



Community Oriented Radio Program in Fostering Agricultural Development and Food Security in Agrarian Communities of Ogun State

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Research Article	ABSTRACT
<p>Article History: Received: 13 February 2025 Accepted: 25 June 2025 Published online: 15 December 2025</p> <p>Keywords: Agricultural Development Community Radio Agric Program Farmers Food Security</p>	<p>The 21st century has witnessed significant advancements in communication technology, reshaping the way societies interact and develop. Among these technologies, radio continues to hold a crucial position as one of the versatile tools for disseminating information and fostering agricultural development. This study examines radio as a tool of agricultural development in addressing food insecurity in Nigeria. The focus was to understand how Agricultural radio programs on Paramount FM 94.5, Abeokuta influence local farmers in Ogun state to be more productive for food security. This study was anchored on Development Media Theory. A sample size of 387 was drawn from the selected population of the study- Abeokuta North, Egbado North, Odeda, and Obafemi-Owode, all located within Ogun State. Utilizing a descriptive survey, with a questionnaire as our key instrument. The result revealed that 79.3% of the respondents had high exposure to agricultural programs. 77.8% were well-informed on agricultural development through radio, 93% benefitted from radio agriculture programs, and 91.2% confirmed that exposure to radio agricultural programs encourage collaboration among farmers for food security and agricultural progress. The study concludes that radio is a formidable instrument of agricultural education and orientation, capable of exposing farmers to modern farming practices to increase food production.</p>
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INTRODUCTION

Agriculture is a major source of food and foreign exchange income in Nigeria, and it is commonly regarded as a highly productive, rapidly developing sector of the global economy in terms of food security, job creation, and poverty reduction, particularly at the rural level (Cloete et al., 2019). Agriculture generates 19.2 percent of GDP and employs around 38.5 percent of the labor force; more than 65-70 percent of the population relies on agriculture. Agriculture is important to the Nigerian economy because it employs over 70% of Nigerians (Food and Agricultural Organization (FAO, 2022). It is one of many sectors that contribute to increasing rural income and ensures the long-term sustainability of its natural resources (Chhachhar et al., 2014).

Unfortunately, just like other sectors, Nigeria has lost the richness and viability of its agricultural sector. Many factors have been attributed to this sad decline in the agro-economy of the country due to systemic neglect arising from a complete focus on crude oil-based economy to other factors like climate change, low funding, access to technology, and others (Afiobor, 2017; Andrew et al., 2020). To make up for food and agricultural output deficiencies, Nigeria imports \$10 billion (mostly wheat, rice, poultry, fish, food services, and consumer-oriented goods). Agricultural imports come primarily from Europe, Asia, the United States, South America, and South Africa (International Trade Administration, 2023).

More than ever before, Nigeria needs robust and more cohesive efforts to improve agricultural outputs amidst the grueling realities of food inflation, food draught, and food insecurity. Recent data show that inflation in Nigeria rose to 35.41% in January 2024, up from 33.9% in December 2023. The number of food-insecure Nigerians increased considerably, from 66.2 million in Q1 2023 to 100 million in Q1 2024 (WFP, 2024), with 18.6 million experiencing acute hunger and 43.7 million Nigerians exhibiting crisis-level or higher hunger coping mechanisms as of March 2024. To be very clear, food prices in Nigeria rose 39.16 percent in October 2024, a dangerous soar that has tremendously affected the lives of many citizens and vulnerable individuals in the country (Trading Economics, 2024). Nigerians face a disturbing level of food crisis, as 71% of households in the country have been affected by food insecurity, while 21% of the local population has been noted to borrow food for survival (Chibueze, 2024; Tunji, 2024).

In a drastic effort to stem the precarious situation emerging from the ugly event, Nigeria has tried several policies, implemented many programmes and initiated a series of approaches to increase food security and agricultural sustainability in the country, but all efforts have only been met with more challenges, which insecurity and terrorism have worsened in recent time (Relief web report, 2023).

This unprecedented situation needs immediate humanitarian, social protection, and food security solutions. The media has been noted to have the capacity to encourage progressive agricultural development by way of “providing information and enlightenment on agricultural innovations and available incentives to encourage farmers, most of whom are rural dwellers to embrace modern precepts and practices in agriculture” (Ochonogo, 2007 in Nwankwo, 2013, p.1).

