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Enhancing Crop Yields through Credit Access among Female Smallholder Farmers in Ogun State, Nigeria

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Abstract

Limited access to credit remains one of the most significant structural barriers to agricultural transformation in developing economies, especially for female smallholder farmers. Without the financial tools necessary to invest in quality inputs, technologies, and markets, these women find themselves trapped in cycles of low productivity and poverty. This study examined how access to credit enhanced crop yields among female smallholder farmers in Ogun State, Nigeria. The study was anchored on the Theories of Financial Inclusion Delivery (Public-Private Partnership (PPP)). The study employed descriptive quantitative research design. Using a multi-stage sampling procedure, 295 respondents were randomly selected from the 1,228 female smallholder farmers belonging to the female farmer organizations across eight LGAs of Ogun State. Data were gathered using a structured questionnaire and were analyzed using descriptive statistics and regression analysis. Findings revealed a significant relationship between credit access and crop yield ($\beta = 0.521$, $p < 0.001$), further demonstrating that credit access is a strong predictor of crop yield among female smallholder farmers. The study concluded that credit access was a critical determinant of crop yield; by enhancing financial access, female smallholder farmers can increase their productivity, improve their livelihoods, and contribute more effectively to food security and economic development in Ogun State. The study therefore recommended that Policies should focus on reducing gender-based barriers to financial access, ensuring equal opportunities for female farmers to benefit from credit facilities, agricultural grants, and financial inclusion programs.

Keywords: Agricultural Productivity, Credit Access, Smallholder Farmers, Public-Private Partnerships (PPP)

Introduction

Agriculture is vital to the economies of developing countries, and smallholder farmers, especially women, play a crucial role in food production and ensuring household food security. However, female farmers often encounter significant obstacles that limit their productivity, with access to credit being a particularly critical issue. The lack of access to credit prevents these farmers from investing in quality input, such as improved seeds, fertilizers, and modern equipment. As a result, their ability to enhance crop yields and improve their livelihoods is hindered. In Nigeria, particularly in Ogun State, women's participation in agriculture is hindered by a complex mix of economic, social, and cultural factors. The intersection of gender and financial exclusion severely restricts the potential of

these female smallholder farmers. Financial inclusion, which is more than an economic tool, is a major transformative force (Saha & Qin, 2023). It is the crucial link that connects female farmers to the resources they need, allowing them to invest in quality inputs, access wider markets, and earn higher incomes. However, many of these women remain trapped in a cycle of low productivity due to limited access to financial services tailored to their needs, hindering their ability to access agricultural opportunities that their male counterparts can (Bankole, 2024).

The importance of financial inclusion in strengthening the resilience and productivity of smallholder farmers is underscored by their role as the backbone of agriculturally sustainable communities, contributing significantly to national sustainability, and playing a pivotal role in the growth of GDP and local economies (Adefare, Adeola, Mogaji, Nguyen & Mogaji, 2024). The smallholder farmers are intricately linked to multifaceted challenges, ranging from inadequate access to modern farming techniques and technologies to limited market opportunities and adverse climatic conditions, all of which affect their productivity. Ogun State's female smallholder farmers face these challenges, including insufficient financial resources, limited access to credit facilities, and inadequate education and training. Gender disparities in land ownership, control over resources, and decision-making in agriculture persist, which disproportionately affect female smallholder farmers. These disparities contribute to their vulnerability and limit their capacity to make long-term investments and sustainable agricultural decisions (Runde & Nealer, 2015). The lack of access to credit, modern agricultural inputs, and technology hampers the agricultural productivity of female smallholder farmers. This not only curtails their income-generating capacity but also perpetuates food insecurity and poverty in the region (Mathan & Sunderaraj, 2024).

The primary objective of this study is to assess how credit to enable female smallholder farmers to improve their economic prospects and contribute positively to rural development and food security in both Ogun State and Nigeria. Specifically, the study investigates:

- i. how access to credit can improve crop yields and enhance food security among female smallholder farmers in Ogun State.

