

ROLE OF EXTENSION WORKERS IN PROMOTING FOOD SECURITY AND NATIONAL DEVELOPMENT IN KONTAGORA LOCAL GOVERNMENT AREA OF NIGER STATE

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Abstract

This study explores the significant contributions of extension workers in advancing food security and national development within Kontagora Local Government Area of Niger State. Agricultural extension services are essential for bridging the gap between research innovations and practical applications by rural farmers. The research highlights the role of extension workers in disseminating modern agricultural practices, providing access to essential inputs, and promoting sustainable farming techniques. Data were collected from six communities in Kontagora, using structured questionnaires and focus group discussions. Results revealed that extension workers play a critical role in improving agricultural productivity, reducing food insecurity, and fostering national development. The study concludes with actionable recommendations, including increased funding for extension services and the integration of digital technologies to improve outreach.

Keyword: *Extension Workers, Food Security, National Development, Agricultural Development*

Introduction

Agricultural extension services are pivotal in achieving food security and national development, particularly in developing countries like Nigeria. These services facilitate the transfer of knowledge, technologies, and skills to rural farmers, empowering them to adopt innovative practices that enhance productivity (World Bank, 2023). In Kontagora Local Government Area, agriculture forms the backbone of the economy, yet challenges such as limited access to inputs, outdated farming methods, and climate change threaten food security. Extension workers serve as a bridge between research institutions and farmers, ensuring the dissemination of practical and localized solutions (Ajayi, 2022).

Extension workers act as a bridge between research institutions and rural farmers, ensuring the dissemination of knowledge, skills, and technologies necessary for improved agricultural outcomes (World Bank, 2023). Their role extends beyond knowledge transfer to include facilitating access to inputs, forming cooperatives, and promoting sustainable farming practices. According to Ajayi (2022), effective extension services can lead to increased agricultural productivity, improved rural incomes, and enhanced food security.

Food security, as defined by the United Nations, encompasses availability, access, utilization, and stability. Achieving food security is central to national development as it directly influences health, education, and economic stability. In Niger State, inadequate extension services, coupled with limited government support, exacerbate food insecurity and hinder agricultural development. Addressing these gaps through robust extension services is critical for

fostering sustainable growth. Food security is a cornerstone of national development, directly influencing health, education, and economic growth. According to FAO (2022), countries that invest in robust extension services report higher agricultural productivity and improved rural livelihoods. However, in Niger State, the lack of adequate extension workers and resources hampers the sector's potential. This study investigates the role of extension workers in promoting food security and national development in Kontagora.

Statement of the Problem

Food security remains a pressing challenge in Nigeria, particularly in rural areas such as Kontagora Local Government Area. Despite its vast agricultural potential, the region grapples with low productivity, inadequate access to agricultural inputs, and insufficient knowledge of modern farming techniques. These issues are exacerbated by climate change, poor infrastructure, and limited extension services. According to FAO (2022), over 25% of rural households in Nigeria experience food insecurity, with women and children being the most affected. Extension services, which are crucial in bridging the knowledge and resource gap between research institutions and farmers, are often underfunded and understaffed in the region. This inadequacy hampers farmers' ability to adopt innovative practices that could significantly boost productivity and income levels. Furthermore, the lack of coordination between government initiatives and local farmers often results in the ineffective distribution of agricultural inputs. This study investigates the specific roles that extension workers play in addressing these challenges, focusing on their contributions to improving access to resources, promoting sustainable practices, and enhancing

agricultural productivity. The findings aim to provide actionable insights for policymakers and stakeholders to strengthen extension services and achieve sustainable development in the region.

Research Objectives

1. To examine the role of extension workers in disseminating modern agricultural practices in Kontagora.
2. To assess the impact of extension workers on farmers' access to agricultural inputs.
3. To evaluate the contributions of extension workers to improving food security in the study area.
4. To analyze how extension workers promote national development through agricultural sustainability.

Research Questions

1. How do extension workers contribute to the dissemination of modern agricultural practices in Kontagora?
2. What is the impact of extension workers on farmers' access to agricultural inputs?
3. How do extension workers improve food security in the study area?
4. In what ways do extension workers promote national development through agricultural sustainability?

Review of Related Literature

Agricultural extension services are fundamental to achieving food security and sustainable development globally. These services bridge the gap between research institutions and farmers, ensuring that innovative practices and technologies reach those who need them most. Extension services play a crucial role in addressing agricultural challenges such as low productivity, inefficient farming methods, and limited resource access. The World Bank (2023) emphasizes that nations with

robust extension systems have consistently experienced higher agricultural productivity, improved rural livelihoods, and enhanced food security outcomes. These findings underscore the importance of investing in extension systems as a catalyst for rural development.

