

---

## **Major Agricultural Matters and Innovations Transmitted by AM and FM Radio Stations in Kaduna and Kano States**

**Abdul-Aziz Haruna<sup>1</sup>; Ibrahim Jimoh, PhD<sup>2</sup>; Maryam Ibrahim, PhD<sup>3</sup> & Prof. Cosmos Eze<sup>4</sup>**

<sup>1, 2, 3 & 4</sup> NAERLS/ABU, Zaria Kaduna State  
abdulharunas@yahoo.com

---

**DOI:** <https://doi.org/10.5281/zenodo.11077680>

### **Abstract**

The study was carried out to discover the significant agricultural matters and innovations transmitted by select AM and FM radio stations in Kaduna and Kano States. The result was analysed and presented thematically. Findings revealed that AM and FM stations source agricultural information from agricultural specialists and share farmers' experience on agricultural matters and innovations on good agronomic practices, livestock, irrigation farming and market information on agricultural commodity prices. Despite that, the programmes lack a feedback mechanism because the programme is a one-way information flow (top-down approach). Furthermore, most agricultural radio programmes are a one-way information flow. Listeners need more opportunities for immediate enquiries and feedback, even though some stations provide phone numbers for short messages (SMS) in the case of further clarifications. However, responses to those questions were not read aloud during the broadcast of the next edition of the programme. The researchers concluded that the frequency of airing radio programmes is significant for sharing development messages and subsequent adoption. The effectiveness of a dissemination channel depends on the number of farmers who receive information and how positively that channel influences farmers' decisions to embrace a given technology. Therefore, it was recommended that the programme producers update their information to avoid overboard repeated editions to maintain the programme's listenership. The agricultural radio programmes need avenues for feedback, such as using GSM phones and short messages (SMS) to be encouraged.

**Keywords:** Major, Agricultural, Matters, Transmitted, Radio

### **Introduction**

Numerous research studies have identified radio as a crucial institutional tool for disseminating agricultural innovations in the Nigerian Agricultural sector. Shella (2015) demonstrated that implementing radio campaigns significantly increased farmers' interest and adoption of cowpea production in Nigeria. Furthermore, the involvement of Farm Radio International in radio campaign strategies has led to positive outcomes, including increased knowledge and the promotion of particular agricultural practices available through radio with support from existing NGOs and government interventions. A study in Ethiopia proves that over 50 per cent of farmers who frequently listened to the radio programmes improved their knowledge of farming, demonstrating the significant impact of agricultural radio programmes on farmers in the study area.

To determine the best practices for addressing the lack of communication infrastructure in rural Nigerian communities, Ahmed (2016) investigated the use of radio to educate smallholder farmers on agricultural techniques and natural resource management. The study found that a rural radio station for smallholders aired daily programmes on agricultural management, environmental protection and market contacts. The programmes were prepared in the local Igbo language, and they reached over one million listeners (many of whom were illiterate) in 11 local government catchments in Imo State, Nigeria. The information shared through these broadcasts helped farmers improve the sustainability of farming practices, increase their yield, access markets, and improve their incomes. It also provided information on household hygiene, sanitation and nutrition.

Mubofu & Elia (2017) investigated the dissemination of agricultural research information to farmers. The study found that the extent of disseminating agricultural research information to farmers could have been greater and it identified the primary types of agricultural research information circulated to farmers, including information on better seed varieties, usage of fertilizers, crop management and pest management. Therefore, this paper assessed the significant agricultural matters and innovations broadcasted by the radio stations in Kaduna and Kano States.

### **Objective**

The objective of the study is to discover the significant agricultural matters and innovations transmitted by select AM and FM radio stations in Kaduna and Kano States.

### **Theoretical Framework**

The researchers employed the development media theory, which assumes that mass media should endorse development objectives in developing nations. The media should prioritise news and information that establishes connections with other developing countries with geographical, cultural, or political proximity. Journalists and other media personnel possess both responsibilities and liberties in their tasks of gathering and disseminating information. Additionally, in pursuing development, the government can intervene in or restrict media operations and devices, exerting direct control. The development media theory has already furnished a foundation for the concepts of development communication. Consequently, this notion will aid in elucidating the study's objective.

### **Methodology**

The study adopted a qualitative method using an in-depth interview guide to generate information about the agricultural matters and innovations transmitted by the radio stations. Ten (10) station gatekeepers were interviewed and the result was presented and discussed thematically. Furthermore, the ten stations were randomly selected among the AM and FM stations in Kaduna and Kano States, considering the high number of radio stations around the States.