In order to enhance the agricultural output capabilities of farmers, it is essential to address various information requirements. Which may lead to a multitude of behaviors that may impact farmers, stakeholders, consumers, and government-affiliated entities. The use of radio for agricultural programming has significant promise for the advancement of a country’s agricultural sector and rural communities (Yahaya, 2018). Radio is an important means of disseminating agricultural messages because it can reach farmers and agribusiness people around the world over large geographical distances (Muhammad & Abu, 2010; Rasmussen, 2016). The application of radio in agricultural development plays a very important role in enhancing interactions and information flows among different actors involved in agricultural innovation and also enhances the capacities of agricultural extension and advisory service providers (Amin et al., 2018; Shodiye, et al., 2024).

This work centers on Ogun State, a Nigerian state located in Western Nigeria, with a population of 6,379,500 (City population, 2022), a location predominated by farmers. The state is one of the six states in the South-West geopolitical zones of Nigeria with arable land of 1,204,000ha and cultivated area of 350,000 ha, the state is also noted to be the agricultural powerhouse of Nigeria in terms of commercial agriculture, logistics, and natural endowments (Adeleye, et al., 2020). The study is to understand how community-focused radio programs can help increase knowledge and yield positive attitude for sustainable food production and progressive agricultural development within the local settlements in Nigeria

MATERIAL AND METHOD

Ethical Approval

The study was approved by the Chrisland University Research Ethics Committee (Ref: CLU/CREC/RES/APV/2025/051). It complied with global ethical regulations (45 CFR 46.104(d)(2); Mayo Clinic, 2022). All participants were adult farmers who voluntarily consented after being informed that no personal data would be collected and all responses would remain anonymous. No vulnerable individuals were involved.

Location of The Study

This study utilised the descriptive survey constituting 12,050 farmers in four agrarian local governments which include Odeda local government, Obafemi-Owode local

government, Abeokuta North local government and Egbado North local government area in Ogun state. The data of these farmers were pulled from the Ogun State Agriculture Programme Development (OGADEP).

Data Collection

The sample size was determined using the Taro Yamane (1967) formula, which is shown below, and the study population consists of 12050 farmers from the selected area:

$$n = \frac{N}{1+N(e)^2} \quad (1)$$

$$n = \frac{12050}{1 + 12050(0.05)^2}$$

$$n = \frac{12050}{1 + 12050(0.0025)}$$

$$n = \frac{12050}{1 + 30.125}$$

$$n = \frac{12050}{31.125}$$

$$n = 387$$

Therefore, with a 0.5 error margin, this sample size is considered ideal for the study. The questionnaire was distributed using proportional sampling techniques. The selection of respondents was done specifically to reflect the ideals of self-report (a situation where farmers were asked if they were aware of the community-oriented radio program on *Paramount FM*, Abeokuta, Ogun State). The radio station was purposively selected because the station's coverage signal is received in the selected local government areas. The allocation of the questionnaire was based on the tenets of proportional random sampling, which made us consider sharing the Google online questionnaire equitably among the identified farmers in various local governments. The responses were presented in simple tables, frequencies and percentages. While the analysis was done using the version 20 of SPSS, and Chy Square was used to analyze and present the relationships between variables. The entire data was carefully presented and analyzed considering each unique variables within the study.

Statistical Analysis

The study utilized descriptive inferential statistics using the standard deviation and Chi-Square analysis to determine the mean value, averages, and the relationship between variables.

RESULTS AND DISCUSSION

Level of Exposure to Community-Oriented Agricultural Broadcast on Radio

The results as presented in Table 1 showed that the majority of the farmers had a high level of exposure to community-based radio programs, 307 respondents (79.3%), followed by those who were moderately exposed to community-based agricultural radio programs 52 respondents (13.4%) and those who were poorly exposed to agricultural programs on the radio were 28 respondents (7.2%). The study thus concluded based on the results with regard to the four demographic characteristics that farmers are highly exposed to community-oriented agricultural broadcasts on *Paramount Radio*, Abeokuta, Ogun State.

How Community-Oriented Radio Motivates Farmers for Agricultural Development and Food Security

The majority of the farmers, about 301 respondents (77.8%) were well-informed through community-based radio on their roles in increasing agricultural productivity and food security in the 21st century. Those who were mildly informed about farmers' inputs for agricultural developmental purposes in the 21st century make up 69 respondents (17.8%); while about 17 respondents (4.4%) were uninformed about the use of radio for agricultural initiatives.

