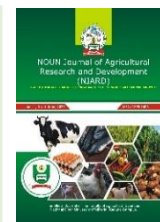




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Original Article

Food Security Status and Livelihood Coping Strategies of Rural Farming Households in Akwa Ibom State, Nigeria

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Abstract

This study assessed the food security status and livelihood coping strategies of rural farming households in Akwa Ibom State, Nigeria. A multistage sampling procedure was used to select 140 rural farming households. Primary data were collected using a structured questionnaire and analyzed with descriptive statistics and the Household Food Insecurity Access Scale (HFIAS). The results showed that 56.4% of respondents were male, 67.9% were married, and the mean age was 40 years. The average years of schooling, household size, farming experience, monthly income, and farm size were 6.1 years, 5 persons, 7.7 years, ₦70,625, and 1.5 hectares, respectively. Most respondents (72.9%) engaged in farming as their primary occupation, while 57.9% specialized in crop production. Mean household outputs were 650 kg of cassava, 455.9 kg of okra, and 882.1 kg of vegetables, with average livestock holdings of 33.2 broiler birds and 8.8 pigs. Food security analysis revealed that 42.9% of households were food secure, whereas 57.1% were food insecure (21.4% mildly, 30.7% moderately, and 5.0% severely food insecure). Common food insecurity experiences included worrying about food availability, limited dietary diversity, and reduced meal size and frequency. Major coping strategies were migration, eating fewer meals, engaging local authorities, livelihood diversification, seeking mediation, and joining farmers' associations. The study concludes that food insecurity remains prevalent despite agricultural engagement and recommends targeted interventions to strengthen rural household resilience and sustainable livelihoods.

Keywords: Food insecurity, poverty, rural, diversification

Introduction

Food insecurity remains one of the most persistent development challenges confronting rural households in sub-Saharan Africa. Although agriculture constitutes the primary source of livelihood for a large proportion of the rural population, many farming households continue to experience inadequate access to sufficient, safe, and nutritious food. The persistence of food insecurity has been attributed to a combination of structural poverty, low agricultural productivity,

limited access to productive resources, climatic variability, and market-related constraints (Otekunrin *et al.*, 2021; Abu & Soom, 2019). These challenges are particularly pronounced among smallholder farmers whose livelihoods depend largely on rain-fed agriculture and whose capacity to absorb economic and environmental shocks remains limited (Okon *et al.*, 2018).

In Nigeria, food insecurity continues to affect a significant proportion of rural farming households despite numerous government interventions



NJARD

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aimed at enhancing agricultural productivity, reducing poverty, and improving rural welfare. Empirical evidence indicates that the incidence and severity of food insecurity remain high among farming households across different agro-ecological zones of the country (Otekunrin *et al.*, 2021; Edet *et al.*, 2021). In Akwa Ibom State, studies have reported substantial levels of rural poverty and low food crop productivity, with many farming households classified as poor and food insecure (Edet *et al.*, 2021; Edet *et al.*, 2024; Okon *et al.*, 2024). Furthermore, previous research has shown that a considerable proportion of rural households fail to meet recommended dietary energy requirements and remain vulnerable to rising food prices, limited access to credit, and fluctuations in agricultural output (Okoro *et al.*, 2020; Edet *et al.*, 2021).

The food security status of rural households is closely linked to their socio-economic characteristics (Okon *et al.*, 2017). Household demographic and economic attributes influence access to productive resources, income-generating opportunities, food acquisition, and consumption patterns. Studies have identified factors such as age, education, household size, farm size, income level, and access to support services as important determinants of household food security (Otekunrin *et al.*, 2021; Abu & Soom, 2019; Edet *et al.*, 2021; Okoro *et al.*, 2020; Okon *et al.*, 2017).

