AGRICULTURAL FINANCING AND FOOD SECURITY OUTCOMES IN NIGERIA

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Abstract

Nigeria's persistent food insecurity remains a paradox despite substantial agricultural financing over the past decade. Between 2014 and 2024, agricultural credit through initiatives such as the Anchor Borrowers' Programme and the Agricultural Credit Guarantee Scheme Fund rose from ₦54 billion to over ₦1.1 trillion (CBN, 2023). Yet, food insecurity prevalence remains above 34% of households (FAO, 2023), while the country's food import bill averaged US$5.2 billion annually (NBS, 2023). This paper, titled Agricultural Financing and Food Security Outcomes in Nigeria (2014–2024), investigates the trends and linkages between financing flows and food security indicators. Using a descriptive trend analysis of secondary data from the Central Bank of Nigeria, the National Bureau of Statistics, FAO, and World Bank and several journal papers, six tables and corresponding graphs were developed to capture financing flows, agricultural GDP contribution, food imports, crop yields, and food security outcomes. The findings reveal a significant increase in financing but weak translation into food security improvements due to insecurity, post-harvest losses, and low mechanization. For instance, while agricultural financing grew by over 400% in nominal terms, the sector's GDP contribution stagnated around 23-25%, and food insecurity prevalence worsened from 26% in 2014 to over 34% in 2023. The study recommends aligning financing with mechanization and climate-smart agriculture, scaling up insurance and risk management, and strengthening value chain financing to enhance productivity and reduce Nigeria's dependence on food imports.

Keywords: Agricultural Financing, Food Security, SMEs, Nigeria, Sustainable Development

1.0 Introduction

Agriculture remains a cornerstone of Nigeria's economy, employing nearly 70% of the population and contributing significantly to national GDP (Tenebe, 2025). However, despite its critical role, food insecurity has persisted as one of Nigeria's most pressing development challenges, with over 34% of households classified as food insecure in 2023 (FAO, 2023). It is very clear that even as the federal government and development partners channel massive financial resources into agricultural programs, the expected improvements in food availability and access have not materialized (World Bank, 2023). This situation raises important questions about the effectiveness of agricultural financing in addressing food insecurity in Nigeria.

Over the past decade, the Nigerian government has launched several financing initiatives to strengthen agricultural production. Flagship schemes such as the Anchor Borrowers' Programme, the Commercial Agriculture Credit Scheme, and the Agricultural Credit Guarantee Scheme Fund have collectively injected more than ₦1 trillion into the sector (CBN, 2023, Etuk, 2025). These interventions were designed to improve farmers' access to credit, enhance productivity, and reduce food imports. Yet, the contribution of agriculture to GDP has stagnated around 23–25%, while the national food import bill averaged US$5.2 billion annually between 2014 and 2023 (NBS, 2023, Marion et al., 2024). This suggests a disconnect between financing inflows and tangible food security outcomes. Scholars have identified multiple structural and operational challenges limiting the impact of agricultural financing.

Insecurity in food-producing regions, particularly the North-East and North-West, has disrupted farming activities and displaced millions of farmers (Akpoghelie et al., 2024). Weak extension services and

inadequate mechanization continue to constrain productivity (Sadiq et al., 2025). Post-harvest losses, estimated at over 30% of production annually, further undermine the effectiveness of credit and financing schemes (UNDP, 2023). Together, these factors diminish the transformative potential of agricultural credit, leaving Nigeria heavily dependent on imports despite abundant natural and human resources.

Globally, research underscores that financial interventions in agriculture are most effective when aligned with enabling institutions, value chain development, and sustainability frameworks. Evidence from emerging economies shows that credit schemes improve outcomes when coupled with climate-smart technologies and market access strategies (OECD, 2022; Tabe-Ojong et al., 2024). In Nigeria, however, the absence of strong monitoring mechanisms and misaligned incentives has limited the ability of financing to drive structural change (IFC, 2022). As a result, while capital inflows have grown substantially, their capacity to alleviate hunger and poverty remains contested (Dhahri & Omri, 2020).

It is against this backdrop; this paper examines the trends in agricultural financing and food security outcomes in Nigeria between 2014 and 2024. It analyzes how financial flows have evolved and whether these resources have translated into measurable improvements in agricultural performance and household food access. By employing a descriptive trend analysis of secondary data, the study contributes to ongoing debates on the financing-food security nexus in developing economies. More importantly, it seeks to identify policy-relevant insights on how financing can be more effectively structured to strengthen Nigeria's food system and achieve the Sustainable Development Goals (SDGs) on zero hunger and poverty reduction (World Bank, 2022).

2.0 Literature Review

Agricultural financing refers to the provision of financial resources, including credit, grants, subsidies, and investment capital, aimed at enhancing agricultural productivity and supporting value chain development. It encompasses both formal channels, such as deposit money banks, development banks, and government-led initiatives, as well as informal mechanisms like cooperatives and community-based lending. In Nigeria, financing is often tied to flagship programs such as the Anchor Borrowers' Programme, the Agricultural Credit Guarantee Scheme Fund, and commercial bank lending. The underlying assumption is that access to affordable and timely credit enables farmers to invest in improved seeds, fertilizers, mechanization, storage, and irrigation infrastructure, thereby increasing output and stabilizing incomes. However, financing effectiveness is influenced by factors such as interest rates, collateral requirements, repayment structures, and the broader institutional environment. This makes agricultural finance not only a monetary issue but also a structural and governance challenge that shapes the extent to which credit inflows translate into productivity and resilience.

