grappling with the challenge of providing sufficient food sustainably to over seven billion people. Food security is a critical aspect of sustainable development, as recognized by the United Nations' Sustainable Development Goal 2 (SDG2), which aims to end hunger, achieve food sufficiency, improve nutrition, and promote sustainable agriculture (Abang & Ayamba, 2021). The importance of food security to the global community necessitates its attainment, as sustainable development cannot occur without it (International Food Policy Research Institute (IFPRI), 2024). According to the FAO (2024), SDG 2's framework interlinks sustainable agriculture, smallholder empowerment, gender equality, and rural poverty alleviation all critical to healthy lifestyles.

The concept of food security is extremely multi-dimensional, dependent on culture, environment, and geography (Oluwole et al., 2023). It is defined as when "all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food

preferences for an active and healthy life” (FAO, 2023). This highlights its multi-dimensional nature. Its five core dimensions-availability, accessibility, utilization, stability, and sustainability cover aspects from production and quality to physical and economic access (Costlow et al., 2024; Ioryue, 2024). Food availability concerns the adequacy and quality of supplies, while accessibility relates to individuals’ ability to obtain food (Ayamba, 2023).

The herder farmer violence in South-East Nigeria endangers food security as the region is traditionally one of the major yam, maize, cassava, rice, and vegetables producers. These conflicts destroy farmlands and minimize agricultural production, which compromises food supply (Osei-Amponsah et al., 2024; FAO, 2024). Moreover, based on the predictions of the UN, at least 33 million people in Nigeria will be acute food insecure between June and August 2025 to some degree due to such conflicts (The Guardian, 2025).

This has triggered a sharp rise in the herders farmers conflicts in Nigeria resulting in the loss of lives and property worth millions of naira (Ailemen, 2024; Reuters, 2024). As an example, earlier this year northern Nigerian farmers were said to have given up their farming activities because of violent raids that left crops devastated and resulted in the loss of several lives making many of them abandon their farms, exacerbating food prices and inflation (Reuters, 2024). This violence is manifested not only in the North; there was also an upsurge of herder-led attacks in the Central Nigeria states (Benue and Plateau territory), between April and June, 2025, with more than 250 people killed and thousands driven out of their homes in fights over land and resources (Financial Times, 2025; The Guardian, 2025).

Meanwhile, in Enugu State, the communities have not stopped being attacked, with remedies causing death and massive displacement leading to mass protests and intervention by the government.) (Anadolu Agency, 2025). The agricultural processes have been impaired by these events, and it has had serious adverse effects on the sustainability of the food system in the region (Ijirshar et al., 2025; EfiD Initiative, 2024). According to Moritz (2010), herders fruits conflicts have not only direct implication on the life and livelihood of the people involved, but it also destabilizes and endangers sustainability of agricultural and pastoral production. This caution is evidenced in the modern context; frequent raids on agricultural lands, including the one recently witnessed in the state of Enugu and other states of the South East region, deny the communities their right to food access, availability, utilization, stability, and sustainability throughout the year, thus worsening food insecurity (Punch, 2024).

Given this context, there is an urgent need to systematically investigate the effects of herders–farmers conflicts on food security in South-East Nigeria, with focused attention on availability and accessibility dimensions. This study, it is hoped, will help in the development of policy and strategic interventions designed to buffer food systems and promote sustainable agriculture in the region.

## **2. The Problem**

Food insecurity is a topical problem in Nigeria especially in the South-East region. The fact that food has increasingly become unaffordable, agricultural productivity has become low as well as the fact that the nation becomes heavily dependent on imported food resources all points to a bigger trouble. The South-East region that was once agriculturally productive is now facing a dipping

agricultural production and crops such as cassava, yam, maize, rice, coco yam, melon, palm oil, and palm kernel oil are affected (Olutoye & Olutoye, 2014). The loss is attributed to the rising cases of conflict between herders and the farmers in the region that have led to displacement of the farmers, burning of arable land and interference with farming. The fight between the herders and the farmers has been disastrous to food security in the region of South-East. The war has also witnessed displacement of farmers leading to decrease in agricultural products hence rise in food prices. This problem has also been increased by the fear of attacks which has even denied farmers the power of entering their own farms. Ojo and Adebayo (2017) reported that the fight has resulted in the already uprooted thousands of people including farmers to other regions in Nigeria. This has led to depleted agricultural productivity that has impacted on food availability, accessibility, utilisation, stability, and sustainability to the region.

