



Effects of Agricultural Credit Access on Farm Productivity Among Small-Scale Farmers in Numan Local Government Area, Adamawa State, Nigeria

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ABSTRACT

This study examined the effects of agricultural credit access on farm productivity among small-scale farmers in Numan Local Government Area, Adamawa State, Nigeria. The study specifically described the socioeconomic characteristics of farmers, identified sources and accessibility levels of agricultural credit, assessed the effects of credit access on farm productivity, and identified constraints to credit acquisition. Multi-stage sampling technique was employed to select 86 respondents, and data was collected through questionnaire and interviews. Frequency, percentage and mean multiple linear regression were used to analyze the data. The results showed that most farmers were in their productive years (55%), with an average age of 41 years, and (41%) have low levels of formal education, which affected their financial literacy. The major sources of agricultural credit included cooperative societies, microfinance institutions, and informal lenders, with limited access to commercial bank loans due to collateral requirements. The regression analysis indicated that the interest rate on credit, farm size significantly influences farm productivity at 1% and amount of credit received, and farming experience significantly influence farm productivity at 5% levels. The study further revealed that high-interest rates per annum (36%), lack of collateral (25.6%), and bureaucratic loan application processes (14%) were the major constraints to credit access, aligning with previous studies. The study concluded that agricultural credit played a crucial role in enhancing farm productivity, but access remained limited due to various socioeconomic and institutional barriers. The findings highlight the need for policy interventions to improve rural banking infrastructure, reduce interest rates, and simplify loan procedures.

Keywords: Agricultural Credit, Access, Farm Productivity and Small-Scale Farmers

INTRODUCTION

Agriculture remains a fundamental driver of economic growth, employment, and food security in developing countries, particularly in Nigeria. Small-scale farmers form the backbone of agricultural

production, contributing significantly to the national food supply. Despite accounting for approximately 90% of Nigeria's agricultural produce, these farmers often face constraints that hinder their productivity and growth (Bello and

Yusuf, 2020). One of the primary challenges is limited access to agricultural credit, which affects their ability to invest in improved farming techniques, inputs, and technologies. Studies indicate that only about 7% of Nigeria's smallholder farmers have access to formal credit facilities (Food and Agriculture Organization (FAO), 2022). This limited access restricts their capacity to procure essential inputs such as seeds, fertilizers, pesticides, and mechanized equipment.

In Nigeria, small-scale farmers account for over 70% of agricultural output but struggle with low productivity due to insufficient financial support. Despite various government interventions, credit accessibility remains a major constraint. The reluctance of commercial banks to provide medium to long-term financing for agriculture, coupled with the mismanagement of government loans, has exacerbated this issue (Akinbode and Ukeje, 2019). Several factors contribute to the persistent financial exclusion of small-scale farmers. High collateral requirements imposed by financial institutions discourage many farmers from seeking loans, as they often lack the necessary assets to secure credit (Olomola, 2018). Additionally, high-interest rates and bureaucratic bottlenecks in loan disbursement further deter farmers from accessing formal financial services (Olawuyi and Balogun, 2020).

Numan Local Government Area (LGA) in Adamawa State exemplifies these challenges. Most farmers in this region engage in subsistence agriculture and rely on informal lending sources due to difficulties in securing institutional credit. A study focusing on sugarcane production in Numan LGA identified inadequate and delayed allocation of farms and insufficient credit as major constraints (Jabiru *et al.*, 2017). Consequently, farmers in this area face low productivity and struggle with challenges such as poor infrastructure, high-interest rates, and cumbersome loan procedures. In addition

to financial constraints, farmers in Numan LGA face challenges related to limited access to modern agricultural inputs and extension services. The high cost of fertilizers, improved seeds, and mechanized equipment makes it difficult for smallholder farmers to enhance their productivity (Bello and Yusuf, 2020). Furthermore, poor road networks and inadequate storage facilities contribute to post-harvest losses, reducing farmers' earnings and overall food supply in the region (Adamu and Garba, 2021).

Climate change further exacerbates agricultural challenges in Numan LGA. Erratic rainfall patterns, prolonged droughts, and floods have disrupted farming cycles, leading to inconsistent yields and food insecurity (Ibrahim and Danjuma, 2022). Many farmers lack climate adaptation strategies and struggle with accessing climate-smart agricultural practices due to limited extension services and financial support (Usman *et al.*, 2023).