One of the primary functions of extension workers is to transfer knowledge and skills from research institutions to farmers. This knowledge transfer includes teaching modern farming techniques, introducing climate-smart agricultural practices, and providing training on pest and disease management. Studies have shown that farmers exposed to extension services are more likely to adopt innovative practices that improve yield and reduce losses. Ajayi (2022) reported that climate-smart practices, such as conservation tillage, crop rotation, and integrated pest management, have gained traction among farmers due to the efforts of extension workers. These practices not only increase productivity but also enhance resilience against climate variability, a critical concern in regions like Kontagora.

Another vital aspect of extension services is facilitating farmers' access to essential inputs such as fertilizers, improved seeds, irrigation systems, and credit facilities. Extension workers often act as intermediaries, linking farmers with government programmes, non-governmental organizations (NGOs), and private sector suppliers. According to Olajide and Adedeji (2020), farmers who benefit from extension services are more likely to access subsidized inputs and financial support, which are critical for scaling up production. Furthermore, extension workers assist in forming cooperatives that provide farmers with collective bargaining power, enabling them

to negotiate better prices and access credit at favorable terms. This function is especially important in rural areas where individual farmers face significant barriers in accessing resources.

Sustainability is a cornerstone of modern agricultural extension services. Extension workers promote sustainable farming practices that preserve environmental resources while ensuring long-term productivity. These include organic farming, water conservation techniques, agroforestry, and crop diversification. FAO (2022) highlights the role of extension workers in training farmers on these methods, noting that sustainability-focused interventions have significantly reduced soil degradation, enhanced biodiversity, and improved food security in many rural communities. In Kontagora, where soil fertility and water availability are critical challenges, the promotion of these practices is particularly impactful.

Despite their importance, extension services in Nigeria face several challenges that hinder their effectiveness. Limited funding, inadequate staffing, and poor infrastructure are among the most pressing issues. Nugroho and Wibowo (2020) argue that these challenges often result in low farmer-to-extension worker ratios, reducing the reach and impact of extension programs. Moreover, a lack of coordination between government agencies and local communities often leads to the inefficient implementation

Results and Discussion

Research Question 1: How do extension workers contribute to the dissemination of modern agricultural practices in Kontagora?

Item	N	Mean	SD	Decision
Training on modern farming techniques	300	3.78	0.82	Agree

of extension activities. The integration of digital tools such as mobile apps and SMS platforms has been proposed as a solution to bridge communication gaps and enhance service delivery. Additionally, public-private partnerships have been identified as a potential avenue for addressing resource constraints and improving the overall efficiency of extension systems.

Methodology

This study adopted a descriptive survey research design to investigate the role of extension workers in six purposively selected communities in Kontagora: Masuga, Anguwan Tudu, Magajiya, Kawo, Tungan Kawo, and Anguwan Rogo. These communities were chosen based on their agricultural activity levels and the presence of extension workers. A total of 300 respondents participated in the study, including farmers and extension workers. Data were collected through structured questionnaires, validated with a Cronbach's alpha reliability coefficient of 0.79, and focus group discussions. The questionnaires captured quantitative data on farmers' perceptions of extension services, while the discussions provided qualitative insights into challenges and opportunities in agricultural extension. Data analysis was performed using descriptive statistics such as means and standard deviations, with the results presented in tables for clarity. SPSS software was employed to ensure accurate and efficient analysis.

Demonstration of improved practices	300	3.64	0.79	Agree
Dissemination of climate-smart agriculture	300	3.71	0.80	Agree
Regular farm visits and follow-ups	300	3.59	0.75	Agree
Aggregate Mean		3.68		Agree

Extension workers significantly enhance farmers' knowledge and adoption of modern agricultural practices. Training sessions on sustainable farming techniques were highly rated by respondents, with a mean score of 3.78. Practical demonstrations of improved practices also received strong agreement, indicating their effectiveness in promoting new methods. Disseminating climate-smart agriculture practices, such as water conservation and soil management, was another critical area of contribution, as reflected by a mean score of 3.71. Regular

farm visits and follow-ups were acknowledged as essential for providing tailored advice and addressing farmers' challenges.

These findings align with Ajayi (2022), who emphasizes the importance of practical demonstrations and personalized support in improving agricultural productivity. By equipping farmers with relevant knowledge and skills, extension workers contribute to increased crop yields and sustainable resource management.

Research Question 2: What is the impact of extension workers on farmers' access to agricultural inputs?

Item	N	Mean	SD	Decision
Access to fertilizers	300	3.68	0.76	Agree
Availability of improved seeds	300	3.74	0.81	Agree
Linkage to credit facilities	300	3.65	0.78	Agree
Facilitation of cooperative formations	300	3.70	0.79	Agree
Aggregate Mean		3.69		Agree