Literature Review

The Importance of Financial Inclusion

Financial inclusion is of immense importance, as it enables individuals and businesses to access and utilize financial services that are essential for effective risk management, investment in productive ventures, and overall economic advancement. It is widely acknowledged as a vital aspect of global development, garnering attention and support from international organizations, governments, and policymakers (Awad & Albaity, 2024).

A crucial aspect of empowering these women and promoting their socio-economic advancement is ensuring their access to financial resources, especially credit (Adegbite, 2020). Financial inclusion, which involves not only the availability of financial services but also their effective utilization, is widely recognized as a catalyst for poverty alleviation and economic development (Peprah, 2020). However, the persistent Financial Inclusion Gender Gap (FIGG) remains a significant barrier, particularly in smallholder agriculture. Recent

research underscores the urgent need to close this gap, as limited access to credit and other financial services continues to hinder the agricultural and economic progress of female smallholder farmers (Adegbite, 2020).

Strengthening food security through financial inclusion, specifically access to credit in enhancing the resilience, productivity, and food security of smallholder farmers, cannot be overstated. Bridging the financial inclusion gender gap, particularly through improved access to credit, is crucial for empowering female smallholder farmers in Ogun State. Achieving this will not only enhance their crop yields and income but also contribute to broader food security and sustainable agricultural development in Nigeria. Empowering women through improved access to credit is essential to enhancing crop yields and food security among female smallholder farmers in Ogun State.

By promoting financial inclusion among female smallholder farmers, several important outcomes can be achieved. Access to financial services such as credit, savings, and insurance has helped empower women economically. This access enables women farmers to invest in their farms, adopt improved agricultural practices, and increase productivity, ultimately leading to higher incomes and improved livelihoods. With financial inclusion, rural dwellers have access to a diverse array of financial services that help them manage their money and access alternative investment opportunities. Agricultural productivity can be boosted by sufficient financial supply, as the provision of credit can facilitate the purchase of inputs and machinery, and the hiring of labour; it can also facilitate diversification of livelihoods and increase farmers' incomes.

Nigerian Agriculture

Agriculture is a primary sector of the Nigerian economy and underpins the economy, with over 70% of the population engaged in agriculture (FAO, 2020). Agriculture accounts for about 23 per cent of Nigeria's GDP (Nigeria Bureau of Statistics, 2023). It is a source of livelihood for a significant majority of the population and generates millions of jobs. In contrast, the agriculture sector in Nigeria is underdeveloped, growing by just 1.3% in the third quarter of 2022. The poor growth is attributed to low productivity, inaccessible or expensive inputs, and increasing post-harvest loss due to poor logistics and insecurity across the country (Gbamwuan, 2022). Changes in Climate, insecurity, and economic hardships continue to bite harder, leading to food insecurity in Nigeria. 17 million people were estimated to be critically food insecure in 2022 (Alun & Rima, 2023). An estimated 25 million Nigerians are expected to experience food insecurity between June and August of 2023 (Ayinde, Otekunrin, & Akinbode, 2020). Meanwhile, Nigeria has overtaken India as the world's most impoverished country. Food insecurity in the country has worsened due to population growth; they predicted that Nigeria's population would reach 400 million by 2050 (Amzat, Aminu, Kolo, Akinyele, Ogundairo, & Danjibo, 2020). In addition to climate impacts on food production, smallholder farmers face low support and access to agricultural inputs for their farms (Chiaka, Zhen, Yunfeng, Xiao, Muhirwa & Lang, 2022).