Statement of the Problem

Worldwide, access to agricultural credit is a key determinant of farm productivity. In developed nations, structured credit facilities have played a major role in enhancing agricultural efficiency. Governments and financial institutions in countries such as the United States, Canada, and the European Union have implemented well-structured agricultural credit programs, enabling farmers to invest in modern technologies, mechanization, and high-yield crop varieties (OECD, 2022).

In Nigeria, smallholder farmers constitute the majority of the agricultural workforce, yet only a small percentage have access to formal credit. Financial constraints have led to an over-reliance on traditional, labour-intensive farming methods, contributing to low yields and food insecurity (Eboh *et al.*, 2020). High lending rates, lack of collateral, and limited rural banking services exacerbate the situation, making it difficult for farmers to obtain loans for purchasing

improved seeds, fertilizers, and mechanized equipment (Olomola, 2019). In Numan LGA, small-scale farmers face unique challenges in accessing agricultural credit. Many rely on informal lenders who charge exorbitant interest rates, making it difficult for farmers to sustain and expand their agricultural activities (Bello and Yusuf, 2020). Those who attempt to secure formal credit from banks and microfinance institutions often encounter strict collateral requirements, delays in loan disbursement, and high repayment burdens, which further hinder their ability to invest in modern farming techniques and inputs (Olomola, 2019). This article aims to explore effects of agricultural credit access on farm productivity among small scale farmers of Numan, Adamawa State. Specifically, the study was to;

- i. describe the socioeconomic characteristics of small-scale farmers in the study area.
- ii. identify the sources and accessibility levels of agricultural credit available to farmers.
- iii. assess the effect of agricultural credit access on farm productivity.
- iv. identify the constraints small-scale farmers face in accessing agricultural credit.

METHODOLOGY

The Study Area

Numan Local Government Area (LGA) is situated in the southern part of Adamawa State, Nigeria. It lies approximately at latitude 9.4667° N and longitude 12.0333° E, geographically placing it in the central-eastern part of Nigeria. The LGA shares boundaries with Demsa LGA to the north, Lamurde LGA to the south, and parts of Taraba State to the east. The region falls within the Guinea Savannah ecological zone, known for its open woodlands and grasslands. The average annual rainfall in Numan LGA ranges between 900 mm and 1,300 mm, making it suitable for rain-fed agriculture. The climate is characterized by a wet season from April to October and a