Extension workers significantly improve farmers' access to essential agricultural inputs, which are critical for enhancing productivity and ensuring food security. Access to fertilizers was one of the most impactful contributions, with a mean score of 3.68. Respondents reported that extension workers played a vital role in linking them to government programmes and suppliers that provide subsidized or high-quality fertilizers. This aligns with findings by Olajide and Adedeji (2020), who noted that farmers with access to extension services are more likely

to obtain fertilizers at affordable rates. Availability of improved seeds was rated even higher, with a mean score of 3.74. Extension workers facilitate the distribution of high-yield and disease-resistant seed varieties, enabling farmers to achieve better crop performance. Linkage to credit facilities received a mean score of 3.65, reflecting the role of extension workers in assisting farmers to access financial resources for agricultural investment. Respondents noted that extension workers often collaborate with microfinance institutions, cooperatives, and

government agencies to secure loans or grants for farmers. Access to credit enables farmers to purchase inputs like fertilizers and equipment, ultimately boosting productivity. Ajayi (2022) highlights the importance of financial support in empowering smallholder farmers to adopt modern agricultural

practices. Facilitation of cooperative formations scored a mean of 3.70. Extension workers play a critical role in organizing farmers into cooperatives, which provide a collective platform for accessing resources, negotiating prices, and sharing knowledge.

Research Question 3: How do extension workers improve food security in the study area?

Item	N	Mean	SD	Decision
Increased crop yield through better practices	300	3.80	0.82	Agree
Reduction in post-harvest losses	300	3.67	0.79	Agree
Enhanced nutritional awareness	300	3.58	0.75	Agree
Support in diversification of crops	300	3.69	0.78	Agree
Aggregate Mean		3.69		Agree

Extension workers contribute significantly to food security by increasing agricultural productivity and reducing losses. Training programmes on improved agricultural practices were highly impactful, with a mean score of 3.80, indicating that respondents observed tangible improvements in crop yield. This finding aligns with FAO (2022), which noted that better agricultural practices are directly linked to food availability. Reduction in post-harvest losses was another critical area, with a mean score of 3.67. Respondents emphasized the role of extension workers in training farmers on proper storage techniques and post-harvest handling, which prevented significant losses. Enhanced nutritional awareness, with a mean

score of 3.58, also emerged as a key contribution. Farmers acknowledged that extension workers educated them on the importance of diverse diets and nutrient-rich crops. Support in crop diversification scored a mean of 3.69, reflecting the role of extension workers in encouraging farmers to grow a variety of crops. Diversification improves household food security and creates additional income streams. These results highlight the multi-dimensional role of extension workers in addressing food security challenges, from increasing productivity to enhancing knowledge about nutrition.

Research Question 4: In what ways do extension workers promote national development through agricultural sustainability?

Item	N	Mean	SD	Decision
Promotion of sustainable farming methods	300	3.72	0.79	Agree
Contribution to rural income generation	300	3.74	0.82	Agree

Engagement in policy advocacy	300	3.65	0.78	Agree
Facilitation of youth involvement	300	3.68	0.77	Agree
Aggregate Mean		3.70		Agree

Extension workers play a crucial role in promoting national development through sustainable agricultural practices. Training on sustainable farming methods, such as crop rotation and conservation tillage, was highly rated, with a mean score of 3.72. These methods not only enhance productivity but also preserve soil health for future generations. This finding supports World Bank (2023), which emphasized the importance of sustainable agriculture in achieving long-term development goals.

The contribution of extension workers to rural income generation scored the highest, with a mean of 3.74. Respondents reported that increased crop yields and market linkages facilitated by extension workers significantly improved household incomes. Engagement in policy advocacy also emerged as a vital role, with a mean score of 3.65. Extension workers acted as intermediaries, voicing farmers' concerns to policymakers and ensuring that agricultural policies reflect local realities.

Facilitation of youth involvement in agriculture scored a mean of 3.68. Extension workers actively engaged young people, introducing modern technologies and practices to make agriculture appealing. This is crucial for addressing youth unemployment and ensuring the sector's sustainability. Collectively, these activities demonstrate how extension workers contribute to national development by fostering economic growth, social inclusion, and environmental sustainability.

Conclusion

The study concludes that extension workers are vital agents of change in promoting food security and national development in Kontagora Local Government Area. By disseminating modern agricultural practices, enhancing access to inputs, and promoting sustainable farming, extension workers address critical challenges facing the agricultural sector. Their efforts lead to increased productivity, reduced food insecurity, and improved livelihoods.

The results showed that extension workers have significantly contributed to increasing farmers' knowledge of modern techniques, improving food security, and facilitating sustainable practices that drive national development. However, challenges such as limited funding and inadequate resources hinder the full potential of extension services.

Recommendations

- 1. Strengthen Capacity Building:** Increase training opportunities for extension workers to equip them with the latest agricultural knowledge and skills.
- 2. Enhance Funding:** Governments and donor agencies should allocate more resources to agricultural extension services to expand their reach and effectiveness.
- 3. Leverage Technology:** Utilize digital tools like mobile apps and SMS platforms to enhance communication and information dissemination between extension workers and farmers.

4. **Promote Public-Private Partnerships:** Encourage collaborations between government, private sector, and non-governmental organizations to support extension services and improve sustainability.
5. **Encourage Youth Involvement:** Develop programmes that specifically target young people, making agriculture more attractive and ensuring the sector's long-term viability.

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