### **Result Presentation**

The qualitative instrument used an interview guide to interview the station gatekeepers (programme presenters and producers) to determine the station's coverage area, the types of agricultural matters and innovation aired, the programme format and the challenges encountered in producing the programme, among others.

**Table 1: Transmitting Agricultural Matters and Innovations**

<b>Theme</b>	<b>Description</b>	<b>Quotations</b>
Theme 1	Assessing the number Agricultural Programmes in the select radio stations	Our station aired three programme titles and two are produced and presented by sponsored and only one title produced by the station (P1) and (P8). The station aired two programme titles and one out of the two is sponsored and only one title that belongs to the station (P3) and (P9). The station aired only a title which is fully produce by the station (P2), (P5), (P6), (P7) and (P10). The station aired two programme titles that is fully packaged and produced by the station (P4)
Theme 2	The stations area of coverage	Our station being the first radio station in the north have wider coverage range from Nigeria to neighbouring countries such as Niger Republic, and within other neighbouring Northern States (P1)  We operate on AM frequency and our coverage range reached our neighbouring states within the north west (P2, 3, and4)  Our coverage is mostly within the State and sometimes to immediate communities bordering the State (P5, 6, 7, 8, 9, and10)
Theme 3	Agricultural matters and innovations aired in the station	The station share farmers' experience on agricultural matters and innovations on 1. good agronomic practices, 2. livestock, 3. irrigation farming  The station through the sponsored programme shares market information on agricultural commodity prices, including the good agronomic practices etc. (P1)
Theme 4	The programme format	The programme format is a magazine format (P1, 2, 3, 5, 6, 7, 8,)

		The programme is in discussion format (P4, 9 and 10)
Theme 5	Target audience	The programme targets farmers, youth and other agricultural stakeholders(P1-10)
Theme 6	Receive any feedback during or after the programme	Feedback are received after the programme broadcasted (P1, 2, 3, 4, 5, 7, 10)
Theme 7	The challenges encounter in producing the programme	Feedback with enquiries are received during the programme broadcast, a phone number is provided for listeners to call for inquiry (P6, 8. 9) Funds is mostly the major challenge in producing the programme. You need to go out to source information (P1, 2, 3, 4, 5, 6, 7, 9, 10)
Theme 8	A political programme poses a challenge to the agricultural programme	Our programme is majorly sponsored by Non-governmental organisations. (P8) Political programmes challenge agricultural programmes due to the station's policy of giving prominence to political programmes rather than agricultural programmes for their income generation (IGR) (P1-7 and 9-10)
Theme 9	AM stations pose a challenge to FM broadcast listenership	The political was not a threat to agricultural radio programme, because our programme has sponsored and aired on weekly basis (P8) AM stations have a more comprehensive coverage than the FM stations, aside advantage of being the first radio frequency to broadcast agricultural programmes before the advent of FM frequency.
Theme 10	FM stations pose a challenge to AM broadcast listenership	The proliferation of FM stations across the State poses a challenge to the listenership of the AM station. Listeners have choice of radio frequency channels at a time

The findings derived from the qualitative data, as presented thematically above, indicate that the select radio stations in Kaduna and Kano States primarily focused on significant agricultural matters and innovations. Results showed that most stations only have one agricultural programme with a limited time slot. Furthermore, the results indicated that two AM and two FM stations, namely: FRCN and Freedom and Guarantee FM, have additional sponsored/paid radio programmes. Consequently, all the chosen radio stations broadcast only one agricultural program, necessitating improvement to promote adoption and subsequent agricultural development in Nigeria. The frequency of

*Major Agricultural Matters and Innovations Transmitted by AM and FM Radio Stations in Kaduna..*

airing radio programmes plays a crucial role in developing and adopting messages, as radio messages are transient and require repeated broadcasts to ensure the dissemination of missed information. The media's responsibility is to fulfil positive development tasks as proposed by the development media theory.

Moreover, the AM radio stations offer a more extensive coverage range, encompassing not only Nigeria, but also neighbouring countries such as Niger Republic and other neighbouring Northern States. Similarly, FM stations cater to various areas within their respective states. AM and FM stations rely on agricultural specialists to source agricultural information and share farmers' experiences regarding agronomic practices, livestock, irrigation farming and market information on agricultural commodity prices—the programme explicitly targets farmers, youth and other agricultural stakeholders in a magazine format.