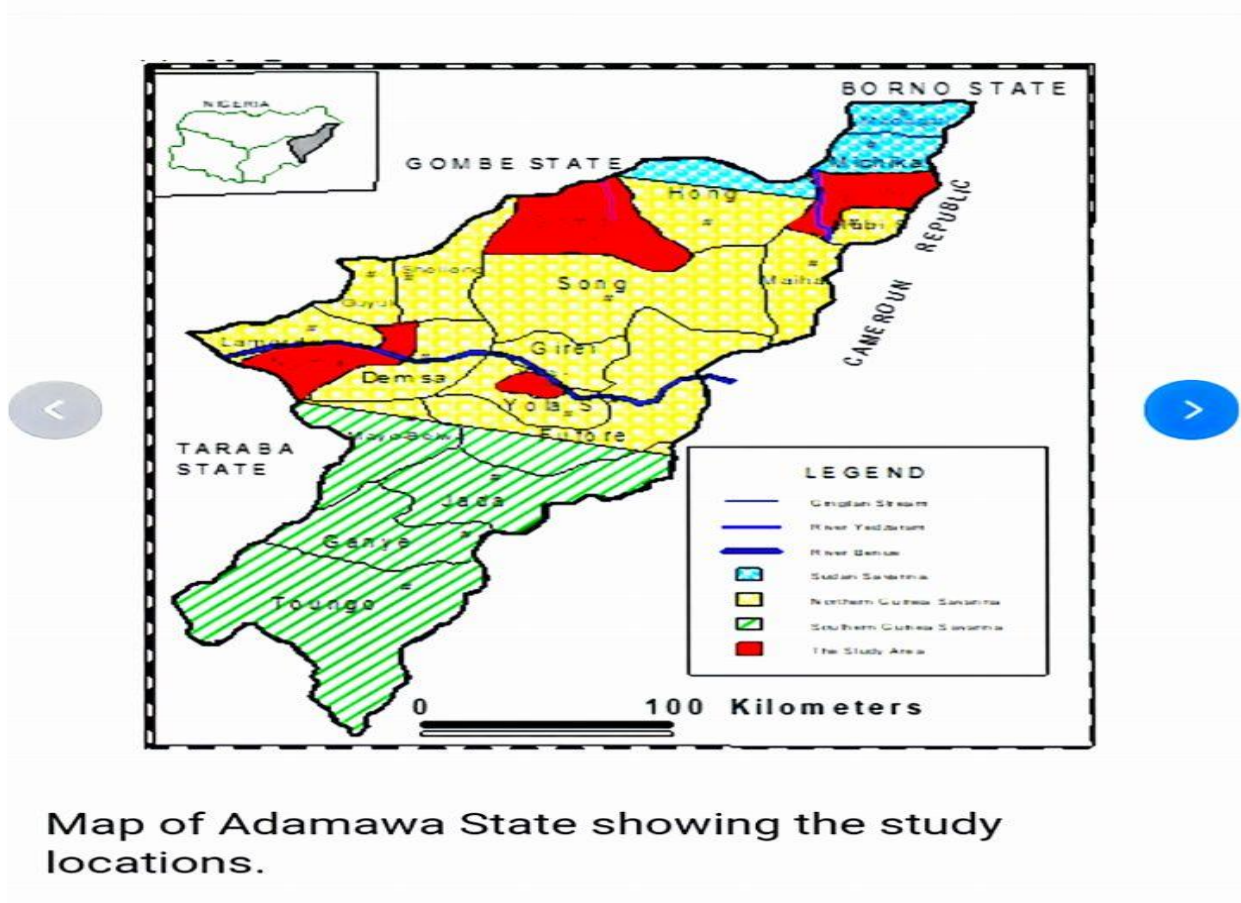
dry season from November to March, with distinct harmattan winds during the dry months. This rainfall pattern supports both crop cultivation and livestock rearing, aligning with the agro-pastoral lifestyle of the inhabitants.

Numan LGA spans an estimated landmass of 1,537 square kilometers, providing extensive arable land for agricultural activities. The majority of residents are involved in farming, which is the dominant economic activity. Key staple crops cultivated include maize, rice, millet, sorghum, and groundnuts. In addition, farmers engage in vegetable production and cultivation of cash crops. Livestock farming particularly cattle, goats, sheep, and poultry is also widely practiced. Ethnically, Numan is home to the Bachama and Batta people, who are indigenous to the area and renowned for their cultural heritage. Other ethnic groups such as Hausa, Fulani, and settlers from other parts of Nigeria coexist and actively participate in agriculture, trade, and artisan work. The LGA also hosts thriving local markets, agro-processing activities, and fishing along the River Benue, which further contribute to household income.

According to the National Population Commission (NPC, 2024), Numan LGA has an estimated population of over 1,106,585 people, growing at a projected annual rate of 3.2%. This growing population underscores the region's importance as a critical food-producing and trading center in Adamawa State.

Method of Data Collection

Primary and secondary data was collected to ensure a comprehensive analysis of agricultural credit access in Numan LGA. Primary data was collected with the aid of questionnaires while secondary data were source from literatures and journals.



Map of Adamawa State showing the study locations.

Figure 1: Map Showing the Geographical Location of Numan LGA

Source: Google Maps (2025)

Sampling Procedure and Sample Size

A multi-stage sampling technique was employed to select respondents for this study:

1. Stage 1: Purposive Selection of Numan LGA

Numan LGA was purposively selected due to its prominence in agricultural activities and the high concentration of small-scale farmers facing challenges in accessing agricultural credit.

2. Stage 2: Selection of Five Wards

Five wards within Numan LGA were randomly selected to ensure broad coverage of farming communities.

3. Stage 3: Selection of Villages

From each selected ward, two villages were randomly chosen, resulting in a total of ten villages for the study.

4. Stage 4: Proportionate Random Sampling of Farmers

A total of 86 small-scale farmers were proportionately and randomly selected from the chosen villages to ensure fair representation across different farming households.

Analytical Techniques

The study employed both descriptive and inferential statistical techniques to analyze data based on the research objectives.