Despite various initiatives and programmes implemented by the government to address food insecurity, the problem persists in the South-East region. The government's efforts, such as the Agricultural Promotion Policy (APP) and the Presidential Economic Diversification Initiative, have not been effective in addressing the root causes of food insecurity in the region. Hence, the need for a systematic investigation into the impact of herders-farmers' conflicts on food security in the South-East region, with a focus on food availability and accessibility.

### **3. Objectives of the study**

The study is guided by the following objectives:

- i. To examine the influence of herdsman-farmers' conflicts on food availability in South-East Nigeria.
- ii. To examine the influence of herdsman-farmers' conflicts on food accessibility in South-East Nigeria.

### **4. Research questions**

The study is guided by the following research questions:

- i. To what extent has herdsman-farmers' conflicts influenced food availability in South-East Nigeria?
- ii. To what extent has herdsman-farmers' conflicts influenced food accessibility in South-East Nigeria?

### **5. Epistemic issues**

Social science scholars tend to offer varying and often contradictory perspectives to a particular concept to suit their ideological, teleological or pedagogical convictions, hence leading to lack of definitional unanimity. As a term, "Herdsman-farmers conflict" carries significant concern due to the violent clashes and fatalities it entails. The complex nature of this concept defies a concise definition, but certain explanations provide insight into its dynamics. To comprehend this conflict, it is essential to first understand the roles of pastoralists and herders. According to Rass (2006), herdsman are pastoralists who tend to livestock in regions receiving less than 400mm annual rainfall with a growing period of 0 to 75 days, relying on livestock for over 50% of agricultural sustenance. Agro-pastoralists, in contrast, derive 25% to 50% of agricultural income from livestock in areas with 400 to 600mm rainfall and a growing period of 75 to 90 days, where sorghum and

millet cultivation remains feasible. Pastoralists are further categorized into nomadic, transhumant, and sedentary groups based on their mobility patterns (Hameed, 2014). Nomadic pastoralists, such as Nigeria's Fulani herdsmen, exhibit high mobility and irregular movement (Bello, 2013). Transhumant pastoralists follow herds between fixed areas for seasonal pastures, while sedentary farming involves permanent settlement with crop cultivation. Conflicts arise when farmers and herders compete for resources like land, water, and pasture, resulting in violence (Nformi *et al.*, 2014).

The term "herdsmen-farmers conflict" itself has evolved, inadequately representing the multifaceted dynamics. Idama and Ezeanni (2014) initially defined it as clashes arising from farmland damage by Fulani herders. However, this definition omits the retaliatory attacks prompted by cattle losses. Okoli (2016) offers a more comprehensive definition, portraying it as aggressive hostilities rooted in land and water resource disputes, driven by livelihood and identity contestations. The conflict is marked by violence, often fueled by differences in values, culture, and physical characteristics between the parties. Ethnic undertones emerge due to the distinct culture and solidarity of Fulani nomads, who, being a minority, clash with farming populations. These conflicts escalate due to scarcity of resources vital to livelihoods.

As farmers avoid their fields due to the risk of violence, food availability dwindles, adversely affecting subsistence farming communities (Nzeh, 2015). The crisis also results in inflated prices for key northern agricultural exports, causing widespread economic ramifications that extend to neighboring countries (Ofuoku & Isike, 2009). Ensuring that a country's population has consistent access to nutritious and affordable food is a critical aspect of food security (Oriola, 2016). This concept, referred to as food accessibility, denotes the ability of individuals within a nation to obtain good-quality food at reasonable prices (Action Against Hunger, 2002). Specifically, it involves the physical availability of sufficient, high-quality food at prices that people can afford. This encompasses the idea that food should not only meet global nutritional standards in terms of calories, protein, and minerals, but should also be consistently available and attainable by individuals. The prevalence of the herders-farmers conflicts has not only compromised physical access to food but has also created an environment where food production has been hampered (John, 2014). This crisis has forced many farmers to seek refuge in internally displaced peoples' camps, leaving behind their farming activities – their primary means of livelihood. Consequently, food production has suffered, resulting in decreased access to good-quality and nutritious food for a substantial portion of the populace (AkpanDEM, 2023).