The results as presented in Table 1 showed that the majority of the farmers, about 360 respondents (93%) benefit individually from community-oriented agricultural radio programs on *Paramount FM*. The farmers highlighted various benefits of such programs in improving agricultural productivity and food security. Meanwhile, (23.3%) of 21 respondents mildly benefit from community-oriented agricultural radio programs while about 8 respondents (2.1%) did not benefit from radio agriculture programs.

Table 1. Ways farmers have benefited from community-oriented agricultural radio program on Paramount FM

Statement	Value	Frequency	%
As a farmer you consider community oriented agricultural radio program relevant to your farming business and food security	Strongly Disagree	1	0.3
	Disagree	16	4.1
	Undecided	10	2.6
	Agreed	101	26.1
	Strongly Agree	259	66.9
	Total	387	100.0
You have greatly benefitted from community-oriented agricultural radio in my farming business.	Strongly Disagree	4	1.0
	Disagree	19	4.9
	Undecided	8	2.1
	Agree	129	33.3
	Strongly Agree	227	58.7
	Total	387	100.0
Through such community focused radio programmes you have been able to access credit facilities and grants.	Strongly Disagree	37	9.6
	Disagree	54	14.0
	Undecided	14	3.6
	Agree	115	29.7
	Strongly Agree	167	43.2
	Total	387	100.0
Community-based agricultural programs such enables you to learn new techniques and improve your farming business.	Strongly Disagree	7	1.8
	Disagree	15	3.9
	Undecided	9	2.3
	Agree	119	30.7
	Strongly Agree	237	61.2
	Total	387	100.0
Through such community-oriented radio program you have being exposed to various farming opportunities and important updates	Strongly Disagree	5	1.3
	Disagree	19	4.9
	Undecided	8	2.1
	Agree	134	34.6
	Strongly Agree	221	57.1
	Total	387	100.0
You mostly rely on the information you get on such radio programs to make a vital decision for increased productivity in your business.	Strongly Disagree	11	2.8
	Disagree	21	5.4
	Undecided	9	2.3
	Agree	158	40.8
	Strongly Agree	188	48.6
	Total	296	100.0

From the Chi-Square analysis in Table 2, it could be seen that the calculated Pearson Chi-Square value (χ^2) = 1814.310 and df = 380 while the p-value of 0.000 indicates a 1% level of significance. Since the p-value is less than 0.05 (i.e. $p < 0.05$), the null hypothesis of no benefit is rejected, and it is concluded that farmers benefit from exposure to community-oriented agricultural radio programs.

Table 2. Chi-Square Tests showing the relationship and extent of exposure to Agricultural radio programs and the farmers' perceived benefits

Chi-Square Tests			
	Value	df	p-value
Pearson Chi-Square	1814.310 ^a	380	0.000
Likelihood Ratio	490.839	380	0.000
Linear-by-Linear Association	230.846	1	0.000
N of Valid Cases	387		

a. 404 cells (96.2%) have an expected count less than 5. The minimum expected count is .00.

From the Chi-Square analysis in Table 3, it could be seen that the calculated Pearson Chi-Square value (χ^2) = 1882.436 and df = 285 while the p-value of 0.000 indicates 1% level of significance. Since the p-value is less than 0.05 (i.e. $p < 0.05$), the null hypothesis of no collaboration is rejected, and it is concluded that exposure to community-oriented agricultural radio programs encourages collaboration among farmers for food security and agricultural progress.

Table 3. Chi-Square Tests showing the relationship and extent of exposure to Agricultural radio programs and the farmers' collaboration

Chi-Square Tests			
	Value	df	p-value
Pearson Chi-Square	1882.436 ^a	285	0.000
Likelihood Ratio	441.129	285	0.000
Linear-by-Linear Association	218.259	1	0.000
N of Valid Cases	387		

a. 306 cells (95.6%) have an expected count less than 5. The minimum expected count is .00.

Exposure of the majority of the farmers to community-oriented agricultural radio programs has encouraged collaboration among farmers, providing opportunities to exchange resources, and join the progressive associations for agricultural progress (Table 4). This is affirmed by 353 respondents (91.2%), followed by those who think community-oriented.