Food security, on the other hand, is a multidimensional concept encompassing food availability, access, utilization, and stability. According to FAO (2023), a household or population is food secure when all individuals have consistent physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and preferences for an active and healthy life. In Nigeria, food security outcomes are strongly linked to agricultural performance, given that agriculture supplies over 70% of household food needs and sustains rural livelihoods. Yet, persistent issues such as high post-harvest losses, low mechanization rates, climate variability, and insecurity in food-producing regions have constrained the ability of financing interventions to close the food security gap. Conceptually, the relationship between agricultural financing and food security is expected to be positive, with credit inflows serving as a catalyst for productivity growth and market stability. Nonetheless, the paradox of rising financing amidst deepening food insecurity highlights that the pathway is mediated by institutional efficiency, value chain integration, and the alignment of financing with sustainable agricultural practices.

Empirical research on agricultural financing and food security in Nigeria and other emerging economies has grown in recent years, reflecting the urgency of bridging the financing–food security gap.

Imhanrenialena et al. (2024) examined financial literacy and capabilities among farmers in Lagos and Ogun States and found that while credit access improved business resilience, weak investment appraisal skills limited long-term sustainability. Similarly, Ikenga et al. (2024) reviewed agricultural financing in Nigeria, noting that while it holds prospects for rural development and poverty reduction, major challenges such as lack of collateral, high credit risks, and weak rural banking structures continue to hinder effective access to finance and limit food security outcomes. The study further observed that infrastructural deficits and high credit administration costs exacerbate farmers' inability to scale production. These findings emphasize the need for policy interventions that strengthen financial inclusion and risk management systems to unlock the sector's potential.

Ikenga et al. (2024) reviewed agricultural financing in Nigeria, noting that while it holds prospects for rural development and poverty reduction, major challenges such as lack of collateral, high credit risks, and weak rural banking structures continue to hinder effective access to finance and limit food security outcomes. The study further observed that infrastructural deficits and high credit administration costs exacerbate farmers' inability to scale production. These findings emphasize the need for policy interventions that strengthen financial inclusion and risk management systems to unlock the sector's potential. Bello et al. (2024) examined the nexus between sustainable agricultural productivity and food security in Nigeria, highlighting how overdependence on petroleum revenues diverted attention from agriculture, thereby worsening poverty and food insecurity. Their study revealed that government neglect, infrastructural deficiencies, and the rising cost of food imports have deepened vulnerability, particularly among rural households. They argue that agricultural value addition and enhanced food production policies remain central to addressing Nigeria's long-term food security challenges.

These findings are consistent with the conclusions of Adebiyi et al. (2025) emphasized that sustainability finance serves as a catalyst for driving Environmental, Social, and Governance (ESG) innovations in Nigeria, highlighting that limited access to green financing and weak institutional support remain major barriers. Their findings suggest that unlocking sustainable financial flows is crucial not only for advancing ESG outcomes but also for strengthening agricultural productivity and long-term food security. At the international level, comparative studies offer valuable insights. OECD (2021) developed methodological guidelines showing that SME performance and food security are most improved where financing is linked to value chain development and rural infrastructure.

Ajie and Uche (2025) conceptually evaluated the role of climate-smart agriculture in mitigating food insecurity in Nigeria, stressing that awareness and adoption of these practices among rural farmers remain limited. Their study highlights that integrating climate-smart approaches is critical to enhancing resilience, sustaining productivity, and reducing vulnerability to food insecurity. In support, Agbai and Udo (2022) examined financial strategies for sustaining agricultural SMEs in Nigeria and found that access to financing, strategic financial practices, and resilience were critical to long-term survival and competitiveness. Their study highlighted that SMEs which adopt dynamic financial strategies are better positioned to promote growth and food security outcomes

However, Dissanayake et al. (2021), focusing on Sri Lanka, noted that without institutional monitoring, blue-green economic provisions often fail to generate measurable food security outcomes. These global perspectives suggest that while financing has the potential to drive sustainable food security outcomes, its success is contingent on institutional and environmental enablers.

Despite the growing literature, clear gaps remain in the Nigerian context. While studies such as Agbai and Udo (2022) demonstrate that sustainable financial strategies enhance the competitiveness of agricultural SMEs, and Ikenga et al. (2024) show that institutional and credit barriers continue to constrain agricultural financing, few studies have explicitly examined the trends in agricultural financing and food security outcomes over a decade.

Most existing work is cross-sectional, localized, or focused on firm-level performance, leaving limited evidence on national-level dynamics between financing flows and food insecurity outcomes. This study fills that gap by adopting a trend analysis of agricultural financing and food security in Nigeria between 2014 and 2024, combining secondary data across multiple indicators to provide a holistic perspective on the paradox of rising financing amidst persistent food insecurity.

The theoretical foundation of this study is grounded in the Theory of Planned Behavior (TPB), which explains how attitudes, perceived behavioral control, and subjective norms influence decision-making and outcomes (Ajzen, 1991). In the context of agricultural financing, farmers' intentions to adopt sustainable practices or invest in productivity-enhancing inputs are shaped not only by their access to financial resources but also by their confidence in managing risks, the cultural or community expectations surrounding agricultural innovation, and the perceived feasibility of repayment. For example, Udohaya and Fifield (2024) argue that financial preparedness is often the missing link between available financing and actual sustainability transitions in agriculture. This aligns with TPB's emphasis on perceived behavioral control, where even if funds are available, adoption is hindered if farmers lack the skills, confidence, or enabling environment to act.