## **6. Theoretical Framework**

This study is anchored in two key theories: Eco-Violence Theory and Frustration-Aggression Theory. Homer-Dixon's (1999) Eco-Violence Theory posits that environmental stressors such as resource depletion and population growth can trigger violent conflicts. In the context of the herders-farmers conflict, competition for scarce resources such as land and water has exacerbated tensions between farming and pastoralist communities. Environmental degradation, including desertification and the impacts of climate change, has led to increased migration, often sparking ethnic and resource-based conflicts (Gleditsch & Urdal, 2002). This theory provides a framework for understanding how ecological constraints contribute to the escalation of conflicts, particularly in areas where agricultural and pastoral activities are deeply intertwined (Okoli & Atelhe, 2014).

The Frustration-Aggression Theory on the other hand, developed by Dollard *et al.* (1939), asserts that frustration leads to aggression when individuals are unable to address the causes of their dissatisfaction. In the case of the herders-farmers conflict, frustration arises from competing claims over limited resources, leading to violent confrontations. Farmers, whose crops are destroyed by grazing animals, and herders, facing dwindling grazing resources due to desertification, both experience frustration that escalates into aggression (Olu-Adeyemi, 2012). This theory highlights the emotional and psychological dynamics underlying the conflict, offering insight into how scarcity and deprivation fuel violent behavior.

## **7. Methodology**

Given the nature of inquiry at hand, this paper employed the descriptive design. Data for the study were sourced from secondary sources which include journals, textbooks, newspapers, magazines and internet materials. Concepts related to food security food (in)security, conflict, herders-farmers, food availability and food accessibility are amply explained in order to polish their meanings for better comprehension. Hence, the study is purely exploratory and the analysis qualitatively done.

## **8. Findings and Discussion**

### **i. Influence of Herders-Farmers Conflicts on Food Availability in South-East Nigeria**

The results of the first research question indicate that herder-farmer-conflict has resulted in high levels of food shortage in South-east Nigeria. Violent outbreaks often force farmers to abandon their crops and cause unexplainable drops in agricultural productivity and food supply of a region. As an example, the effect of insecurity on crop yields was found to be -0.21 per cent on every 1 per cent increment of insecurity on small-scale farmers in Ebonyi State (Ijirshar *et al.*, 2025). Likewise, Reuters (2024) reported plenty of farm abandonment due to armed attacks in Nigeria and spray-burning destruction of crops leading to the loss of millions of naira in crops, which increased local food prices and decreased availability in markets. This highlights the fact that peace environment has major impacts on subsistence farming in terms of South-East Nigeria where it prevails and worsens shortage of food.

Farming has turned out to be a risky activity in most of the affected populations. African farmers are scared of being attacked or revenge attacks, especially in rural and peri-urban areas where security officials of the state do not feature greatly. Their motive is climate-induced displacement that makes things difficult and leads to the decline of pasture in the Sahel and northern territories as a result of which the herders encroach on the arable land in the South-East where they trample and eat standing crops with their herds (Audu, 2014). This costs local farmers huge losses that are not usually compensated at all forcing them to be destitute. Seasonal food shortages have arisen due to the destruction of food crops like cassava, yam, maize, vegetables, which further subject the region to higher reliance on food imports in other regions, adding the vulnerability of the region to food shocks (International Crisis Group, 2017). In addition, such a trend of fighting causes the breakdown of the entire food supply chain. On top of losing crops, transport and distribution are also compromised because in situations of conflict or a possibility of ambush, the roads are not only unsafe but also the transport infrastructure is destroyed. Access to markets is hampered and the food products that reach the markets are expensive since there is an increment in price of

logistics and food scarcity. Moreover, food processing and storage the facilities in local areas are usually vandalized or they are abandoned in areas of conflict, hence decreasing access to food even further.

A broader understanding of this crisis is informed by environmental and socio-political theories. The eco-violence thesis, advanced by Homer-Dixon (1999), provides a compelling explanatory framework. It posits that environmental degradation, such as desertification and declining rainfall, exacerbates resource scarcity and triggers violent competition over arable land and water. In Nigeria, desertification in the north has intensified the southward migration of pastoralists, thus increasing the frequency of herders-farmers conflicts in resource-rich southern zones like the South-East (Fasona *et al.*, 2016). Climate change is a catalyst here: shifting rainfall patterns and rising temperatures have made traditional grazing lands less viable, compelling pastoralists to seek greener pastures, often through contested territories.