Rural food production in Nigeria is characterized by diverse agricultural enterprises that contribute differently to household food availability and income generation. These enterprises include the cultivation of staple food crops, vegetable production, livestock rearing, and other complementary agricultural activities (Edet *et al.*, 2021; Mukaila *et al.*, 2021; Bahta, 2022). In Akwa Ibom State, rural agricultural production is dominated by small-scale farming systems that often operate under conditions of limited capital, low technological adoption, and inadequate market integration. Studies conducted among food crop farmers in the state reveal that production is frequently constrained by small farm sizes, low productivity levels, and poor access to production-enhancing resources, thereby limiting both household food availability and income opportunities (Edet *et al.*, 2021; Okon, 2025). Consequently, many rural households remain vulnerable to food insecurity

despite continued engagement in agricultural production.

The assessment of household food security has received considerable attention in agricultural and development economics literature. Empirical studies employing calorie-based approaches, the Food Security Index, and the Household Food Insecurity Access Scale (HFIAS) consistently demonstrate that a substantial proportion of rural farming households in Nigeria fall below recommended food consumption thresholds (Otekunrin *et al.*, 2021; Ademola *et al.*, 2021; Edet *et al.*, 2021). Evidence from Akwa Ibom State further indicates the prevalence of moderate and severe food insecurity among food crop farming households, accompanied by inadequate consumption of nutrient-rich foods such as cereals, fish, and animal protein sources (Edet *et al.*, 2021). Similar findings from other parts of Nigeria identify household size, income, cooperative membership, and access to extension services as significant factors influencing food security outcomes (Mukaila *et al.*, 2021).

Faced with recurrent food shortages and livelihood uncertainties, rural households often adopt various coping strategies to sustain consumption and mitigate the effects of food insecurity. Common coping mechanisms include reducing meal frequency and portion sizes, substituting preferred foods with cheaper alternatives, purchasing food on credit, borrowing money, and utilizing savings to meet immediate food needs (Iheme *et al.*, 2026; Ademola *et al.*, 2021; Okidim *et al.*, 2021; Mukaila *et al.*, 2021; Okon *et al.*, 2018). Studies from other African countries have also documented reliance on informal support networks, casual labour, asset liquidation, and temporary migration as important adaptive responses to food stress (Mbhenyane *et al.*, 2025; Bahta, 2022). While these strategies may provide short-term relief, they often compromise nutritional quality, deplete household assets, and weaken long-term resilience. The COVID-19 pandemic further intensified food insecurity among rural households and increased dependence on such coping mechanisms, particularly among households with larger family sizes (Okidim *et al.*, 2021).

Food insecurity continues to pose a major challenge to rural development in Nigeria despite decades of agricultural development programmes, poverty reduction initiatives, and social protection



interventions. Recent evidence suggests that a substantial proportion of farming households remain unable to achieve adequate food consumption and nutritional well-being, indicating that existing interventions have not sufficiently addressed the underlying drivers of food insecurity (Otekunrin *et al.*, 2021; Ibok *et al.*, 2025). This situation is particularly concerning because rural households depend heavily on agriculture for both food and income, making them highly vulnerable to production shocks, economic instability, and rising food prices (Okon, 2025).

In Akwa Ibom State, empirical studies reveal high levels of food insecurity among food crop farming households, with only a small proportion classified as food secure despite considerable farming experience and active participation in agricultural production (Edet *et al.*, 2021). Furthermore, persistent rural poverty continues to affect many farming households, suggesting that agricultural engagement alone has not translated into improved welfare and food security outcomes for a large segment of the rural population (Edet *et al.*, 2024; Okon *et al.*, 2024). These conditions raise important concerns regarding the capacity of rural households to sustain adequate food consumption and maintain resilient livelihoods.

Although previous studies have generated valuable insights into the determinants of food security and agricultural productivity in Akwa Ibom State, they provide limited evidence on how household socio-economic characteristics, the structure of rural food production enterprises, and food security status collectively influence the coping strategies adopted by rural households during periods of food stress. Yet, evidence from Nigeria and other African countries demonstrates that households frequently adopt coping mechanisms that may reduce dietary quality, deplete productive assets, and undermine long-term resilience (Itheme *et al.*, 2026; Ademola *et al.*, 2021; Mbhenyane *et al.*, 2025). Without a comprehensive understanding of these relationships, policy interventions may fail to adequately address the realities faced by vulnerable rural households.