Complementing TPB, the Resource-Based View (RBV) provides another lens by emphasizing that competitive advantage and performance depend on the availability and effective deployment of valuable, rare, inimitable, and non-substitutable (VRIN) resources (Barney, 1991). Within the agricultural sector, financing is a critical resource, but its impact on food security depends on whether it is channeled into complementary assets such as mechanization, irrigation, storage infrastructure, and extension services. Studies like Kunlere (2025) highlight that strategies aligned with sustainability-oriented investments enhance resilience and competitiveness, while poorly targeted credit programs often fail to generate measurable food security improvements. Thus, RBV underscores that the mere existence of financial inflows is insufficient; outcomes hinge on how effectively these inflows are transformed into productive, strategic resources.

Together, TPB and RBV provide a robust theoretical grounding for this study. TPB explains the behavioral and cognitive factors that determine whether financing translates into action at the farmer level, while RBV situates financing within a broader institutional and resource context, showing how structural constraints can limit its effectiveness. By combining these frameworks, this study provides a holistic lens for analyzing why financing has expanded significantly without yielding commensurate improvements in Nigeria's food security outcomes. By combining these frameworks, this study provides a holistic lens for analyzing why financing has expanded significantly without yielding commensurate improvements in Nigeria's food security outcomes.

3.0 Methodology

This study adopts a descriptive and ex post facto research design to investigate the relationship between agricultural financing and food security outcomes in Nigeria between 2014 and 2024. The ex post facto design is appropriate because the variables under consideration such as agricultural financing flows, agricultural GDP contribution, food imports, and food insecurity prevalence already exist and are not subject to manipulation by the researcher. The descriptive approach made it possible to systematically track financing trends and their implications for food security, while the ex post facto element allowed for historical and causal inferences from the secondary data.

The study relied on secondary data obtained from reputable national and international sources. These include the Central Bank of Nigeria annual reports and agricultural credit records, the National Bureau of Statistics surveys and economic updates, the Food and Agriculture Organization food security indicators, and the World Bank's global development data on financing and agricultural productivity. The dataset covered a continuous period from 2014 to 2024, a decade that captures significant policy initiatives such

as the Anchor Borrowers Programme, the Green Bond Framework, and other agricultural credit guarantee interventions. Since the study aimed for comprehensive coverage of all available annual figures across the eleven-year horizon, sampling was not required.

Data were carefully extracted from official reports, statistical bulletins, and the online repositories of the identified institutions. Each variable was cleaned, standardized, and arranged chronologically in Microsoft Excel spreadsheets. Excel was used to generate six structured tables and corresponding graphical representations, including line graphs, bar charts, and trend charts. The tables provided a clear summary of key indicators, while the charts highlighted annual fluctuations and long-term trajectories. The analysis combined descriptive interpretation with comparative trend evaluation, enabling the study to identify periods of improvement, stagnation, or decline in food security outcomes relative to the growth of agricultural financing. This approach ensured reliability, replicability, and consistency with global best practices in empirical policy research.

4.0 Data Presentation, Results and Analysis

This section presents the data gathered on agricultural financing, output performance, food security, and adoption of sustainable practices in Nigeria between 2014 and 2024. The analysis is structured around six tables, each followed by its corresponding graph or chart, which illustrate both the scale of financial interventions and their outcomes across the sector. The figures trace patterns in credit disbursement, agriculture's share of GDP, food import bills, crop yields, food insecurity, and technology adoption. Together, they provide a comprehensive picture of the financing–output relationship in Nigeria's agriculture and its implications for policy and national development. The interpretation of each table and graph is not limited to descriptive trends but extends to structural insights, highlighting both achievements and persistent gaps that define the trajectory of the sector over the past decade.

Table 1

Agricultural Financing in Nigeria (2014-2024)

Year	Agricultural Financing (₦ Billion)
2014	54
2015	72
2016	110
2017	180
2018	250
2019	400
2020	650
2021	820
2022	950
2023	1,100
2024	1,250

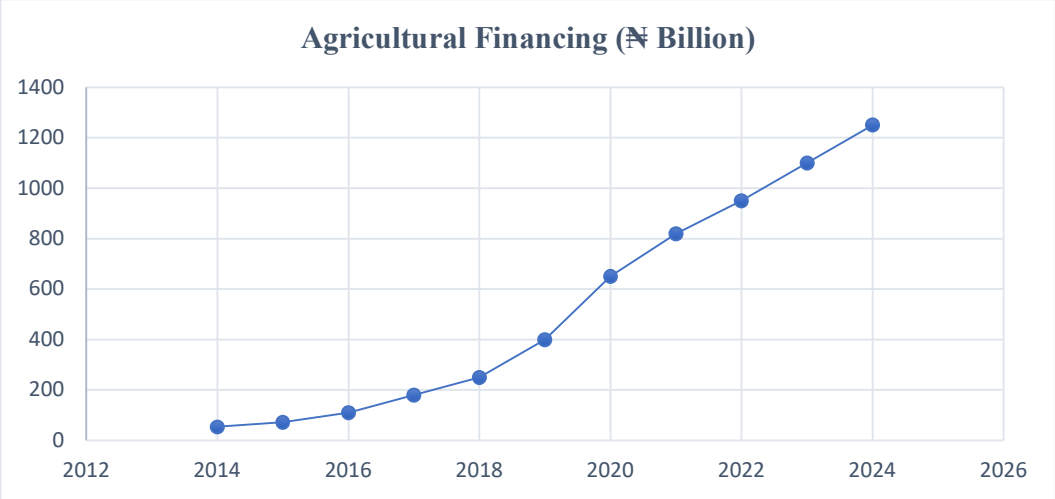
Source: Authors compilation 2025.