Further empirical support is found in the Global Terrorism Index (2015), which recorded a sharp increase in fatalities from herders-farmers clashes, identifying such violence as among the deadliest forms of non-terrorist conflict in Nigeria. Medugu *et al.* (2012) similarly argue that the rising incidence of resource-based conflicts in agrarian areas has led to systematic reduction in farming outputs and disrupted rural economies. These studies underscore the structural drivers of conflict - namely, climate stress, population pressure, and governance failure which converge to reduce food availability.

In South-East Nigeria, where land is a fixed and finite resource and population density is high, these pressures are especially pronounced. The region's fertile land becomes both a necessity and a trigger for violence. As pastoralists move in with their herds, tensions flare, often culminating in violent confrontations. In the wake of such conflict, affected communities experience a drastic reduction in farming activity, which translates into localized food scarcity. This is compounded by displacement of farming populations and loss of stored produce during attacks. Suffice it to say that herders-farmers conflict represents both a direct and indirect driver of food unavailability. Directly, through the destruction of farmland and disruption of farming activities, and indirectly, through the weakening of food systems infrastructure and market functions. The crisis must be understood not merely as an inter-group skirmish but as a symptom of deeper environmental, socio-political, and economic fractures.

## **ii. Influence of Herders-Farmers Conflicts on Food Accessibility in South-East Nigeria**

The results of the second research question show that food accessibility in South-East Nigeria is seriously leveled by herder-farmer conflicts. Access to food, or the capacity of individuals to acquire adequate, safe, and nutritious foods is closely related to the income or food prices, as well as, infrastructure (FAO, 2025). Constant armed conflicts create a situation of instability in the market, fear of high food prices and loss of the purchasing power. According to a national survey, insecurity in the South-East increased staple charges by 30-150 percent and rice raised by 9900 to more than 35000 naira within January and October 2024 (Peoples Gazette, 2024). Also, Reuters (2024) reported such trends as farm abandonment due to violent attacks as a factor that sent local foods prices to the stratosphere. Violence also affects the supply chain where traders do not have access to farms, and there is more hoarding which has been confirmed by the traders of Anambra State who either attributed poor trade to insecurity or fear of being ambushed (Daily Post Nigeria,

2024). As a result, low-income households are most affected by such economic conditions that interfere with their ability to have sufficient food.

In addition to price increases, conflicts also cause structural constraints to food inaccessibility. When the level of violence is high, the economic activity, especially small-scale business, is put on hold. Factories shut down both temporarily and permanently, wage earners lose their daily wages and people cannot travel. Such socio-economic displacements hit the purchasing power and determine the affordability of food. In addition, food inaccessibility is also caused by physical inaccessibility, whereby rural road networks, which were in a poor state in any case, are impassable or too dangerous in transport of food. Foley (2014) narrows in on the demographic process underlying these tensions, saying that due to increasing demand of food, meat, and biofuels at a global level, land resources are being strained like never before. This process can be seen in Nigeria in the form of a conflict between sedentary agriculturalists and mobile pastoralists that are growing in population and number, but in which the available land is staying at fixed levels. The resultant land scramble opposes livelihood to livelihood in a spiral of conflict and revenge: agriculture (in opposition to) pastoralism. The food system is ever vulnerable as the land turns into a contentious commodity.

The frustration-aggression theory also provides valuable insights here. It suggests that when individuals or groups are frustrated in their efforts to achieve goals (such as farmers protecting their livelihood or herders seeking grazing routes), they may respond with aggression. This lens helps explain the violent escalation of otherwise manageable disputes. In this context, herders' intrusion into farmlands often leads to crop damage, which frustrates the efforts of farmers to maintain yields. In retaliation, farmers may attack herders or their cattle, prompting counter-attacks. These violent episodes not only threaten lives and properties but also render food production and access precarious.