Moreover, recent assessments of social protection and agricultural support programmes suggest that some interventions have not effectively shielded rural households from the adverse effects of inflation, declining purchasing power, and structural constraints affecting food access (Ibok

et al., 2025). Consequently, there remains a critical need for empirical evidence that integrates household characteristics, enterprise structures, food security outcomes, and coping behaviour within a single analytical framework. This study seeks to fill this gap by examining the socio-economic characteristics of rural farmers, identifying and describing the different enterprises in rural food production, determining the food security status of rural farming households, and assessing the coping strategies adopted in response to food insecurity in Akwa Ibom State.

Methodology

This study was conducted in Akwa Ibom State, Nigeria. Akwa Ibom State is located in the Niger Delta region of Nigeria with an estimated population of 5.451 million (NBS, 2016) and a land area of 6,900 sq. Km. It lies between latitudes 4°32'N and 5°33'N and longitudes 7°25'E and 8°25'E. It is bordered on the east by Cross River State, west by Rivers State and Abia State, and on the south by the Atlantic Ocean. It is currently the highest oil-producing State in Nigeria. Agriculture is the dominant economic activity of Akwa Ibom State. Agriculture supports 75% of households of the State's population. The various agricultural products include palm oil, cassava, yam, cocoyam, plantain, maize, rice, rubber, seafood such as varieties of fish, shrimps, crayfish, oysters, etc., poultry eggs and meats, pork, and lately snail farming.

Data for this study were collected through the use of structured questionnaire which were administered to farmers' households. Multistage random sampling technique was used for the study. In the first stage, one (1) Local government Area was randomly selected from each of the six agricultural zones in Akwa Ibom State, which include: Eket, Etinan, Abak, Ikot- Ekpene, Uyo and Oron respectively. In the second stage, three (3) communities were randomly selected from each of the selected local government Areas, giving a total of 18 communities in each zone. In the third stage, 8 households giving a total of 144 farm households. This was standardized to 140 respondents for the study.

Data were collected through the use of structured questionnaire. The socioeconomic characteristics of the respondents and the enterprises in rural food production was analyzed using descriptive statistics. A four-point Likert type scale rating was used to analyze the coping strategies of the rural



farmers and the Household Food Insecurity Index Scale was used to determine the food security status of the respondents.

The Household Food Insecurity Access Scale (HFIAS) developed by the USAID-funded Food and Nutrition Technical Assistance II project (FANTA) between 2001 and 2006 was used to determine the food security status of farming households in the study area. The HFIAS was constructed from a set of questions that captures households' behavioral and psychological manifestations of insecure food access that covered a recall period of 7 days. The questionnaire consisted of two types of questions; nine 'occurrence' and nine 'frequency of occurrence' questions. The response were transformed into a categorical indicator of food security. The HFIAS questions were scored 0 – 3, with 3 being the highest frequency of occurrence. The respondents were categorized based on the result as food secure, mildly food insecure, moderately food insecure, or severely food insecure.

RESULTS AND DISCUSSION

Socio-economic Characteristics of the Respondents

The results in Table 1 and Table 2 showed that rural farming in the study area was dominated by males (56.4%), while females accounted for 43.6%. This suggests that both genders participate in agricultural production, although male farmers may have greater access to productive assets and resources, which can influence their farming activities and livelihood outcomes (Ikoyo-Eweto *et al.*, 2024; Effiong, 2024).