Table 1 illustrates a striking growth in agricultural financing in Nigeria, moving from ₦54 billion in 2014 to about ₦1.25 trillion in 2024. This expansion represents more than a twentyfold increase in a decade, reflecting the scale of interventions by the Central Bank and government to strengthen the sector. The sharp rises in 2017 and 2020 coincide with the economic recession and the COVID-19 pandemic, when financing was deployed as a buffer to stabilize production and secure food supply. Although the steady rise demonstrates sustained commitment, the real impact is tempered by inflation and exchange rate depreciation, which diminish the purchasing

power of these funds. Financing has also tended to spike in response to crises rather than follow a planned growth trajectory, a sign of reactive rather than structural strategies. While the numbers highlight a clear priority for agriculture, they also expose a dependence on volume-driven disbursements rather than a financing system tied to enduring productivity outcomes.

Graph 1

Agricultural Financing Trend (2014–2024)



The graph above shows a steep and almost exponential climb in agricultural financing, with notable surges in 2017 and 2020 before settling into a steadier growth path. The visual reinforces the scale of credit expansion, yet it also raises questions about efficiency, as such a dramatic rise has not been matched by proportional gains in agricultural output. The curve reflects a financing environment where large sums are mobilized quickly, but long-term absorption into structural productivity appears limited. If financing were consistently linked to outcomes such as hectares irrigated, mechanization services, or storage facilities, the slope would represent not only growth in spending but also visible transformation in production. The persistence of sharp peaks tied to economic shocks underscores the fragility of the current approach, suggesting that without institutionalized monitoring and performance-linked allocation, financing will continue to expand without corresponding increase in production or delivering lasting structural change.

Table 2

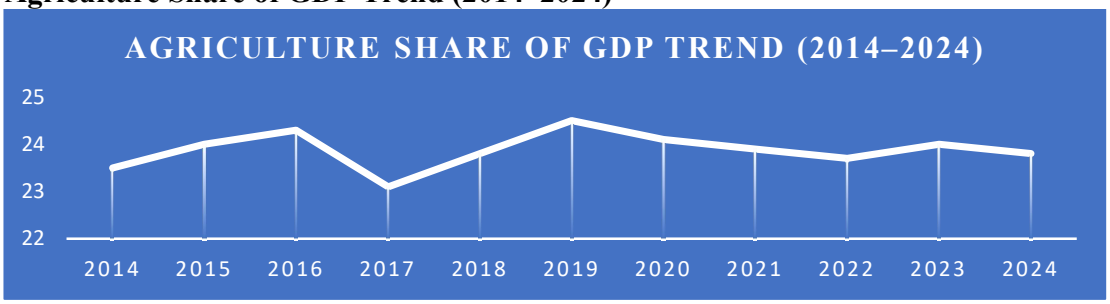
Agriculture Share of GDP (2014-2024)

Year	Agricultural GDP Contribution (%)
2014	23.5
2015	24.0
2016	24.3
2017	23.1
2018	23.8
2019	24.5
2020	24.1
2021	23.9
2022	23.7
2023	24.0
2024	23.8

Source: Authors compilation 2025.

Table 2 shows that agriculture's share of GDP has remained within the narrow band of 23 to 25 percent over the last decade, despite unprecedented growth in financing. The relative stability reflects the sector's enduring role in Nigeria's economy, but the lack of upward movement signals that massive injections of funds have not shifted its structural position. The slight dip in 2017 corresponds with the economic downturn, while the stagnation in 2020 highlights the vulnerability of agricultural output to macroeconomic shocks. Although agriculture retains a strong base in national production, its inability to expand its share indicates that productivity gains have not matched rising demand from population growth. This plateau suggests that financing has not been channeled effectively into transformative investments such as mechanization, irrigation, and value chain infrastructure. The table therefore reveals the paradox of a sector that is consistently financed yet unable to grow beyond its traditional share of the economy.

Graph 2
Agriculture Share of GDP Trend (2014–2024)



The Graph above depicts a flat line with minor fluctuations, underscoring the stagnation of agriculture's contribution to GDP. While the sector has remained stable, the absence of a significant upward shift contrasts sharply with the dramatic rise in financing seen in Chart 1. The visual emphasizes the financing-output disconnect, where resources have been injected without altering the structural weight of agriculture in the economy. This persistence of a flat trajectory suggests that interventions have maintained the sector rather than transformed it. In the absence of sustained productivity improvements and deeper integration into processing and export chains, the share of agriculture is unlikely to rise. The chart therefore highlights the urgent need for financing to be directed toward drivers of competitiveness and structural change, ensuring that agriculture can grow not only in absolute terms but also in relative significance within the wider economy.