Furthermore, the programmes require an effective feedback mechanism since they are produced in a one-way information flow (top-down approach), depriving listeners of the opportunity for immediate inquiries and feedback. Although, some stations provide phone numbers and email addresses for questions, there remains a need for improvement in this aspect. The findings also revealed that the agricultural programmes need help with packaging due to logistical constraints and limited funds for generating content on agricultural matters and innovations. Similarly, most producers acknowledged that political programmes challenge agricultural programmes as the station prioritises political programmes for income generation and financial sustainability rather than agricultural programmes.

In addition, the proliferation of FM stations across the selected states poses a challenge to the listenership of AM stations, as audiences now have the freedom to switch between different stations. However, it is essential to note that AM stations offer a more comprehensive coverage area than FM stations and are the first to broadcast agricultural programmes prior to the introduction of FM frequency.

These findings imply that radio is a complementary medium for disseminating agricultural matters and innovation to farmers for sustainable agricultural development in Nigeria. However, it needs more commitment to the agricultural sector. This finding is evidenced by allocating only one title and a single weekly slot to agricultural programmes, as seen in table 1. The frequency at which a programme aired plays a crucial role in adopting agricultural matters and innovations, as the diffusion of innovation theory postulates, the theory emphasises that the media have an essential role in the progression of the diffusion on innovation since they create awareness among vast farmers (audience) at the same time and achieving this is through frequent programme airing because the target audience can revisit missed editions during a repeat broadcast. Similarly, the development media theory equally, emphasises on the media's crucial role in facilitating the achievement of development goals in developing countries. In other words, the media should champion all economic priorities and development goals of the society.

The findings indicated that the programme format which follows a magazine-style approach is characterised by a top-down communication strategy, rather than a

participatory one. Participatory agricultural extension communication, on the other hand, can influence perception and stimulate adoption. According to the perception theory, mass communicators aim to capture the attention of their audiences, encourage internalisation of the news content and prompt modifications in attitudes or philosophies, ultimately leading to desired behavioural reactions. Furthermore, the select radio stations should have prioritised the agricultural programme as they tend to focus on other programmes, such as political content. The producers of the agricultural program faced constraints in generating information on agricultural matters and innovation every week, mainly due to limited funding.

### **Discussion of Findings**

The data generated from in-depth interviews conducted with the programme producers and presenters in the ten AM and FM radio stations in Kaduna and Kano States. On the significant agricultural matters and innovations broadcasted, it was revealed that most stations have one (1) agricultural programme title with only a slot per week without repeat broadcast. This is in line with Oyekunle, Abdulslam-Saghir & Bolarinwa (2013) whose study found that most of the journalists were not inclined to reporting agricultural and rural development broadcasts rather they concentrate on government activities and political matters. Furthermore, Awojobi & Adeokun's (2012) study revealed that in 2007, 2008, 2009 and 2010, respectively two Nigerian daily newspapers did not report any agricultural matters and those that featured agricultural matters, majorly covered only 1-2 stories per day.

Furthermore, the result showed that among the ten (10) radio stations, two AM and two FM stations (FRCN and Nagarta AM radio and Freedom and Guarantee FM) have additional sponsored/paid radio programmes. By implication, most of the radio stations produced and aired only one (1) agricultural programme which needs improvement for adoption and subsequent agricultural development in Nigeria. The frequency of airing radio programmes is significant for developing messages and adoption because radio message is transient, requiring a repeat broadcast for the target audience to cover the missed information. Robert, Roger, Gordana, & Zakariah (2003) affirmed that radio can be utilised to improve the distribution of agricultural information to rural farmers. But Ifejika, Ayanda & Nwabeze (2007) confirmed low coverage of agricultural matters which accounted for only 1% among the radio stations in Niger, Koro and New Bussa areas and that the radio stations were underutilised in disseminating fishery to fisherfolks in the Kainji lake basin due to insufficient coverage of development matters.

The media are saddled with positive development tasks postulated by the development media theory. Oyekunle (2011) posits that effective communication with farmers is a crucial aspect of progressive agricultural programmes, as the channels used for transmitting innovative ideas to recipients are vital in their decision to adopt or reject them. The findings showed that AM and FM stations source agricultural information from agricultural specialists and share farmers' experience on agricultural matters and innovations on good agronomic practices, livestock, irrigation farming and market information on agricultural commodity prices. Despite that, the programmes lack a feedback mechanism because the programme is a one-way information flow (top-down approach). Listeners need more opportunities for immediate enquiries and feedback, even



### *Major Agricultural Matters and Innovations Transmitted by AM and FM Radio Stations in Kaduna..*

though some stations provide phone numbers for short messages (SMS) in the case of further clarifications. However, responses to those questions were not read aloud during the broadcast of the next edition of the programme. Robert, Roger, Gordana & Zakariah (2003) discovered that participatory communication methods require farmers' involvement and use of local languages. Adekoya & Badaru (2013); Nathaniel, Okome & Okumagba (2017); Kuta, Adamson & Kareem (2018) opined that farmers want information on agricultural production to aid their contribution to agricultural activities.