The respondents were relatively young, with 52.1% below 40 years of age, 43.6% between 40 and 50 years, and only 4.3% above 50 years. The mean age was 40 years, indicating that most farmers were within their economically active years and therefore capable of contributing effectively to agricultural production when provided with adequate support and enabling conditions (Ikoyo-Eweto *et al.*, 2024; Waheed *et al.*, 2023). Most respondents were married (67.9%), while 16.4% were widowed, 8.6% were single, and 7.1% were divorced. The predominance of married farmers implies greater household responsibilities and consumption obligations (Ikoyo-Eweto *et al.*, 2024; Waheed *et al.*, 2023; Ogah *et al.*, 2024).

Regarding educational attainment, 49.3% of the respondents had secondary education, 47.1% had

primary education, and only 3.6% attained tertiary education. The average years of schooling was 6.1 years, indicating a moderate level of literacy that could facilitate the understanding and adoption of improved agricultural practices (Ikoyo-Eweto *et al.*, 2024). This finding agrees with reports that education supports farmers' ability to manage unfamiliar technologies and improves participation in agricultural production and related decisions (Effiong, 2024).

The average household size was five persons, with 52.1% of households comprising 4–6 members, 27.1% having fewer than four members, and 20.8% having more than six members. Such household sizes may provide family labour for farm operations (Akpan *et al.*, 2023). Farming was the primary occupation for 72.9% of the respondents, while 27.1% engaged primarily in other occupations, supporting the observation that agriculture remains the dominant livelihood activity in rural areas (Waheed *et al.*, 2023; Effiong, 2024).

With respect to enterprise type, 57.9% of the respondents were engaged in crop farming, 33.6% in livestock production, 5.7% in mixed farming, and 2.9% in agricultural marketing. The respondents were also fairly experienced, with 70.7% having 5–10 years of farming experience, 16.4% having less than five years, and 12.9% having more than ten years. The mean farming experience was 7.7 years, suggesting adequate practical knowledge for farm management and production decisions (Ikoyo-Eweto *et al.*, 2024; Akpan *et al.*, 2023; Agom *et al.*, 2024).

The result in Table 2 further show that average monthly income of the respondents was ₦70,625, with 46.4% earning between ₦50,000 and ₦100,000, 41.4% earning below ₦50,000, and only 12.2% earning above ₦100,000. The mean monthly income of ₦70,625 suggests that the average respondent earns only slightly above Nigeria's national minimum wage. However, with 41.4% of the respondents earning below ₦50,000 per month, a substantial proportion of rural farming households have limited purchasing power (Edet *et al.*, 2024; Agom *et al.*, 2024; Effiong, 2024). Given the prevailing economic conditions, characterised by persistent inflation and rising food prices in Nigeria, these income levels are likely to constrain households' ability to access adequate and nutritious food, thereby increasing their vulnerability to food insecurity (Aremu & Reynolds, 2024).



In terms of land tenure, 51.4% acquired land through inheritance, 25.7% through communal arrangements, and 22.9% through rental arrangements, indicating that inheritance remains the dominant mode of land acquisition in the area (Nyaknoabasi, 2026). Farm size was generally small, as 60.7% cultivated less than 2 hectares, while 39.3% cultivated more than 2 hectares. The mean farm size of 1.5 hectares confirms the predominance of small-scale farming in the study area (Idu *et al.*, 2023; Ogah *et al.*, 2024).

The results further revealed that 69.3% of the respondents relied on hired labour, while 30.7% utilized family labour, suggesting that labour use depended on the nature and scale of farm operations (Akpan *et al.*, 2023). A majority (60.7%) had access to credit facilities, which could

enhance their capacity to finance production activities, while 39.3% lacked access to credit (Effiong, 2024; Ikoyo-Eweto *et al.*, 2024; Idu *et al.*, 2023). Similarly, 74.3% belonged to social organizations, indicating substantial participation in groups that may provide production information, financial support, and collective action opportunities (Ikoyo-Eweto *et al.*, 2024; Idu *et al.*, 2023; Edet *et al.*, 2024). However, access to extension services was low, as 72.1% of the respondents reported no contact with extension agents. This limited access may constrain farmers' exposure to improved production technologies, pest and disease management practices, and market information necessary for enhanced agricultural productivity (Idu *et al.*, 2023; Akpan *et al.*, 2025; Aremu & Reynolds, 2024).