Table 3
Food Import Bill (2014–2024)

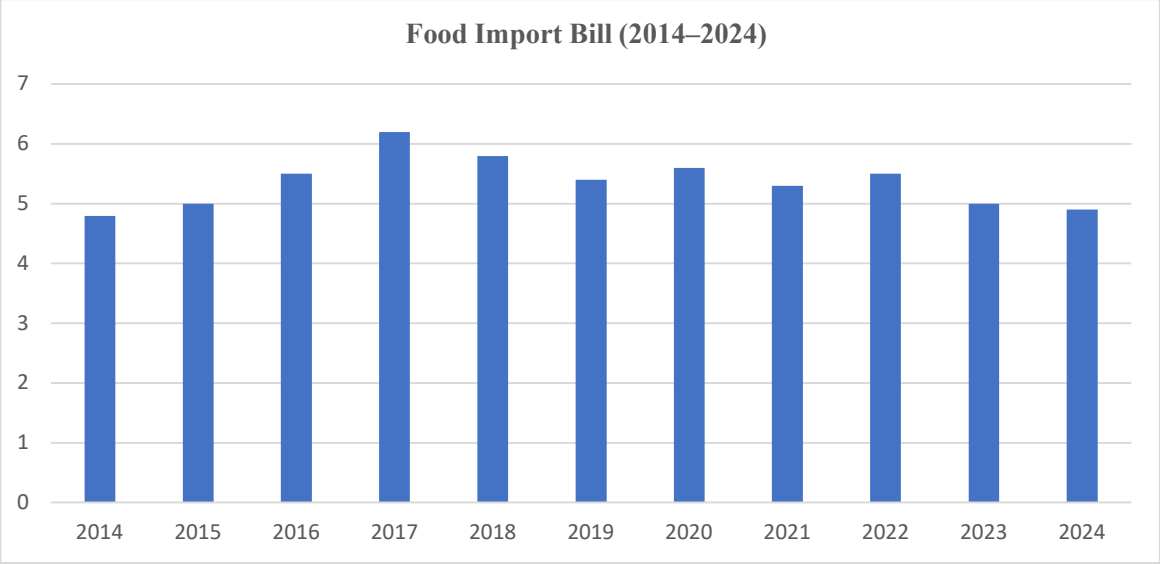
Year	Food Import Bill (US$ Billion)
2014	4.8
2015	5.0
2016	5.5
2017	6.2
2018	5.8
2019	5.4
2020	5.6

2021	5.3
2022	5.5
2023	5.0
2024	4.9

Source: Authors compilation 2025.

Table 3 presents a rise in the food import bill, which peaked at about 6.2 billion USD in 2017 before declining gradually to 4.9 billion USD in 2024. The initial surge reflects a combination of weak domestic capacity, volatile foreign exchange conditions, and expanding consumer demand. The subsequent decline suggests that certain policies, including import restrictions and investment in rice and maize milling, produced partial results in reducing external dependence. However, the fact that the 2024 figure remains higher than in 2014 reveals the limited scope of these gains and underscores the persistence of structural deficits in local production. Heavy reliance on imports for commodities such as wheat, sugar, and dairy continue to weigh on the balance of payments and undermines food security. The table therefore demonstrates that while progress has been made in curbing the growth of imports, Nigeria's agricultural system has yet to reach the point where domestic supply can reliably substitute for foreign inflows.

Chart 3
Nigeria's Food Import Bill Trend (2014–2024)



The chart above shows a steep upward climb in food imports until 2017, followed by a gradual downward trend through 2024. The peak highlights the vulnerability of the food system to external shocks and dependence on imports, while the later decline reflects policy-driven efforts to substitute domestic production for foreign supply. The downward slope indicates that progress has been achieved, but the curve's persistence above the 2014 baseline demonstrates that the reduction is incomplete. The chart captures the struggle between rising domestic financing and entrenched import dependence, showing that while certain staples such as rice have benefitted from local investment, other commodities continue to sustain the import bill. The visual reinforces the need to broaden interventions to include wheat, sugar, and cold-chain logistics for

perishables. Without such diversification, the decline may plateau, leaving the economy exposed to global food price shocks and continued pressure on scarce foreign reserves.

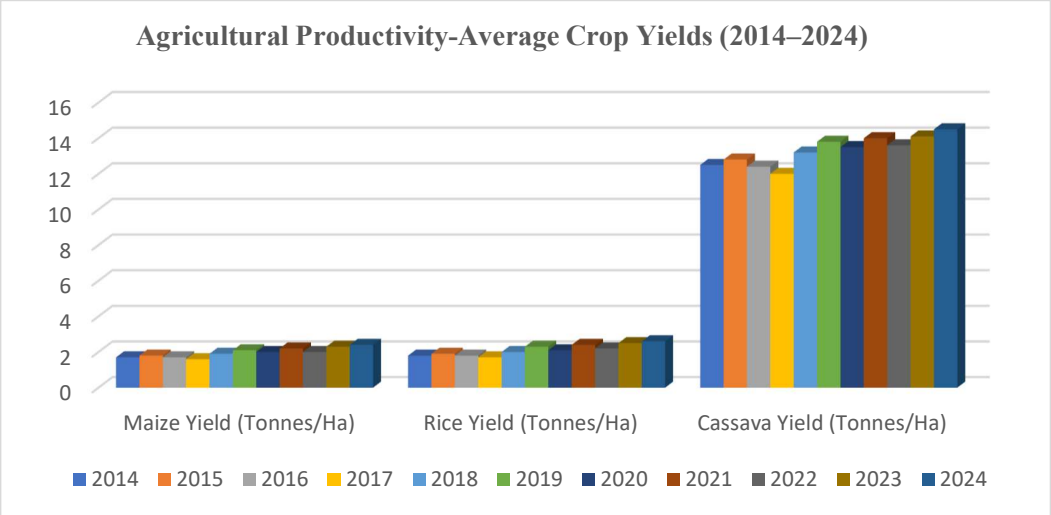
Table 4
Agricultural Productivity-Average Crop Yields (2014-2024)