Descriptive Statistics

Descriptive statistics such as frequency, percentage, and mean were used to summarize and present data for objectives 1,2 and 4

Inferential Statistics

Inferential statistical techniques such as Multiple Regression Analysis applied to analyze objectives 3

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon \quad 1$$

Where:

Y = Farm productivity (output per hectare)

β_0 = Intercept

β_1 – β_5 = Regression coefficients

X1 = Amount of credit received (₦)

X2 = Interest rate on credit (%)

X3 = Repayment period (months)

X4 = Farm size (hectares)

X5 = Farming experience (years)

ε = Error term

RESULTS AND DISCUSSION

Socioeconomic Characteristics of Small-Scale Farmers

The socioeconomic characteristics of farmers in Numan LGA provided an insight into their farming activities and how these attributes influenced access to agricultural credit and farm productivity. Table 1; revealed that the mean age of respondents is 41years, indicating that most farmers were within their productive years. This aligns with Adebayo *et al.* (2021), who found that the majority of small-scale farmers in northern Nigeria fall within the 30-50year age range. The predominance of middle-aged farmers from Table 1 suggests a balance between youthful energy and experience, which is crucial for agricultural efficiency. However, the relatively low participation of younger farmers (20.9%

under 30 years) supports the findings of Adetunji and Adepoju (2019), who noted that youth interest in farming is declining due to the availability of better income-generating opportunities in non-agricultural sectors. Encouraging youth engagement in agriculture through targeted interventions such as training programmes, credit accessibility, and mechanization incentives could help sustain agricultural productivity in the region.

The study in Table 1; also revealed a gender imbalance in agricultural participation, with 73.3% of respondents being male and 26.7% female. This suggests that farming in Numan LGA is male-dominated, which is consistent with Olawale *et al.* (2019), who observed that cultural and socioeconomic factors often limit women's participation in agriculture. Despite this, women play a vital role in specific agricultural activities such as vegetable farming, agro-processing, and small-scale livestock production. Addressing gender disparities by improving women's access to land, agricultural credit, and extension services could enhance their contribution to the sector.

In terms of education, the study found that the average years of schooling among respondents is 6.5 years, implying that most farmers have only primary-level education. This finding is consistent with Eboh *et al.* (2020), who stated that low literacy levels hinder access to agricultural credit in rural Nigeria. Farmers with limited education may struggle with loan applications, record-keeping, and understanding financial services, reducing their ability to secure credit for farm expansion. Strengthening adult education programs and financial literacy training could improve farmers' knowledge of credit facilities and enhance their ability to navigate the loan acquisition process.

Household size is another important socioeconomic factor influencing farm

labour availability and consumption levels. The study found that the average household size is 6.8 persons, with 57% of respondents having between 5 to 8 members. Larger household sizes can be beneficial as they provide labour for farming activities, reducing the need for hired labour. However, large families also increase household consumption, which can limit savings and investments in agricultural inputs. This dual effect of household size is supported by Ajibefun *et al.* (2018), who noted that while larger families provide labour, they may also strain financial resources, leading to food insecurity and lower productivity. Implementing household planning awareness and productivity-enhancing programs could help balance labour benefits with financial constraints.

Farming experience is another crucial factor influencing agricultural productivity. The mean farming experience of respondents is 13 years, indicating that most farmers have significant practical knowledge. This aligns with the findings of Okojie and Oboh (2022), who reported that experienced farmers are more likely to adopt modern agricultural techniques and manage farm risks effectively. However, despite their experience, many farmers still struggle with accessing improved farming technologies and financial resources. Experience alone does not always guarantee increased productivity, as factors such as capital availability, mechanization, and extension services play a crucial role in enhancing agricultural output.

The study found that the average farm size is 2.6 hectares, with 47.7% of respondents cultivating between 2 and 4 hectares. Limited farm size restricts the ability of farmers to expand their operations and benefit from economies of scale, emphasizing the need for credit accessibility to support land acquisition and mechanization. This indicates that small-

scale farming dominates the study area, which is consistent with Adetunji and Adepoju (2019), who reported that most Nigerian farmers operate on small landholdings due to land fragmentation and tenure system constraints. The limited land size restricts expansion and mechanization, further emphasizing the need for land reform policies and improved access to financial support to enable smallholders to increase their farm sizes and productivity.