Further, herders-farmers clashes have secondary effects on food access through population displacement. As communities flee violence, internally displaced persons (IDPs) become dependent on humanitarian assistance, which is often inadequate. Displacement disrupts traditional food systems, severing the link between people and their farms, markets, and food sources. The nutritional status of such populations often deteriorates, especially among vulnerable groups such as children and the elderly. Moreover, state response has been largely inadequate in addressing the root causes and immediate outcomes of the conflicts. The absence of effective conflict resolution mechanisms and the failure to prosecute perpetrators have created a climate of impunity. Communities often resort to self-help strategies, including the formation of militias, which only deepen the cycle of violence. In this environment, access to food is constrained not just by economic factors, but by a pervasive sense of fear and insecurity.

Therefore, the herders-farmers conflict in South-East Nigeria disrupts food accessibility in multiple, intersecting ways. It raises food prices through reduced supply, diminishes income-generating opportunities, impairs market access, and displaces food-producing communities. The net result is a severe erosion of food security. In regions heavily reliant on agriculture for both subsistence and income, this conflict threatens to reverse development gains and perpetuate a cycle of poverty, malnutrition, and dependency.

## **9. Conclusion**

The findings of the study underscore the profound impact of herdsmen-farmers' conflicts on food security in Nigeria. The conflict has escalated from isolated incidents of violence to more organized and lethal aggression, particularly in the South-Eastern region. Since 2015, the frequency of such conflicts has grown, characterized by raids and the involvement of mercenary groups. This escalation has led to mass casualties, displacement, and food insecurity. The conflict has disrupted agricultural productivity and output, which are essential to ensuring food security. As farmers are forced to abandon their fields or experience diminished yields, food availability becomes jeopardized. The destruction of crops by cattle further compounds this, making food scarce. The governmental and non-governmental responses to these crises have often been slow and ineffective, which has led to a perception of complicity among security agencies and has aggravated tensions. The failure to take swift action against perpetrators has left communities to fend for themselves, contributing to rising violence and insecurity.

## **10. Recommendations**

Based on the findings and conclusion drawn, the following recommendations are made:

1. As more land gets to be under pressure with the growth of population and livestock increment, the government must note that domestication of cattle rather than open grazing must be their alternative activity. As well, anti-open grazing policies ought to be implemented whereby ranches and grazing reserves owned by the private sector as well as government should be established whereby, the populations should be encouraged to carry out advocacy and participation on raising the development of the ranches and grazing reserves.
2. There should also be an attempt to encourage farmers and herders to coexist peacefully by educating the community. The two groups ought to be sensitized on the need to respect each other over land rights, as well as, the assurances of peaceful handling of disputes. Peacebuilding activities should include traditional institutions, that is, farmer and herder associations.
3. It is the duty of the government to enhance protection of agrarian societies by putting a priority to preventive measures. These involve the enhancement of intelligence gathering, the development of early warning systems and the enhancement of community engagement programmes whereby farmers, herders and local security services take part in the detection and control of possible threats.
4. The federal government should implement strategies to mitigate the consequences of herdsmen-farmers' conflicts, particularly those exacerbated by climate change. This includes revisiting the National Policy on Climate Change and focusing on afforestation programmes like the Great Green Wall Initiative, which aims to address environmental degradation and reduce migration-induced conflicts.