Table 1: Frequency Distribution of Respondents Based on Socio-economic Characteristics

Socio-economic Characteristics	Frequency (n=140)	Percentage
Gender		
Male	79	56.4
Female	61	43.6
Age (Mean = 40years)		
Below 40 years	73	52.1
40 - 50 years	61	43.6
Above 50 years	6	4.3
Marital Status		
Single	12	8.6
Married	95	67.9
Widowed	23	16.4
Divorced	10	7.1
Educational Level (Mean = 6.1 years)		
Below 6 years	66	47.1
6 - 12 years	69	49.3
Above 12 years	5	3.6
Household Size (Mean = 5 persons)		
Below 4	38	27.1
4 - 6	73	52.1
Above 6	29	20.8
Farming as Main Occupation		
Yes	102	72.9
No	38	27.1
Type of Farming		
Mixed farming	8	5.7
Crop farming	81	57.9
Livestock farming	47	33.6
Marketer	4	2.9
Experience (Mean = 7.7years)		
< 5years	23	16.4
5 - 10years	99	70.7
> 10years	18	12.9

Source: Field Survey Data, 2024.



Table 2: Frequency Distribution of Respondents Based on Socio-economic Characteristics

Socio-economic Characteristics	Frequency (n=140)	Percentage
Monthly Income (Mean = ₦70,625.0)		
Below ₦50,000	58	41.4
₦50,000 - ₦100,000	65	46.4
Above ₦100,000	17	12.2
Mode of Land Acquisition		
Inheritance	72	51.4
Rent	32	22.9
Communal	36	25.7
Farm Size (Mean = 1.5ha)		
Below 2ha	85	60.7
Above 2ha	55	39.3
Labour Source		
Family	43	30.7
Hired	97	69.3
Access to Credit		
Yes	85	60.7
No	55	39.3
Membership of Social Organization		
Yes	104	74.3
No	36	25.7
Access to Extension Services		
Yes	39	27.9
No	101	72.1

Source: Field Survey Data, 2024.

Agricultural Enterprises of Respondents in the Study Area

The results presented in Table 3 indicate that rural farmers in the study area were engaged in both crop and livestock enterprises, although production was generally characterized by small-scale operations. Crop and livestock activities coexist in rural farming systems in Akwa Ibom State, where farmers cultivate crops such as cassava and vegetables and also rear animals, while production remains predominantly smallholder in scale (Akpan *et al.*, 2023).

Among the crop enterprises, cassava was a major enterprise, with 42.9% of the respondents producing between 500 and 1,000 kg, 38.6% producing less than 500 kg, and 18.5% producing more than 1,000 kg. The mean cassava output was 650 kg. Recent evidence from Akwa Ibom State likewise describes cassava as a central enterprise among rural farmers and characterizes cassava producers as micro- or small-scale farmers with modest farm sizes (Nwanneamaka *et al.*, 2025; Agom, 2024).

For okra production, the majority (75.0%) recorded yields below 500 kg, while 16.4% produced between 500 and 800 kg and 8.6% produced above 800 kg. The average okra yield was 455.9 kg. Recent Nigerian evidence similarly treats okra production as a smallholder enterprise, with average farm size around 1.8 hectares and productivity shaped by household, farm size, and cooperative factors (Alabi *et al.*, 2023).

Similarly, vegetable production was dominated by relatively low output levels, as 79.3% of the respondents harvested less than 1,000 kg, 15.0% harvested between 1,000 and 1,500 kg, and only 5.7% harvested above 1,500 kg. The mean vegetable yield was 882.1 kg. In Akwa Ibom State, smallholder production systems commonly include vegetables such as waterleaf and fluted pumpkin, and farmers typically operate on moderate to small landholdings, which is consistent with relatively modest output levels (Akpan *et al.*, 2023).