Furthermore, Table 1, shows that 46.5% farmers earn between ₦200,000 and ₦500,000 annually, with the mean annual farm income being ₦480,500 per year. This suggests that most farmers operate at a subsistence or low-commercial level, reinforcing the findings of Jabiru *et al.* (2017), who stated that limited capital and market access prevent smallholder farmers from expanding their production. Low farm income also affects farmers' ability to invest in quality inputs such as fertilizers, improved seeds, and mechanized tools, ultimately impacting productivity. Strengthening agricultural credit schemes and providing farmers with better market linkages could improve their income levels and economic stability.

The results in Table 2 indicated that cooperative societies (25.6%) are the most common source of agricultural credit for small-scale farmers in Numan LGA. This is in line with Ajayi and Ogunleye (2021), who reported that cooperative societies play a crucial role in providing accessible and low-interest credit to rural farmers. Cooperatives offer flexible repayment terms, making them attractive to small-scale farmers who often lack collateral for commercial bank loans. Microfinance banks (20.9%) also play a significant role in credit accessibility, as they are designed to cater to small-scale entrepreneurs, including farmers as revealed in Table 2.

Table 1: Socio-Economic Characteristics of Respondents

Characteristics	Frequency (n=86)	Percentage (%)	Mean
Age (years)			
< 30	18	20.9	41 years
30 – 50	47	54.7	
> 50	21	24.4	
Gender			
Male	63	73.3	
Female	23	26.7	
Education Level			
No formal education	27	31.4	
Primary	35	40.7	
Secondary	19	22.1	
Tertiary	5	5.8	
Household Size			
1 – 4	22	26	7
5 – 8	49	57	
> 8	15	17	
Farming Experience			13 years
< 5	12	14.0%	
5 – 15	48	55.8%	
> 15	26	30.2%	
Farm Size (ha)			
< 2 ha	30	34.9%	2.6 ha
2 – 4 ha	41	47.7%	
> 4 ha	15	17.4%	
Annual Farm Income (₦)			
< 200,000	25	29	₦480,500
200,000 - 500,000	40	47	
> 500,000	21	24	

Source: Field Survey (2025)

This supports the findings of Olomola (2019), who noted that microfinance institutions provide rural farmers with small loans to support agricultural production. However, challenges such as high-interest rates and short repayment periods often limit their effectiveness.

Commercial banks (14.0%) are not a major source of credit for farmers, mainly due to stringent loan requirements, high-interest rates, and collateral demands. This finding aligns with Eboh *et al.* (2020), who observed that most smallholder farmers in Nigeria struggle to access formal banking credit due to bureaucratic procedures and financial illiteracy. The low patronage of commercial banks underscores the need for policy

interventions to simplify loan procedures and provide farmers with financial training.

Government-supported agricultural credit schemes, such as those provided by Agricultural Development Programs (ADP) (9.3%) and government credit programs (11.6%), remain underutilized despite their potential benefits as revealed in Table 2. This low uptake may be attributed to bureaucratic bottlenecks, corruption, and lack of awareness, as highlighted by Okojie and Oboh (2022). Expanding farmers' awareness of these schemes and streamlining the application process could enhance participation and improve access to affordable credit.

On the informal side, family and friends (11.6%) and money lenders (7.0%) serve as alternative credit sources, especially for farmers who cannot access institutional loans. While these sources offer quick and flexible lending, they often come with

challenges such as limited loan amounts and exploitative interest rates. This aligns with Jabiru *et al.* (2017), who reported that informal credit sources are widely used but may not provide sufficient capital for large-scale agricultural investment.

Table 2: Sources of Agricultural Credit in the Study Area

Source of Credit	Frequency (n = 86)	Percentage (%)
Commercial Banks	12	14.0
Microfinance Banks	18	20.9
Cooperative Societies	22	25.6
Agricultural Development Programs (ADP)	8	9.3
Government Credit Schemes	10	11.6
Money Lenders	6	7.0
Family and Friends	10	11.6
Total	86	100

Source: Field Survey (2025)

Effects of Agricultural Credit on Farm Productivity

Farm productivity was analyzed using a multiple regression model, incorporating key factors such as amount of credit received, interest rate on credit, repayment period, farm size, and farming experience as independent variables. The model was evaluated based on the coefficient of determination (R^2), Z-statistics, and the direction of regression coefficients. The regression results in Table 3 indicate that the R^2 value of 0.6934 implies that 69.34% of the variation in farm productivity is explained by the model, demonstrating a strong explanatory power. The F-value (8.742, $P = 0.000$) confirms the overall significance of the model, indicating that the included variables jointly influence farm productivity.