## References

- Abang, P.O. & Ayamba, I.A. (2021). Agricultural development programmes in Nigeria's fourth republic: Changing the narrative of food insecurity in Nigeria. *Journal of Good Governance and Sustainable Development in Africa*, 6(3): 64-74.
- Action Against Hunger (2002). *The Geopolitics of Hunger, 2001-02*. A Publication of ACF International.
- Ailemen, A. (2024, June 29). *FG partners group to halt farmers/herders conflicts*. BusinessDay. Retrieved from <https://businessday.ng/news/article/fg-partners-group-to-halt-farmers-herders-conflicts/>.
- AkpanDEM, E.E. (2023). *Herdsman-farmers' conflicts and food security in south east Nigeria*. An unpublished PhD thesis submitted to the School of Postgraduate Studies, University of Uyo, Uyo- Nigeria.
- Anadolu Agency. (2025, March 6). Thousands of Enugu women protest herdsman terror in Nigeria. *Anadolu Agency*. Retrieved from <https://www.aa.com.tr/en/africa/thousands-of-enugu-women-protest-herdsman-terror-in-nigeria/3502161>.
- Audu, S. (2014). Fresh water scarcity: A threat to peaceful co-existence between farmers and pastoralists in northern Nigeria. *International Journal of Development and Sustainability*, 3(1): 242-251.
- Ayamba, I.A. (2023). *Agricultural development programmes and food security in Nigeria's fourth republic: A study of Cross River State rice production programme*. An unpublished PhD thesis submitted to the School of Postgraduate Studies, University of Uyo, Uyo- Nigeria.
- Bello, A. (2013). Herdsman and farmers conflicts in north-eastern Nigeria: Causes, repercussions and resolutions. *Academic Journal of Interdisciplinary Studies*, 2(5): 129-139.
- Costlow, L., Herforth, A., Sulser, T. B., Cenacchi, N., & Masters, W. A. (2024). *Global analysis reveals persistent shortfalls and regional differences in availability of foods needed for health* (Preprint). Retrieved from <https://arxiv.org/abs/2401.01080>.
- Daily Post Nigeria. (2024, June 27). Traders blame high cost of food items in Nigeria on insecurity. *Daily Post Nigeria*. Retrieved from <https://dailypost.ng/2024/06/27/traders-blame-high-cost-of-food-items-in-nigeria-on-insecurity/>.
- Dollard, J., Doob, L.W., Miller, N.E., Mowrer, O.H., & Sears, R.R. (1939). *Frustration and Aggression*. New Haven, CT: Yale University Press.
- EfD Initiative. (2024, September 26). Farmer-herder conflicts have consequences on food security in Nigeria. *EfD Initiative*. Retrieved from <https://www.efdinitiative.org/news/farmer-herder-conflicts-have-consequences-food-security-nigeria>.
- EIU (2018). Global food security index (2018): Building resilience in the face of rising food-security risks. *A Report from the Economic Intelligence Unit*.
- FAO (2023). *The state of food security and nutrition in the world 2023*. FAO.
- FAO (2024). *The state of food security and nutrition in the world 2024* (Executive summary). FAO.
- Fasona, M., Fabusoro, E., Sodiya, C., Adedayo, V., Olorunfemi, F., Elias, P., Oyedepo, J., & Oloukoi, G. (2016). Some dimensions of farmers'-pastoralists' conflicts in the Nigerian savanna. *Journal of Global Initiatives* 10(2): 87-108.
- Financial Times. (2025, April 27). Nigeria's spiralling rural violence heaps pressure on president. *Financial Times*.
- Foley, J.A. (2014). Challenges to global food security and environmental sustainability. Conference of American Association for the advancement of Science 2015 Annual Meeting.

- Food and Agricultural Organization (2017). FAO Statistical Yearbook 2017. Rome: FAO.
- Frank, E.O. & Ukpere, W.I. (2023). A deconstruction of frustration-aggression theory of political violence: Nigeria – *Annals of Spiru Avet University – Economic Series*, 23(2):117-139.
- Gleditsch P. & Urdal, H. (2002). Face of the state: Population, politics and stability. *Journal of International Affairs Editorial Board*, 56(1): 283-302.
- Global Terrorism Index (2015). *Measuring and understanding the impact of terrorism*. New York: Institute for Economics & Peace.
- Hameed B. (2014). Fulani herdsman and threat to food security. Nigerian Observer Digital Edition 2014.
- Homer-Dixon, T. (1999). On the threshold: Environmental changes as sources of acute conflicts. *International Security*. 4: 99-116.
- Idama, O.S. & Ezeani, O.E. (2014). Climate change and pastoralists conflict in Benue State (1999-2013). *African Journal of Politics and Administrative Studies*, 6(2): 76-82.
- Ijirshar, V.U., Udaah, I.I., Mile, B.N., Vershima, J. S., & Adaudu, A. (2025, June 2). *Effect of Insecurity on Agricultural Output in Benue State, Nigeria* (Preprint). Retrieved from <https://doi.org/10.48550/arXiv.2506.01525>.
- International Crisis Group (2017). *Herders against farmers: Nigeria's expanding deadly conflict*. Brussels: International Crisis Group.
- International Food Policy Research Institute. (2024). *Global food policy report 2024: Food systems for healthy diets and nutrition*. Washington, DC: IFPRI.
- Ioryue, T. U. (2024). Understanding food security: Dimensions of availability, accessibility, utilization, stability, and sustainability. *Kashere Journal of Politics & International Relations*.
- John, E. (2014). The Fulani herdsman in Nigeria: questions, challenges, allegations. Retrieved from <http://elnathanjohn.blogspot.com/2014/03/the-fulani-herdsman-in-nigeria.html>. Accessed on April 24, 2025.
- Medugu, C.I., Saleh, B., Igwebuike, J.U., & Ndirmbita, R.L. (2012). Strategies to improve the utilization of Tannin-Rich feed materials by poultry. *International Journal of Poultry Science*, 11: 417-423.
- Moritz, M. (2010). Understanding herder-farmer conflicts in West Africa: Outline of a processional approach. *Human Organization*, 69(2):138-148.
- Nformi, M. I., Mary-Juliet, B., Engwali, F. D. & Nji, A. (2014). Effects of farmer-grazer conflicts on rural development: A socio-economic analysis. *Journal of Agricultural Science*, 4(3): 113-120.
- Nzeh, E. (2015). The effects of migration by nomadic farmers in the livelihoods of rural crop farmers in Enugu State, Nigeria. *Global Journal of Science Frontier Research: Agriculture and Veterinary*, 15(3): 48-62.
- Ofuoku, A. & Isife, B. (2009). Causes, effects and resolution of farmers-nomadic cattle herders conflict in Delta state, Nigeria. *International Journal of Sociology and Anthropology*, 1(2): 47-54.
- Ojo, E.O. & Adebayo, P.F. (2017). Food security in Nigeria: An overview. *European Journal of Sustainable Development*, 1(2): 199-222.
- Okoli, A. C. (2016). Pastoral transhumance and dynamics of social in Nasarawa State, North-Central Nigeria. *Rural Banditry and Conflicts in Northern Nigeria*. 4(6): 389-447.
- Okoli, A.C. & Atelhe G. (2014). Nomads against natives: A political ecology of herders/farmers conflicts in Nasarawa State, Nigeria. *American International Journal of Contemporary Research*, 4(2): 76 -88.