Table 3: Types of agricultural enterprises owned by respondents

Agricultural Enterprises	Frequency (n=140)	Percentage
Crop Enterprises		
Cassava (Mean = 650kg)		
Below 500kg	54	38.6
500kg - 1000kg	60	42.9
Above 1000kg	26	18.5
Okra (Mean = 455.9kg)		
Below 500kg	105	75.0
500kg - 800kg	23	16.4
Above 800kg	12	8.6
Vegetable (Mean = 882.1kg)		
Below 1000kg	111	79.3
1000kg - 1500kg	21	15.0
Above 1500kg	8	5.7
Livestock Enterprises		
Broilers (Mean = 33.2birds)		
Below 50	123	87.9
50 - 100	11	7.9
Above 100	6	4.2
Pigs (Mean = 8.8pigs)		
Below 10	116	82.8
10 - 15	12	8.6
Above 15	12	8.6

Source: Field Survey Data, 2024.

These results suggest that crop production in the study area is predominantly small-scale, with most farmers recording relatively modest output levels. That interpretation agrees with recent evidence from Akwa Ibom and other Nigerian settings showing that cassava and okra production is largely undertaken by smallholder farmers on limited land areas (Nwanneamaka *et al.*, 2025; Nwaobiala *et al.*, 2023; Oyotomhe *et al.*, 2025).

With respect to livestock enterprises, broiler production was largely undertaken on a small scale. The majority (87.9%) of the respondents maintained fewer than 50 birds, while 7.9% kept between 50 and 100 birds and only 4.3% kept more than 100 birds. The mean flock size was 33.2 birds. Findings describe broiler farming in Nigeria as a predominantly small-scale enterprise, including work in Aguata that explicitly focuses on small-scale broiler farmers (Attamah *et al.*, 2023).

Similarly, pig production was characterized by small herd sizes, with 82.8% of the respondents rearing fewer than 10 pigs, while 8.6% kept between 10 and 15 pigs and another 8.6% maintained more than 15 pigs. The average herd size was 8.8 pigs. Recent rural household evidence from southwest Nigeria shows that pig production is commonly part of mixed

smallholder livestock systems and is constrained by high input costs, which is consistent with the maintenance of small herd sizes (Ojumu *et al.*, 2023).

The findings indicate that both crop and livestock enterprises in the study area are predominantly smallholder-oriented, reflecting the limited scale of agricultural production among rural farming households. Across the full set of recent studies, this smallholder pattern is consistent for cassava in Akwa Ibom State, okra in Kaduna State, broilers in Taraba and Adamawa States, and mixed livestock systems in rural Nigeria (Agom, 2024; Ojumu *et al.*, 2023).

Food Insecurity Status of the Respondents in the Study Area

The results in Table 4 show that responses to the HFIAS items were generally consistent. There was a decreasing percentage in their responses from the first question to the last question. This indicated that the severity of household food insecure was getting lower over the domain. More respondents reported affirmatively to the items indicating less severe food insecurity such as having to eat fewer meals in a day because there was not enough food, than to items indicating more severe food insecurity such as household member not able to eat the kinds of foods you



preferred because of lack of resources (Ajao et al., 2023; Oni et al., 2024)

Two items most frequently receiving an affirmative response which indicated that they were food secure included question 6, “did you or any household member have to eat fewer meals in a day because there was not enough food?” and 8, “did you or any household member go to sleep at night hungry because there was not enough food?”. Both received 45.7% of affirmative responses. On the contrary, item receiving the least affirmative response (0.0%) was the second question which was also indicating the most severe food insecurity, “were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?”.