Smallholder Farmers

Smallholder farming is vital for providing food and livelihoods to millions, especially in rural areas of developing countries (Rome, 2013). These farmers play a pivotal role in sustainable development and poverty reduction. Despite rising food demand, smallholders face numerous challenges, including limited access to land, credit, and markets, as well as environmental pressures that impede their productivity. Nevertheless, their contributions to agriculture and food security remain significant (Mapanje, 2023). Agriculture supports millions across Africa (Andinet, 2017), and in Nigeria, the continent's most populous nation, the sector is central to food security, employment, and income generation. Smallholder farmers, who cultivate less than 2 hectares, form the backbone of Nigeria's agricultural landscape and play a vital role in the nation's food security. They account for approximately 80% of the farming population and are responsible for producing an estimated 90% of the food consumed locally (Adepoju, 2015). Among these farmers, female smallholder farmers are particularly significant, as they contribute substantially to food production and economic stability in Nigeria (Murendo, 2020). Therefore, addressing the unique needs and challenges faced by female smallholder farmers is essential for national development.

Female smallholder farmers are central to Nigeria's agricultural sustainability, GDP growth, and local economic development (Adefare et al, 2024). Nevertheless, they face multifaceted challenges, including inadequate access to modern farming techniques and technologies, limited market opportunities, adverse climatic conditions, and, most critically, insufficient financial resources and limited access to credit facilities. These challenges are particularly acute for female smallholder farmers in Ogun State, who also face a lack of adequate education and training.

Providing support to small-holder farmers can therefore enhance food security in the country. A critical strategy should be in place for smallholder farmers to support their development and secure the present and future livelihoods of the country's population. Given the need for Nigeria to diversify its economy to agriculture and the crucial role of rural smallholder farmers, there is a need to intensify efforts to ensure financial inclusion makes significant impacts in agriculture, rural livelihood, and economic growth (FMARD, 2017).

Gender Dimensions: Empowering Female Smallholder Farmers

It is estimated that female smallholder farmers constitute 50% of the labour force, which includes African women who play a vital role in food and agriculture. They produce much of the food for domestic consumption and drive food processing, marketing, and preservation (African Development Bank, 2023). A significant dimension of smallholder farming in Ogun State is the prevalence of female farmers. Women play an extremely important role in agricultural activities, contributing not only to food production but also to household income and economic stability. On the other hand, gender disparities and sociocultural norms often constrain their participation and access to resources, including finance (Bello, Baiyegunhi, & Danso-Abbeam, 2021). The latent potential of female smallholder farmers can be unlocked by empowering them with financial inclusion solutions that will enhance their decision-making capacity and contribute to women's economic empowerment.

Theoretical Review

This study was anchored on the Theories of Financial Inclusion Delivery (Public-Private Partnership (PPP). Regarding the organizations responsible for providing official financial services to the general public, there are different viewpoints. Some call for government involvement in the provision of these services (Ramadhan & Robin, 2024; Basnayake, Naranpanawa, Selvanathan, & Bandara, 2024). Others, on the other hand, assert that businesses in the private sector, such as banks and financial technology firms, can provide these services to the general public more successfully (Ghosh & Vinod, 2017; Basnayake, Naranpanawa, Selvanathan, & Bandara, 2024). In addition, some viewpoints contend that a cooperative effort between the public and private sectors may be the best strategy for providing formal financial services (Nkechika, 2023; Pearce, 2011).

According to the Theories of Financial Inclusion Delivery (Public-Private Partnership (PPP), formal financial services can be efficiently provided to the general public through cooperation between private sector companies, such as banks and financial technology corporations, and government bodies. According to this notion, combining the advantages of both industries can yield a more effective, all-encompassing financial inclusion plan.

Empirical Review

Chinoda and Kapingura (2024) explored the relationship between access to credit and income growth among female smallholder farmers, a recurring theme. This is particularly important for female farmers who often face constraints in accessing financial resources. In the context of the growing prevalence of digital financial inclusion solutions, the significance of technology in enhancing access to financial services for female smallholder farmers has been emphasized. Mobile money platforms and USSD-based services have played a pivotal role in broadening financial inclusion.

According to Kandpal et al. (2023) and Chinoda and Kapingura (2024), the availability of finance increases agricultural productivity and farmers' incomes. As a result, the hunger of the poor is reduced, enabling them to escape poverty traps and withstand periodic shocks. Fowowe (2020) also asserted that financial inclusion, irrespective of the measurement approach used, has yielded positive and statistically significant impacts on agricultural productivity in Nigeria.