The coefficient for the amount of credit received (0.487) suggests that a ₦1,000 increase in credit access leads to a 0.49-unit increase in farm productivity per hectare. The P-value (0.023) confirms statistical significance at the 5% level, indicating that access to agricultural credit plays a crucial

role in improving productivity. This finding is in agreement with Adebayo *et al.* (2021), who found that access to formal credit increased farm productivity by 35% through improved input acquisition. Similarly, Ajayi and Ogunleye (2021) reported that farmers with access to microcredit experienced higher productivity and food security.

The coefficient for the interest rate (-0.759) indicates a negative relationship between interest rates and farm productivity. The P-value (0.001) shows statistical significance at the 1% level, implying that higher interest rates discourage farmers from borrowing, ultimately reducing productivity. This aligns with the Credit Rationing Theory (Stiglitz and Weiss, 1981), which suggests that financial institutions limit credit supply due to risks of loan default, particularly for farmers with irregular incomes. Similarly, Bello and Yusuf (2020) found that high-interest rates restricted farmers' ability to secure loans, thereby limiting farm expansion and modernization.

The coefficient for the repayment period (0.213) is positive but statistically insignificant (P-value = 0.287), indicating

that variations in loan repayment duration do not have a substantial effect on farm productivity in the study area. This result contrasts with the findings of Okojie and Oboh (2022), who observed that longer repayment periods improved financial flexibility for smallholder farmers, allowing them to invest more in their farms.

The coefficient for farm size (1.028) suggests that a one-hectare increase in farm size leads to a 1.03-unit increase in farm productivity. The P-value (0.005) confirms statistical significance at the 1% level, reinforcing the importance of land size in enhancing productivity. This finding aligns

with Olomola (2019), who emphasized that farm size plays a crucial role in determining farm output, as larger landholdings allow for economies of scale and mechanization.

The coefficient for farming experience (0.356) is statistically significant at the 5% level ($P = 0.041$), indicating that more experienced farmers achieve higher productivity due to better resource management and risk mitigation strategies. This result is supported by Ajayi and Ogunleye (2021), who noted that experienced farmers are more likely to adopt improved agricultural practices, leading to increased farm output.

Table 3: Effects of Agricultural Credit on Farm Productivity in the Study Area

Variable	Coefficient	Standard Error	t-Statistic	P-Value
Constant	2.8574	0.6891	4.15	0.000***
Amount of Credit Received (X1)	0.00005	0.000018	2.78	0.006**
Interest Rate on Credit (X2)	-0.0543	0.0152	-3.57	0.001***
Repayment Period (X3)	0.0211	0.0145	1.45	0.152
Farm Size (X4)	0.3748	0.1021	3.67	0.002***
Farming Experience (X5)	0.0325	0.0132	2.46	0.016**

Source: Field Survey (2025)

Key: *** = Significance at 1% and ** = Significance at 5%

Constraints to Agricultural Credit Access

Access to agricultural credit is critical for improving farm productivity, yet small-scale farmers in Numan LGA face several challenges that limit their ability to secure financial resources. The analysis identified high-interest rates, lack of collateral, bureaucratic loan procedures, and poor financial literacy as the key barriers to credit access.

High-Interest Rates

High-interest rates were reported in Table 4 as the most significant constraint, affecting 36% of the respondents. This finding supports the work of Adebayo *et al.* (2021), who noted that interest rates exceeding 25% discourage farmers from borrowing, as the cost of repayment becomes unsustainable.

High borrowing costs prevent small-scale farmers from accessing credit, thereby limiting their ability to invest in modern agricultural inputs such as fertilizers, improved seeds, and mechanized equipment. Similarly, Olawale *et al.* (2019) found that high-interest rates in Nigeria significantly reduce farmers' willingness to apply for loans, forcing them to rely on informal lending sources with unpredictable repayment conditions.

Lack of Collateral

Another major constraint identified by 25.6% of the respondents is the lack of collateral, a requirement for most formal lending. This result in Table 4 aligns with Jabiru *et al.* (2017), who highlighted those stringent collateral demands, particularly land ownership restrictions, prevent many smallholder farmers from securing loans. In

rural Nigeria, where many farmers operate on communal or inherited land without formal documentation, banks and microfinance institutions often perceive them as high-risk borrowers. This structural limitation significantly reduces credit access, further marginalizing small-scale farmers. Adepoju and Oyedele (2019) also emphasized that the inability to provide acceptable collateral increases farmers' dependence on informal credit sources, which often come with exploitative repayment conditions.