The score was then calculated based on the distribution of the responses to the nine items. The household food insecurity scores ranged from 0 to 36. The maximum score for a household is 36 and the minimum score is 0. The mean food insecurity score is 0.50 ± 0.16 . This was not a good phenomenon as the higher the score, the more food insecurity a household experienced (Ajao et al., 2023; Nkoko et al., 2024). Using the categorical measure of food insecurity based on the indices obtained, four levels of food insecurity had been identified which were food security (0-39), mildly food insecure (40 -59), moderately food insecure (60-79) and severely food insecure (80-100). Table 5 showed the frequency and percentage of each HFIAS category.

Table 4: Distribution of affirmative responses to items on the Household Food Insecurity Access Scale (HFIAS) in the Study Area

Occurrence Questions	Often	Sometimes	Rarely	Never
In the past four weeks, did you worry that your household would not have enough food?	41.4	47.1	8.6	2.9
In the past four weeks, were you or any household member not able to eat the kinds of foods you preferred because of lack of resources?	49.3	20.0	30.7	0.0
In the past four weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources?	50.0	41.4	5.7	2.9
In the past four weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	41.4	47.9	7.9	2.9
In the past four weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food?	35.7	22.9	17.1	24.3
In the past four weeks, did you or any household member have to eat fewer meals in a day because there was not enough food?	24.3	17.1	30.7	45.7
In the past four weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food?	18.6	25.0	47.9	8.6
In the past four weeks, did you or any household member go to sleep at night hungry because there was not enough food?	5.7	11.4	37.1	45.7
In the past four weeks, did you or any household member go a whole day and night without eating anything because there was not enough food?	5.7	27.9	33.6	32.9

Source: Field Survey, 2024.

Table 5: Prevalence of Household Food Insecurity (n=140)

HFIAS categories	Frequency	Percentage
Food secure	60	42.9
Mildly food insecure	30	21.4
Moderately food insecure	43	30.7
Severely food insecure	7	5.0
Mean $\pm$ Standard Deviation	0.50 ± 0.16	

Source: Field Survey Data, 2024.

From Table 5, a cumulative of 57.1% of rural farm households were food insecure. That meant they were at times, uncertain of having or unable

to acquire enough food for all household members because they had insufficient money and other resources for food. They were further



categorized into mildly food insecure (21.4%), moderately food insecure (30.7%) and severely food insecure (5.0%). The remaining, 42.9% of households were food secure, meaning that they always had access to enough food for an active, healthy life for all household members. This is in line with the findings of Ajao et al. (2023), Nkoko et al. (2024), and Oni et al. (2024).

Coping Strategies Adopted by Rural Farmers in the Study Area

The result in Table 6 shows that the farmers used several strategies for coping with the effects of land grabbing on their production in the area. The prominent strategies they used were migration to another community ($x=3.59$), eating fewer times a day ($x=3.33$), engaging with local authorities and government agencies ($x=3.27$), relocation to another farmland ($x=3.27$), seeking mediation or conflict resolution services ($x=3.24$), diversifying into off-farm enterprises ($x=3.21$), diversification to other type of farming ($x=3.21$), fencing of land ($x=3.16$), joining a farmers cooperative or association ($x=2.99$) and seeking legal advice and assistance to secure land rights ($x=2.56$).

The result showed that migration to another community is considered as a coping strategy for farmers affected by land grabbing. When farmers experience land grabbing, they may choose to relocate to another community to seek alternative opportunities and livelihoods. By moving to a different area, farmers may hope to find new land for farming or explore non-agricultural employment options (Weldemariam et al., 2023).

Land grabbing has a negative effect on food security, as a result, some farmers resort to coping strategies such as adjusting their eating patterns (Alhassan, Shaibu and Kuwornu, 2018) such as reducing the number of meals consumed in a day (Alhassan et al., 2018; Weldemariam et al., 2023).

Engaging with local authorities and government agencies can be beneficial for rural farmers facing challenges such as land grabbing. By actively participating in dialogues and building relationships with these entities, farmers can potentially address their concerns and seek assistance or protection (Sändig, 2021).