In the field of financial inclusion, particularly when considering gender disparities, women frequently face a range of barriers that limit their economic engagement compared to men (World Bank, 2017; Udensi & Akintunde, 2024). Previous empirical research has consistently demonstrated the substantial impact of gender on formal financial access (Reynolds, Anderson, Biscaye, Fowle, Knauer, O'Brien-Carelli, & Orlebeke, 2017; Ugwuja & Anusie, 2024). Reynolds, Anderson, Biscaye, et al (2017), in their study, Digital Financial Services and Their Relationship with gender, identified factors linked to awareness, adoption, and utilization. The study explored the factors influencing financial inclusion in Central and West Africa, highlighting the importance of gender in this context.

In the words of Kelikume (2021), increased access to finance is associated with lower poverty rates, improved financial stability, and a stronger economic system. Both demand-side and supply-side factors play significant roles in promoting financial inclusion (Ozili,

2021). Social programs have been shown to be significant contributors to reducing extreme poverty in developing nations (Geraldes, Gama, & Augusto, 2022). The phenomenon of lower financial inclusion among females has been linked to a range of socioeconomic factors. These include disparities in education, literacy, employment, and access to productive resources and assets, particularly in comparison to their male counterparts (Reynolds, Anderson, Biscaye, Fowle, Knauer, O'Brien-Carelli & Orlebeke, 2017).

Methodology

A descriptive quantitative research design was adopted for this study. The study population comprises female smallholder farmers in Ogun State, Nigeria. A multi-stage sampling procedure, including purposive, cluster, and random sampling techniques, was employed to select 1,228 female smallholder farmers from the female farmer organizations across eight LGAs of Ogun State. Out of which 295 respondents were randomly selected using Krejcie & Morgan (1970). Data was collected using a structured questionnaire and analyzed using descriptive statistics and regression analysis (inferential statistics).

Presentation of Data

Demographic Analysis of Respondents

Two hundred and ninety-five (295) questionnaires were distributed, and all were retrieved by the researcher. All of the questionnaires were correctly filled in and used for the analysis, which represents a 100 per cent response rate as presented in Table 1

Table 1: Demographic characteristics of female smallholder farmers in the study

S/n	Variables	Labels	Frequency	Percentage
1	Gender	Male	-	-
		Female	295	100.0
2	Age	20-25 years	17	5.8
		30-35 years	76	25.8
		40-45 years	70	23.7
		46 and above years	132	44.7
3	Years of work experience	Below 10 years	65	22.0
		10-20 years	131	44.4
		Above 20 years	99	33.6
4	Highest level of education	First leaving certificate	202	68.5
		OND/NCE	44	14.9
		Professional qualification	1	0.3
		Degree	47	15.9
		Masters	1	0.3
5	Marital status	Single	12	4.1
		Married	277	93.9
		Divorced	1	0.3
		Separated	5	1.7

6	Number of dependent	No dependent	1	0.3
		1-5 dependents	197	66.8
		6-10 dependents	92	31.2
		11-15 dependents	4	1.4
		Above 15 dependents	1	0.3
7	Years of farming experience	Less than 5 years	18	6.1
		5-10 years	101	34.2
		11-20 years	96	32.5
		More than 20 years	80	27.1

Source: Fieldwork (2025)

Table 1 shows the demographic characteristics of female smallholder farmers in the study. The age distribution showed that most female farmers (44.7%) are aged 46 and above, followed by 30-35 years (25.8%), while younger farmers (20-25 years) are the minority at 5.8%. This indicated that most female farmers in the study are middle-aged or older, suggesting a possible trend of ageing in the farming population. Additionally, the majority have significant work experience, with 44.4% having worked for 10-20 years, indicating that these women are seasoned farmers with extensive knowledge of farming practices.