Table 4. Ways community-oriented agricultural radio has addressed farmers' critical needs for food security

Statement	Value	Frequency	%
Radio programs have enabled you to identify with fellow farmers.	Strongly Disagree	3	0.8
	Disagree	21	5.4
	Undecided	10	2.6
	Agree	120	31.0
	Strongly Agree	233	60.2
	Total	387	100.0
Through radio programs such as agricultural programs on Paramount FM, you have been able to join farmers association(s) that benefit your farming business.	Strongly Disagree	1	0.3
	Disagree	31	8.0
	Undecided	10	2.6
	Agree	138	35.7
	Strongly Agree	207	53.5
	Total	387	100.0
Agricultural radio programs have provided opportunities for you to source useful farming equipment and exchange resources with other farmers.	Strongly Disagree	4	1.0
	Disagree	28	7.2
	Undecided	13	3.4
	Agree	140	36.2
	Strongly Agree	202	52.2
	Total	387	100.0
Agricultural programs on radio have encouraged progressive relationships and solidarity among farmers.	Strongly Disagree	3	0.8
	Disagree	28	7.2
	Undecided	9	2.3
	Agree	152	39.3
	Strongly Agree	195	50.4
	Total	387	100.0

DISCUSSION

Based on the results, the study affirmed that farmers were highly exposed to community-oriented agricultural broadcasts on radio in Abeokuta. The majority of the farmers (79.3%) had a high level of exposure to radio programs. The study thus concludes that farmers were highly exposed to agricultural broadcasts on radio. In direct agreement with this work, Yakubu et al. (2019) acknowledge that farmers are exposed to new agricultural knowledge through radio programs. Their findings further conclude that radio is an effective medium for disseminating agricultural information to farmers. Also, Shrestha and Pant (2018), revealed that radio remains a crucial source of information for rural farmers.

The findings of this work again reveals that the majority of the farmers (77.8%) were well-informed on the use of community-based radio for agricultural development in

the 21st century. Some of these farmers said they now understand their roles better in ensuring food security and are better informed about agricultural development. In similar studies by Birhanu et al. (2021), Yakubu et al. (2019) and Folitse et al. (2016), they demonstrate the efficiency of radio programs in sustaining agricultural practices, by providing enlightenment for farmers on ways to minimize risks that can impact food security.

Also, the study establishes that Ogun State farmers have been benefitting hugely from community-oriented agricultural radio programs to increase agricultural outputs for food security and sustainability. The majority of the samples (91.2%) affirmed that there are veracious benefits associated with being exposed to agricultural broadcast on radio. It could be seen in the calculated Pearson Chi-Square where it is determined that exposure to the *agricultural* radio programs on Paramount FM influences farmers' perceived benefits. In line with this, the study, by Olajide (2015) ascertained the utilization of agricultural information among crop farmers in Nigeria.

The study indicates that community-oriented programs have been used in several ways to address food security and agricultural sustainability. This finding agrees with the work of Folitse et al. (2016) indicating that farmers have the potential to acquire several improved practices as a direct outcome of agricultural radio broadcasts. Hudson et al. (2017) conducted focused on the Sub-Saharan Africa how interactive radio can be used to increase food security among small scale farmers, the study discovered that using participatory radio in Burkina Faso, Ghana, Tanzania, and Uganda, can greatly improve agricultural outputs. Adio et al., (2016) found that agricultural radio programming significantly contributes to agricultural productivity.

CONCLUSION

Following the findings of this study, it can be concluded that radio will continue to assert its relevance as a powerful tool for agricultural development in the 21st century, acting as a catalyst for positive change in rural communities worldwide. The evolution of technology has not diminished its impact; rather, it has transformed radio into a versatile and dynamic medium that adapts to the needs and preferences of modern society, especially in addressing contemporary issues relating to food security and agricultural sustainability. Radio's accessibility and reach remain significant, particularly in areas where digital infrastructure is limited. Its ability to transcend literacy barriers and language differences ensures that vital information on innovative farming practices, weather forecasts, market trends, and government policies and interventions reaches even the most remote and marginalized farmers. In this era of the digital divide, radio serves as a bridge, connecting isolated communities to knowledge that empowers them to make informed decisions improve their livelihoods, and increase agricultural productivity. For more efficient and viable use, it has been noted that important stakeholders in the agricultural and food sector

should take advantage of radio in designing effective grassroot programs that can adequately address problems of food insecurity, malnutrition and agricultural development. Aside this, more funding and sponsorships should be give to radio initiatives that can drive agricultural innovations and collaborations for nation building and food security.

Conflict of Interest

The authors confirm that there is no conflict of interest between them.

Authors' Contribution

OMW: Writing – review & editing, Writing – original draft, Supervision, Designing of research Instrument, Administration of instrument, Methodology, Formal analysis, Data curation, AOW:Literature review & editing, JOW:Literature review, Editing, Methodology, TAE: Questionnaire administration, Data curation

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