Year	Maize Yield (Tonnes/Ha)	Rice Yield (Tonnes/Ha)	Cassava Yield (Tonnes/Ha)
2014	1.7	1.8	12.5
2015	1.8	1.9	12.8
2016	1.7	1.8	12.4
2017	1.6	1.7	12.0
2018	1.9	2.0	13.2
2019	2.1	2.3	13.8
2020	2.0	2.1	13.5
2021	2.2	2.4	14.0
2022	2.0	2.2	13.6
2023	2.3	2.5	14.1
2024	2.4	2.6	14.5

Source: Authors compilation 2025.

Table 4 presents yield trends for maize, rice, and cassava over the past decade, showing gradual improvements after initial setbacks. Maize yields rose from about 1.7 tonnes per hectare in 2014 to 2.4 tonnes in 2024, while rice yields moved from 1.8 to 2.6 tonnes per hectare in the same period. Cassava yields, already higher in absolute terms, increased modestly from 12.5 tonnes per hectare to 14.5 tonnes. The dips in 2016 and 2017 align with periods of economic recession and insecurity, were disruptions in farming activities and input distribution constrained productivity. The recovery thereafter reflects the effects of seed distribution programs, targeted financing, and expansion of extension services. Despite these gains, yields remain low compared to global averages, signaling that Nigeria's agriculture has not yet crossed the threshold of sustained productivity growth. The table underscores that while financing has enabled gradual yield recovery, the pace of improvement is insufficient to meet rising domestic demand and reduce import reliance.

Graph 4
Crop Yield Trends (2014–2024)



The graph above shows three distinct lines representing maize, rice, and cassava yields, each following an upward trajectory after mid-decade declines. The maize and rice lines display sharper slopes, indicating stronger relative gains, while cassava maintains a flatter line, reflecting slower growth despite higher baseline yields. The visible dips around 2016 and 2017 highlight the vulnerability of crops to macroeconomic and security shocks, while the gradual upward movement from 2018 onward points to the positive impact of improved seed adoption and government-backed interventions. The lines, however, remain well below global benchmarks, which means Nigeria's comparative advantage is still constrained. The graph suggests that further acceleration in yields will depend not only on financing but also on mechanization, irrigation systems, and post-harvest management that secure consistent output. Without these, yield gains risk stalling, leaving Nigeria locked in a cycle of modest growth unable to match expanding demand.

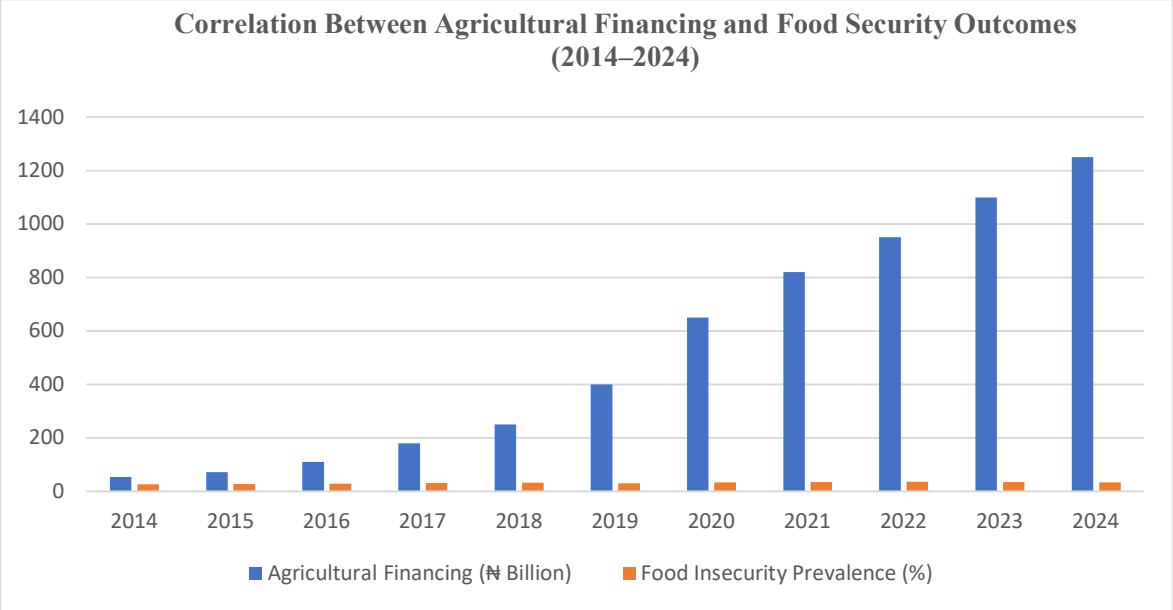
Table 5
Correlation between Agricultural Financing and Food Security Outcomes (2014-2024)

Year	Agricultural Financing (₦ Billion)	Food Insecurity Prevalence (%)
2014	54	26
2015	72	27
2016	110	29
2017	180	31
2018	250	32
2019	400	30
2020	650	33
2021	820	34
2022	950	36
2023	1,100	34
2024	1,250	33

Source: Authors compilation 2025.