Bureaucratic Loan Application Processes

The complexity of loan application processes was cited by 14% of respondents as a significant barrier to credit access. Many farmers struggle with excessive paperwork, long processing times, and the stringent eligibility criteria imposed by financial institutions. This result in Table 4 (14%) is consistent with Okojie and Oboh (2022), who found that bureaucratic bottlenecks discourage farmers from seeking formal credit, leading to reduced investments in agricultural production. Streamlining loan application procedures and introducing digital financial services tailored to farmers could help mitigate this

challenge. Additionally, Yusuf *et al.* (2021) recommend that policymakers and financial institutions adopt more flexible lending requirements that accommodate the unique circumstances of smallholder farmers.

Poor Financial Literacy

Limited financial knowledge and awareness were reported as a constraint by 16.3% of respondents, further hindering access to agricultural credit. Many farmers lack an understanding of formal banking systems, loan repayment structures, and financial management strategies, making them hesitant to engage with financial institutions. This finding in Table 4 (16.3%) agrees with Adeyemi *et al.* (2020), who stressed that a lack of financial literacy reduces farmers' confidence in seeking credit, leading to underutilization of available funding opportunities. Furthermore, Eze and Onu (2018) argue that improving financial education through targeted training programs could enhance farmers' ability to assess credit options, manage loans efficiently, and ultimately boost agricultural productivity.

Table 4: Challenges Faced in Accessing Credit

Constraints	Frequency	Percentage (%)	Ranking
High-Interest Rates	31	36.0	1st
Lack of Collateral	22	25.6	2nd
Bureaucratic Procedures	12	14.0	4th
Poor Financial Literacy	14	16.3	3rd
Limited Rural Banking Infrastructure	7	8.1	5th
Total	86	100	

Source: Field Survey (2025)

CONCLUSION AND RECOMMENDATIONS

The study concludes that agricultural credit is a crucial determinant of farm productivity, enabling smallholder farmers to invest in improved inputs, mechanization, and other productivity-enhancing technologies. However, access to credit remains a major

challenge due to various socioeconomic and institutional barriers. Farmers who successfully accessed credit reported increased productivity, underscoring the importance of financial support in agricultural development. However, high-interest rates, collateral requirements, bureaucratic processes, and low financial

literacy continue to limit credit accessibility. Farmers struggle to meet collateral requirements, and many are deterred by the complex and time-consuming loan application procedures imposed by formal financial institutions. Additionally, the high cost of borrowing discourages loan uptake, further restricting farmers' ability to invest in productivity-enhancing technologies. These findings suggest that without targeted interventions to address these challenges, agricultural credit accessibility will remain limited, constraining the growth of the agricultural sector. Therefore, policy reforms and institutional improvements are necessary to expand credit access, reduce borrowing costs, and simplify loan acquisition processes.

Based on the findings, the following recommendations were proposed to improve agricultural credit access and farm productivity in Numan LGA.

- i. Financial institutions should introduce low-interest agricultural loan schemes tailored for smallholder farmers, while government policies should promote subsidized credit facilities to enhance affordability. Additionally, lending institutions should adopt collateral-free loans or group-based lending, leveraging cooperative societies as guarantors, while expanding microfinance initiatives targeting rural farmers to bridge the financing gap.
- ii. Financial institutions should reduce bureaucratic bottlenecks and digitize loan applications to enhance accessibility.
- iii. Policies should encourage public-private partnerships to expand credit schemes for farmers, while the government should strengthen agricultural finance policies, ensuring fair loan distribution and monitoring for effective use.