In terms of education, the majority (68.5%) have only a First Leaving Certificate, the most basic level. A small proportion (15.9%) had a degree, while less than 1% hold a professional qualification or a master's degree. This showed a disparity in education levels among the farmers, which could affect their ability to adopt new technologies or farming practices. Furthermore, a significant majority of the women (93.9%) are married, which indicates that family support systems are an important factor in their ability to engage in farming activities. Regarding dependents and farming experience, most farmers (66.8%) have between 1-5 dependents, with a smaller proportion (31.2%) having 6-10 dependents. This indicated a substantial family responsibility for many farmers, potentially influencing their labour capacity and financial needs. When it comes to farming experience, a considerable number of farmers (34.2%) have been farming for 5-10 years, and nearly as many (32.5%) have 11-20 years of experience. Those farming for more than 20 years accounted for 27.1%, while the least experienced (less than 5 years) accounted for only 6.1%. This showed that the majority have substantial farming experience confirmed with 85.8% agreeing with the seventh statement, leading to a high mean of 4.11.

Presentation of Research Question

Research Question One: To what extent does access to credit for female smallholder farmers affect their crop yield?

Table 2: The analysis of access to credit and its impact on crop yield among female Smallholder farmers.

S/N	Access to credit	SD	D	U	A	SA	$\bar{x}$	S.D.
1	Having access to loans increases agricultural yield	3 1.0%	11 3.7%	13 4.4%	155 52.5%	113 38.3%	4.23	0.784

2	Access to loans makes it easier to implement better farming practices	2 0.7%	6 2.0%	14 4.7%	179 60.7%	94 31.9%	4.21	0.683
3	Financing is essential for purchasing high-quality farming inputs	2 0.7%	5 1.7%	11 3.7%	159 53.9%	118 40.0%	4.31	0.687
4	Access to credit indirectly impacts crop productivity by easing tension or boosting confidence in farming techniques	2 0.7%	4 1.4%	14 4.7%	170 57.6%	105 35.6%	4.26	0.672
5	Financing significantly affects overall productivity on my farm	2 0.7%	4 1.4%	9 3.1%	186 63.1%	94 31.9%	4.24	0.639
6	There is difficulties obtaining credit for farming work	5 1.7%	16 5.4%	8 2.7%	139 47.1%	127 43.1%	4.24	0.878
7	I employ specific strategies to maximize the benefits of credit for my crop produce	6 2.0%	6 2.0%	17 5.8%	180 61.0%	86 29.2%	4.13	0.773
8.	Finance availability allows for the purchase of advanced farming equipment	13 4.4%	14 4.7%	19 6.4%	141 47.8%	108 36.6%	4.07	1.007
9	Loans enable the growth of farming operations	4 1.4%	7 2.4%	13 4.4%	184 62.4%	87 29.5%	4.16	0.729
10	Credit facilitates participation in training and capacity-building activities.	4 1.4%	13 4.4%	25 8.5%	173 58.6%	80 27.1%	4.06	0.808
11	Loans assist in diversifying crops	3 1.0%	4 1.4%	40 13.6%	166 56.3%	82 27.8%	4.08	0.744
12	Loans help mitigate the risks associated with erratic weather	15 5.1%	31 10.5%	80 27.1%	114 38.6%	55 18.6%	3.55	1.067
13	Credit availability fosters cooperation among farmers for group purchases or marketing campaign	1 0.3%	2 0.7%	13 4.4%	190 64.4%	89 30.2%	4.23	0.591
14	Financing has led to lasting partnerships with agricultural input suppliers.	2 0.7%	2 0.7%	15 5.1%	183 62.0%	93 31.5%	4.23	0.634

Weighted Mean =4.14

SD= Strongly Disagree, **D=**Disagree, **U=** Undecided, **A=**Agree and **SA=**Strongly Agree