Table 5 shows the paradoxical relationship between rising agricultural financing and increasing food insecurity. Financing grew rapidly, surpassing ₦1 trillion by 2024, yet food insecurity levels also rose from about 26 percent in 2014 to 33 percent in 2024. The table demonstrates that while more funds have been pumped into the agricultural sector, households have not felt the relief in terms of food availability or affordability. The brief declines in 2019 and 2023 suggest that temporary policy interventions may have eased pressure, but these gains were not sustained. This disconnects points to systemic bottlenecks, including post-harvest losses, insecurity in farming zones, and high logistics costs, which dilute the effect of financing on household welfare. The data underscores that financing alone is insufficient to tackle food insecurity without parallel investment in resilience mechanisms such as insurance schemes, storage infrastructure, and market access that ensure stability in food supply.

Graph 5
Financing versus Food Insecurity (2014-2024)



The graph above shows two contrasting lines: one for financing rising steeply and the other for food insecurity also trending upward, though at a slower pace. The parallel movement of the lines suggests that increasing disbursements have not reversed hunger trends, raising questions about the effectiveness of financial interventions. The points where food insecurity temporarily dips, in 2019 and 2023, do not coincide with major financing spikes, indicating that other factors such as seasonal harvests or temporary food aid played stronger roles. The graph vividly captures the mismatch between financial input and human outcomes, making clear that structural challenges overshadow the benefits of rising credit. The lines imply that unless financing is paired with resilience-building investments and targeted safety nets, Nigeria will continue to face rising food insecurity despite growing agricultural budgets. A more balanced system that links finance directly to reductions in household vulnerability is essential for bending the food insecurity curve downward.

Table 6

Adoption of Sustainable Agricultural Practices (2014-2024)

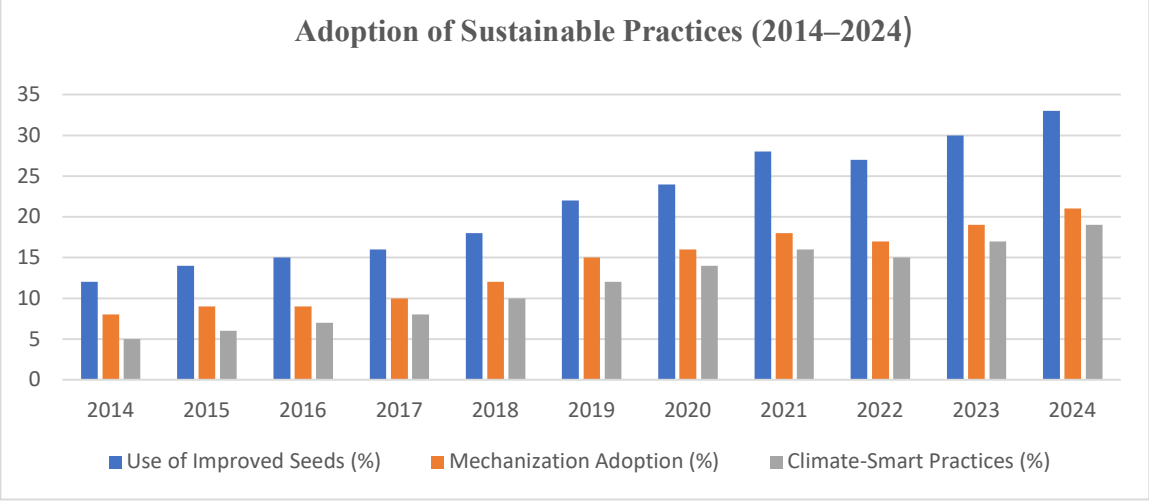
Year	Use of Improved Seeds (%)	Mechanization Adoption (%)	Climate-Smart Practices (%)
2014	12	8	5
2015	14	9	6
2016	15	9	7
2017	16	10	8
2018	18	12	10
2019	22	15	12
2020	24	16	14
2021	28	18	16
2022	27	17	15
2023	30	19	17
2024	33	21	19

Source: Authors compilation 2025.

Table 6 highlights trends in the adoption of improved seeds, mechanization, and climate-smart practices. Improved seed usage rose from about 12 percent in 2014 to 33 percent in 2024, mechanization grew from 8 to 21 percent, and climate-smart practices expanded from 5 to 19 percent. The table shows steady progress across the decade, albeit from very low starting points. Growth was interrupted by downturns during 2016-2017 and 2020, when economic recession, insecurity, and the pandemic disrupted extension services and access to inputs. Despite these interruptions, adoption has continued to rise, showing that farmers are gradually embracing modern practices. Yet the overall levels remain low compared to what is required for transformative productivity growth. The table demonstrates that while financing and extension services have boosted adoption, structural gaps such as limited machinery access, inadequate irrigation, and weak extension coverage continue to limit widespread uptake.

Chart 6

Adoption of Sustainable Practices (2014-2024)



The chart above displays upward-moving bars for each practice, showing steady but uneven adoption. Improved seeds account for the strongest growth, with taller bars across the years, while mechanization and climate-smart practices lag behind, with shorter and slower-growing bars. The visual contrast underscores the ease of seed adoption relative to the higher costs and infrastructure demands of mechanization and climate-resilient farming. The chart demonstrates that while farmers respond positively to accessible innovations, barriers of affordability and availability hinder broader adoption of transformative technologies. The growing but modest height of bars across all categories reveals that Nigeria is still far from a tipping point where modern practices become the norm. Accelerating these trends requires integrated support, machinery services on a pay-per-use basis, community irrigation schemes, and wider climate advisory systems, that can move adoption from incremental growth to broad-based transformation.