REFERENCES

- Adamu, M., and Garba, Y. (2021). Challenges of rural infrastructure and its impact on agricultural productivity in Nigeria. *Journal of Agricultural Economics and Development*, 9(2), 45-58.
- Adebayo, S. O., Yusuf, T. A., and Adekunle, O. R. (2021). Determinants of agricultural credit access among smallholder farmers in Adamawa State, Nigeria. *Journal of Agricultural Finance and Development*, 8(2), 45-60.
- Adepoju, A. O., and Oyedele, O. A. (2019). *Collateral and land ownership: Implications for credit access among smallholder farmers in Nigeria*. *Agricultural Finance Review*, 79(4), 412-427.
- Adetunji, O. M., and Adepoju, A. O. (2020). *Youth engagement in agriculture: Assessing participation and constraints in rural Nigeria*. *African Journal of Agricultural Research*, 15(5), 678-689.
- Adeyemi, K. A., Olorunfemi, S., and Aluko, R. A. (2020). *Financial literacy and agricultural credit access among small-scale farmers in Nigeria*. *International Journal of Agricultural Economics*, 8(1), 112-123.
- Ajayi, K., and Ogunleye, M. (2021). Microfinance and agricultural development: The case of small-scale farmers in Nigeria. *Nigerian Journal of Development Finance*, 10(2), 65-81.
- Ajibefun, I. A. (2018). *Social infrastructure and agricultural performance in*

- Nigeria: Challenges and policy options. *Journal of Agricultural Economics and Development*, 7(2), 45-58.
- Akinbode, S. O., & Ukeje, E. (2019). *Agricultural credit policies and smallholder farmers' productivity in Nigeria*. Munich Personal RePEc Archive (MPRA). Retrieved June 24, 2025, from <https://mpra.ub.uni-muenchen.de/88306/>
- Bello, M. U., and Yusuf, A. I. (2020). Credit accessibility among small-scale farmers: Challenges and prospects. *Nigerian Journal of Rural Economy and Finance*, 11(3), 89-102.
- Eboh, E. C., Nwachukwu, I. N., and Okorie, P. (2020). Access to credit and its impact on smallholder farming in Nigeria. *Journal of Rural Studies*, 37(1), 44-59.
- Eze, C. C., and Onu, J. I. (2018). *Financial education and access to credit among rural farmers in Nigeria: An empirical analysis*. *African Development Review*, 30(2), 298-312.
- Food and Agriculture Organization (FAO). (2022). *Financial inclusion of smallholder farmers: Barriers and opportunities in Nigeria*. Retrieved June 24, 2025, from <https://openknowledge.fao.org>
- Google, 2025. *Map of Numan Local Government Area, Adamawa State, Nigeria*. [online] Google Maps. Available at: <https://maps.google.com> Accessed 24 June 2025.
- Ibrahim, A., and Danjuma, R. (2022). Climate change effectss on smallholder farming in Adamawa State, Nigeria. *Journal of Climate and Agricultural Sustainability*, 7(2), 23-39.
- Jabiru, M. B., Bello, Y. S., and Yusuf, K. O. (2017). Land tenure insecurity and its impact on credit access among smallholder farmers in Numan LGA, Adamawa State. *African Journal of Agricultural Policy and Development*, 5(1), 88-101.
- Organisation for Economic Co-operation and Development (OECD). (2022). *Agricultural policy monitoring and evaluation*. Retrieved from <https://www.oecd.org>
- Okojie, J. F., & Oboh, C. P. (2022). *The role of age and experience in agricultural financing: Insights from cooperative societies in Nigeria*. *Journal of Agricultural Policy Research*, 19(4), 34–50. Retrieved June 24, 2025.
- Olawale, F. O., Adegbite, D. A., and Ojo, T. A. (2019). *Gender imbalance in agricultural participation: Barriers and policy recommendations in Nigeria*. *Journal of Rural Studies*, 34(3), 245-259.
- Olawuyi, T. and Balogun, A. (2020). The impact of high-interest rates on agricultural financing in Nigeria. *West African Journal of Financial Studies*, 8(2), 34-51.
- Olomola, A. S. (2018). Agricultural credit access and smallholder farmers' performance in Nigeria. *African Journal of Economic Policy*, 25(1), 55-72.

- Olomola, A. S. (2019). Agricultural credit and rural development: An assessment of financial inclusion strategies. *Nigerian Journal of Economic Studies*, 14(2), 55-78.
- Usman, M. S., Bello, A., and Ahmed, K. (2023). Climate-smart agriculture adoption and its impact on smallholder farmers in Adamawa State, Nigeria. *International Journal of Agricultural Sustainability*, 18(4), 78-95.
- Yusuf, T. M., Lawal, W. A., and Sulaiman, A. (2021). *Digital financial services and accessibility among smallholder farmers in Nigeria: Prospects and challenges*. *Journal of Digital Economy*, 5(4), 78-94.