Table 2 presents an analysis of access to credit and its impact on crop yields among female smallholder farmers. It was revealed that there is a strong consensus on the importance of access to credit in enhancing agricultural productivity. Majority of the farmers agreed or

strongly agreed that access to credit increases agricultural yield 90.8%, ($\bar{X} = 4.23$), facilitates better farming practices 92.6%, ($\bar{X} = 4.21$), and is essential for purchasing high-quality inputs 93.9%, ($\bar{X} = 4.31$). Furthermore, financing was seen as a critical factor in easing farming-related stress and boosting confidence in farming techniques 93.2%, ($\bar{X} = 4.26$). Similarly, most respondents affirmed that access to credit significantly affects overall farm productivity 95%, ($\bar{X} = 4.24$) and enables the growth of farming operations 91.9%, ($\bar{X} = 4.16$). This strong agreement indicated that financial accessibility plays a crucial role in optimizing agricultural output among female smallholder farmers.

Presentation of Hypothesis

Hypothesis One: There is no significant effect of access to credit on the crop yield of female smallholder farmers in Ogun State.

Table 3: Regression analysis showing the effect of access to credit on the crop yield of female smallholder farmers in Ogun State

Variables	F-Ratio	Sig. of P	R	R ²	Adj. R ²	B	T	p-value
Access to credit	108.882	<.001	.521	.271	.268	.521	10.435	.001

Source: Fieldwork, (2025)

Table 3 showed that access to credit significantly affected the crop yield of female smallholder farmers in Ogun State. The table also shows a coefficient of multiple correlation (R) of .521 and an R² of .271. This means that 27.1% of the variance was accounted for by the predictor variable. The significance of the contribution was tested at $p < .05$. The table also showed that the analysis of variance (ANOVA) for the regression yielded an F-ratio of 108.882 (significant at the 0.05 level). This implies that the effect of access to credit on the crop yield of female smallholder farmers was significant and that other variables not included in this model may have accounted for the remaining variance. The contribution and level of significance of access to credit, expressed as beta weights ($\beta = .521$, $p < .001$) $< .05$, revealed that access to credit could independently and significantly predict crop yield of female smallholder farmers in the study.

The findings from hypothesis one highlights the significant impact of access to credit on crop yield among female smallholder farmers in Ogun State. This aligns with previous studies that emphasized that financial access enables farmers to invest in improved seeds, fertilizers, and modern farming techniques, ultimately leading to increased productivity (Nordjo & Adjasi, 2019). Similarly, other studies established that credit availability enhances female farmers' ability to expand their farming operations, adopt better irrigation systems, and improve soil fertility management, thereby boosting crop yields. The study confirms that financial constraints limit productivity, reinforcing the argument that providing adequate credit facilities can significantly enhance agricultural output among female smallholder farmers (Adigun, 2022). Furthermore, the independent predictive power of access to credit on crop yield emphasizes the critical role of financial inclusion in agricultural development.

Another researcher asserted that female farmers often face greater barriers to accessing credit due to collateral requirements and socio-economic biases, hindering their ability to invest in farm inputs (Adewale, Lawal, Aberu, & Toriola, 2022). The study's findings support this argument, showing that women with greater access to credit achieve higher yields than those with limited financial support. This indicated that policies aimed at improving credit accessibility, such as soft loans, cooperative financing, and microfinance interventions, play a transformative role in enhancing agricultural productivity among female farmers in Ogun State.

Additionally, the study revealed that access to credit not only affects input acquisition but also influences post-harvest management and market access, which are essential for sustained productivity. In line with previous studies, female smallholder farmers often struggle with poor storage facilities and market linkages, which reduce the profitability of their agricultural ventures (Osabohien, Ogunniyi, Matthew, Edafe, & Lawal, 2020). Credit accessibility enables them to invest in storage infrastructure, transportation, and value addition processes, thereby minimizing post-harvest losses and increasing income. This finding reinforces the importance of financial empowerment as a catalyst for sustainable agricultural development and for reducing rural poverty.