Furthermore, the effectiveness of a dissemination channel depends on the number of farmers who receive information and how positively that channel influences farmers' decisions to embrace a given technology. Effective communication is essential for creating and sustaining positive social and professional relationships, as many scholars, including Haruna (2019) and Arokoyo (2020) emphasise. Additionally, the result revealed that the proliferation of FM stations across the selected States poses a challenge to the listenership of the AM stations. The audience can now turn to different stations at their liberty. However, the AM stations have a more comprehensive coverage than the FM stations, aside from being the first radio frequency to broadcast agricultural programmes before the advent of FM frequency. Despite the significant number of both AM and FM radio stations, Kuta, Adamson & Kareem (2018) confirmed that most radio stations that disseminate agricultural programmes have low reportage agricultural matters and innovations, with insufficient coverage of agricultural programmes in their daily schedule which ought to be part of their social responsibility as stipulated by development media theory.

### **Conclusion and Recommendations**

The researchers conclude that the effectiveness of a dissemination channel depends on the number of farmers who receive information and how positively that channel influences farmers' decisions to embrace a given technology. The select radio stations should have prioritised the agricultural program, as they tend to focus on other programmes, such as political content. The producers of the agricultural programme faced constraints in generating information on agricultural matters and innovation every week, mainly due to limited funding. Many studies on media coverage of agricultural reportage recommends an increase in airing slot and prominence to agricultural programme coverage for ensuring food security, employment opportunities, as well as Nigerian economic development. Based on the findings and conclusion, the following recommendations are hereby given:

1. Regarding the significant agricultural matters and innovations transmitted by the select station's radio stations, the programme producers should update their information to avoid repeated editions to maintain the programme's listenership.
2. It was revealed that most agricultural radio programmes are one-way information flows. The agricultural radio programmes need avenues for feedback, such as using GSM phones and short messages (SMS) to be encouraged.
3. Funding should be provided to agricultural radio programmes to support the producers in generating updated information on new agricultural matters and innovations for improving food security in Nigeria.

## **References**

- Adekoya, A. E. & Badiru I. O. (2013). Listenership of radio agricultural broadcasts in South- Western Nigeria. *Applied Environmental Education and Communication Journal*. Retrieved from <http://dx.doi.org/10.1080/1533015X.2012.777292>
- Adejuwon, A. & O. A. Adeokun (2012). Content analysis of agricultural issues reported in two Nigerian daily newspapers. *Library Philosophy and Practice (e-Journal)* <http://digitalcommons.unl.edu/libphilprac/>
- Ifejika, P. I., Ayanda, J. O. & Nwabeze, G. O. (2007). A content analysis of radio Niger programme on the promotion of fisheries around Kainji Lake Basin, Nigeria. *Journal of Agricultural Extension*. Retrieved from <https://www.researchgate.net/publication/258935998>
- Kuta, M. Y., Adamson, F. A. & Kareem, H. T. (2018). Coverage of agricultural programmes in broadcast stations in Oyo State. *Journal of Agricultural Extension*, Retrieved from <http://journal.aesonnigeria.org>  
<http://www.ajol.info/index.php/jae>
- Omoghene, F., Nathaniel, A. J. Okome, S. K. & Okumagba, G. (2017). Impact of radio agricultural programmes on the targeted audience in Nigeria. *African Journal of Development and Agricultural Economics*, 2 (1), 048- 052.
- Oyekunle, O., Abdulslam-Saghir, P. & Bolarinwa, K. K. (2013). Journalists' attitudes towards the coverage of agricultural and rural development news in Ogun State. *Journal of Biology, Agriculture and Healthcare*, 3 (11), 19-27.
- Sheila, R. (2015). Using radio in agricultural extension. Global Forum for Rural Advisory Services. Retrieved from [www.betterextension.org](http://www.betterextension.org)
- Robert, C., Roger, B., Gordana, K. B. & Zakariah, A. B. T. (2003). Rural radio in agricultural extension: Agricultural Research and Extension Network. Paper No. 127. Retrieved from <https://www.researchgate.net/publication/42765522>