Relocating to another farmland allows farmers to secure a new plot of land where they can resume farming operations. By finding alternative land, farmers can mitigate the negative impact of land grabbing on their income and livelihoods. However, it is important to note that finding suitable farmland for relocation may not always be easy, as land availability and access can be limited in certain regions (Weldemariam et al., 2023; Aboye et al., 2024).

Mediation or conflict resolution services can help facilitate negotiations between the affected farmers and the parties involved in the land grabbing, aiming to find a mutually acceptable solution. These services can provide a platform for dialogue, negotiation, and potentially reaching agreements that protect the rights and interests of the farmers (Dell'Angelo et al., 2021).

In addition to seeking mediation or conflict resolution, diversification can be another coping strategy for farmers affected by land grabbing (Alhassan et al., 2018). Diversification involves expanding the range of activities or sources of income beyond traditional farming. This can include exploring alternative livelihood options such as off-farm employment, starting non-agricultural businesses, or engaging in value-added activities like processing and marketing agricultural products. Diversification can help farmers reduce their dependence on the land that has been grabbed and mitigate the negative impact on their income (Aboye et al., 2024).

Fencing the land can serve as a protective measure to secure the remaining land from further encroachment or unauthorized access. By establishing physical boundaries, farmers can deter potential land grabbers and protect their farming activities. Fencing can help maintain control over the land and safeguard their livelihoods.

Joining a farmers cooperative or association can provide farmers with collective strength and support. By coming together, farmers can pool their resources, knowledge, and experiences to address common challenges, including land grabbing. Cooperatives or associations can



advocate for farmers' rights, provide legal assistance, and offer a platform for sharing information and strategies to mitigate the impact of land grabbing. Additionally, collective action

can enhance farmers' bargaining power and enable them to negotiate better terms with external stakeholders (Dell'Angelo et al., 2021; Shumiye et al., 2026).

Table 6: Coping Strategies Adopted by Rural Farmers

Coping Strategies	S.A	A	D	SD	Mean
Joining a farmers cooperative or association	71	27	11	31	2.99*
Strengthening community ties	26	38	45	31	2.42
Networking with neighbouring farmers	26	38	45	31	2.42
Seeking legal advice and assistance to secure land rights	26	51	39	24	2.56*
Diversification to other type of farming	78	35	6	21	3.21*
Diversifying into off-farm enterprises	78	35	6	21	3.21*
Relocation to another farmland	89	-	51	-	3.27*
Migration to another community	89	45	6	-	3.59*
Engaging with local authorities and government agencies	68	42	30	-	3.27*
Seeking mediation or conflict resolution services	57	59	24	-	3.24*
Fencing of land	81	24	11	24	3.16*
Eating fewer times a day	81	24	35	-	3.33*

Source: Field Survey, 2024 , Keys: SA- Strongly Agree, A - Agree, D - Disagree, S.D - Strongly Disagree

Conclusion

The findings suggest that food insecurity remains a significant challenge among rural farming households in the study area, necessitating policies that improve agricultural productivity, strengthen extension delivery, enhance access to credit, and promote livelihood diversification to build household resilience and food security.

Recommendations

- Government and agricultural development agencies should increase the coverage and effectiveness of extension services in rural communities through regular farm visits, farmer field schools, and training programmes on improved crop and livestock production practices.
- Financial institutions, cooperatives, and government intervention programmes should provide accessible and low-interest credit facilities to rural farmers, alongside subsidized inputs such as improved seeds, fertilizers, agrochemicals, and livestock feed.
- Rural households should be encouraged to diversify both agricultural and non-farm income-generating activities through targeted skill acquisition programmes, agribusiness development initiatives, and value-addition enterprises.
- Policymakers should design and implement community-based food security programmes that focus on vulnerable farming households, particularly those classified as moderately

and severely food insecure. Such interventions may include food assistance programmes, conditional cash transfers, nutrition-sensitive agricultural projects, community food banks, and support for farmer cooperatives.

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