Considering these findings, it is evident that expanding credit opportunities for female smallholder farmers can significantly improve crop yield and overall agricultural productivity. This aligns with the theory of Financial Inclusion Targeting Vulnerable Groups, which argues that vulnerable populations often bear the brunt of economic hardships and financial crises and, as such, should be a primary focus for inclusion in the formal financial sector (Ozili, 2020). Given the significant relationship between credit access and crop yield in the study, stakeholders, including government agencies, non-governmental organizations, and financial institutions, must prioritize financial inclusion initiatives tailored to the needs of female smallholder farmers. Doing so will not only boost food security but also contribute to economic empowerment and rural development in Ogun State and across Nigeria.

Discussion of Findings

The study examined the impact of credit access on crop yield and found a significant relationship. The beta weight ($\beta = 0.521$, $p < 0.001$) further demonstrated that access to credit is a strong predictor of crop yield among female smallholder farmers. Similarly, borrowing practices were found to have a significant positive relationship with investment in quality farm inputs, as evidenced by a Pearson correlation coefficient of $r = 0.825$ ($p < 0.001$). Further analysis of the relationship between financial inclusion components and productivity revealed several important findings. Access to credit showed a moderate positive correlation with productivity ($r = 0.451$, $p < .001$). This indicated that improved access to borrowing enables farmers to invest in better-quality inputs, ultimately improving farm productivity.

The findings highlighted the significant impact of access to credit on crop yield among female smallholder farmers in Ogun State. This aligns with previous studies that emphasized that financial access enables farmers to invest in improved seeds, fertilizers, and modern farming techniques, ultimately leading to increased productivity (Swain & Nsabimana, 2023). Similarly, other studies established that credit availability enhances

female farmers' ability to expand their farming operations, adopt better irrigation systems, and improve soil fertility management, thereby boosting crop yields (Adewale *et al.*, 2022). Furthermore, the independent predictive power of access to credit on crop yield emphasizes the critical role of financial inclusion in agricultural development. Another researcher asserted that female farmers often face greater barriers to credit access due to collateral requirements and socio-economic biases, which hinder their ability to invest in farm inputs (Romanus *et al.*, 2020). The study's findings support this argument, showing that women with greater access to credit achieve higher yields than those with limited financial support. This indicated that policies aimed at improving credit accessibility, such as soft loans, cooperative financing, and microfinance interventions, play a transformative role in enhancing agricultural productivity among female farmers in Ogun State.

Conclusion and Recommendations

This study has demonstrated that financial inclusion plays a crucial role in enhancing the productivity and economic well-being of female smallholder farmers in Ogun State. However, significant challenges persist, particularly in accessing formal financial services, credit facilities, and tailored financial products that meet the specific needs of female farmers. A substantial proportion of the farmers reported difficulties in securing financial services and credit, which has hindered their ability to invest in quality farm inputs and expand their agricultural activities. Despite these limitations, a strong culture of savings and financial empowerment was observed among the farmers, indicating that with better financial access, they could achieve greater economic stability and productivity.

Access to credit was found to be a critical determinant of crop yield, while saving practices significantly contributed to income generation. By enhancing financial access, female smallholder farmers can increase their productivity, improve their livelihoods, and contribute more effectively to food security and economic development in Ogun State and beyond. Based on the findings of this study, the following recommendations were suggested.

1. Financial institutions and government agencies should design and implement credit facilities that are easily accessible to female smallholder farmers to foster a more sustainable food production nation by introducing low-interest agricultural loans, reducing collateral requirements, and offering flexible repayment plans.
2. With the strong correlation between borrowing practices and investment in quality inputs, policies should be implemented to improve access to credit for agricultural investment. Financial institutions should provide specialized loan products that allow female farmers to invest in improved seeds, fertilizers, irrigation systems, and modern farming equipment.
3. Government agencies and financial regulators should develop policies that specifically address the financial challenges faced by female smallholder farmers. Policies should focus on reducing gender-based barriers to financial access, ensuring equal opportunities for female farmers to benefit from credit facilities, agricultural grants, and financial inclusion programs.
4. Cooperative societies and farmer associations can play a key role in improving financial access for female smallholder farmers. These organizations should be

strengthened through government support and financial grants, allowing them to provide credit, savings schemes, and training programs to their members.

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