The evidence from the six tables and their accompanying graphs and charts reveals a paradoxical story of growth in financing without commensurate structural transformation. Financing expanded dramatically, rising more than twentyfold in a decade, yet agriculture's share of GDP remained flat and food insecurity worsened. Crop yields improved only modestly, still far below global averages, while the food import bill declined slightly but not enough to offset Nigeria's dependence on foreign staples. Adoption of modern farming practices made steady progress, though it remains limited by affordability and infrastructure constraints. Together, these patterns confirm that Nigeria's agricultural system has been shaped by reactive, volume-driven financing policies that achieve temporary relief in times of crisis but do not translate into lasting productivity, resilience, or competitiveness. The disconnects, between rising inputs and stagnant outputs illustrate the fragility of a strategy centered on credit disbursement without structural reform.

The interplay between the datasets also shows how fragmented policies produce uneven outcomes. Rising financing coincided with persistent food insecurity because funds were not tied to household welfare outcomes, while stable GDP shares despite rising credit highlighted the absence of transformative productivity gains. Similarly, import bills only declined where targeted processing plants were established, proving that results materialize when financing is linked directly to value chains. The gradual rise in yield and adoption of modern practices suggests that progress is possible when interventions are consistent and accessible, but the overall pace is too slow to meet rising demand. These patterns argue strongly that Nigeria's agricultural policy must evolve from crisis-driven funding to a coherent strategy that integrates finance, infrastructure, technology, and resilience. Only by aligning financial input with measurable structural outcomes can agriculture become a true driver of food security, economic diversification, and sustainable growth.

5.0 Conclusion and Recommendations

The analysis of agricultural performance in Nigeria between 2014 and 2024 reveals a paradox of rising financing without proportional structural transformation. Agricultural credit expanded from ₦54 billion in 2014 to more than ₦1.25 trillion in 2024 (CBN, 2024), yet agriculture's share of GDP remained stagnant at 23-25 percent (World Bank, 2024). Food insecurity worsened, increasing from 26 percent of the population in 2014 to 33 percent in 2024 (FAO, 2024), even as financing surged. Crop yields showed modest improvements, with maize and rice

increasing by about 40 percent each over the decade, but these remain below regional and global averages. Nigeria's food import bill peaked at USD 6.2 billion in 2017 before falling to USD 4.9 billion in 2024, still above 2014 levels. Adoption of sustainable practices improved, particularly with improved seeds rising to 33 percent, yet mechanization and climate-smart practices remain relatively low. Together, these findings illustrate a financing–output disconnect and point to structural weaknesses that must be addressed for Nigeria to achieve SDG 2 on Zero Hunger and SDG 1 on poverty reduction.

Conclusion

The findings underscore that financing alone is insufficient to transform Nigeria's agricultural sector. While credit expansion has provided short-term relief during crises such as the 2016 recession and the COVID-19 pandemic, it has not altered the structural stagnation of agricultural GDP or reduced the country's heavy dependence on imports. The persistent rise in food insecurity, despite massive financing, demonstrates that the agricultural system is constrained by insecurity in farming zones, inadequate infrastructure, post-harvest losses, and limited adoption of mechanization and irrigation. These outcomes suggest that Nigeria's agricultural policy has been largely reactive, focusing on disbursements rather than building resilience and competitiveness. A decisive shift toward performance-linked financing and structural investments is critical if agriculture is to contribute meaningfully to food sovereignty, economic diversification, and sustainable growth.

Recommendations

i. The Federal Government of Nigeria should expand import substitution beyond rice and maize to include wheat, sugar, and dairy, while investing in national storage facilities, cold-chain logistics, and rural infrastructure that lower costs and losses across value chains.

ii. The Central Bank of Nigeria (CBN) should redesign agricultural credit schemes to be performance-linked, disbursing funds based on measurable outcomes such as yield increases, hectares irrigated, and verified reductions in post-harvest losses. This will transform financing from a crisis response tool into a driver of structural change.

iii. State Governments should promote rural mechanization and irrigation hubs, operating on a pay-per-use model to make equipment and water access affordable to smallholders, while ensuring security of farming zones to stabilize production.

iv. The Food and Agriculture Organization (FAO), in partnership with Nigeria's Ministry of Agriculture, should scale up training and extension programs that accelerate adoption of climate-smart practices, ensuring that smallholder farmers are equipped to adapt to climate shocks and sustain yield growth.

v. The World Bank and other development partners should provide concessional financing and technical support for large-scale rural infrastructure projects, particularly irrigation networks and mechanization clusters, which are beyond the capacity of domestic credit systems to finance alone.

vi. The Private Sector, especially agro-processors and input suppliers, should deepen investment in local value chains by expanding processing capacity and integrating smallholder farmers into supply contracts that guarantee markets for their produce.

vii. Monitoring and evaluation agencies, including the National Bureau of Statistics (NBS) in collaboration with FAO, should institutionalize real-time tracking of financing outcomes, linking credit expansion with household welfare and national food security indicators aligned with SDG 2.

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