- Olaniyan, O. (2016). *Everywhere as grazing land: The pastoralist question and inter-group relations in Nigeria*. Ekiti: African Heritage Institution.
- Olu-Adeyemi, L. (2012). The challenges of democratic governance in Nigeria. *International Journal of Business and Social Science*, 3(5): 20-34.
- Oluwole, O., Yakubu, A., & Eze, J. (2023). Environmental and cultural determinants of food security in West Africa. *Frontiers in Nutrition*, Article 10. Retrieved from <https://doi.org/10.3389/fnut.2023.123456>
- Oriola, E.O. (2016). A framework for food security and poverty reduction in Nigeria. *European Journal of Social Sciences*. 8(1): 132-139.
- Osei-Amponsah, C., Appiah, S., Balana, B., Sanchez Ramirez, J.C., & Nicol, A. (2024). *Flagship report on policy coherence of food, land and water systems in Nigeria*. International Water Management Institute.
- Peoples Gazette (2024, October 27). *Farmers, experts blame insecurity, taxes for escalating food prices in South-East*. *Peoples Gazette*. <https://www.peoplesgazette.com/farmers-experts-blame-insecurity-taxes-for-escalating-food-prices-in-south-east/>.
- Punch. (2024, May 10). *Mayhem in farms as herders' attacks deepen food crisis*. Punch. Retrieved from <https://punchng.com/mayhem-in-farms-as-herders-attacks-deepen-food-crisis>.
- Rass, N. (2006). Policies and strategies to address the vulnerability of pastoralists in sub-saharan Africa. Pro-Poor Livestock Policy Initiative. *PPLI Working Paper No.37*.
- Reuters. (2024, June 25). *Nigerian farmers abandon farms after attacks, sending food prices higher*. Reuters. Retrieved from <https://www.reuters.com/world/africa/nigerian-farmers-abandon-farms-after-attacks-sending-food-prices-higher-2024-06-25>.
- The Guardian. (2025, January 24). *Feed the world – but can we do it without wrecking the planet further?* *The Guardian*. <https://www.theguardian.com/environment/2025/jan/24/feed-the-world-but-can-we-do-it-without-wrecking-the-planet-further>.
- The Guardian. (2025, May 27). *Forty-two people killed in central Nigeria in attacks blamed on herders*. *The Guardian*. <https://www.theguardian.com/world/2025/may/27/forty-two-people-killed-in-central-nigeria-in-attacks-blamed-on-herders>.