

Media Performance And Rural Development In Developing Countries: Effects Of Mass Media On Inculcating, Adoption Of Innovation And Challenges In Agricultural Development

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ABSTRACT

The results of a study that evaluated small- scale farmers' access to and usage of mass media for agricultural information sharing, innovation adoption and constraints related to Tanzanian agricultural development are presented in this paper. The Gairo district, Morogoro region, had two specifically chosen villages where the study was conducted. A sample size of 384 respondents was employed in the investigation. It used a combination of quantitative and qualitative data collection techniques along with a case study research design. Questionnaires, focus groups, and observations were used to gather data. Version 16.1 of the Statistical Package for Social Sciences (SPSS) was used to examine the quantitative data, while content analysis was applied to the qualitative data. In the study area, radio was the most popular information channel when compared to television, newspapers and new media according to the study's findings. In general, the respondents' radio-based agricultural information was pertinent to their farming endeavors. Furthermore, the respondents' use of newspapers and television to obtain agricultural information was only partially relevant to their farming activities. The study's conclusions also showed that the study area's low power supply, weak signals, high cost of buying mass media sources, and insufficient feedback mechanism were the main obstacles to receiving agricultural information through the media. It is therefore advised that the government encourage rural electrification and enhance the signals, internet and transportation infrastructure in order to increase the availability and usage of contemporary agricultural mass media sources and facilitators in these areas compared to their current state.

Key words: Small-scale farmers, Mass Media, Agricultural Information, inculcating and adoption of innovation, rural and agricultural development

INTRODUCTION

It is impossible to overstate how important agricultural information is to rural residents, especially farmers. One of the most crucial tools for agricultural and rural development is agricultural information, which helps farmers make decisions and take the necessary steps for future development related to farming¹ (Stefano et al., 2005). while its significance, Ozowa (1995) believes that scientific and technical knowledge continues to be underappreciated and given a lower status than other sectors, while being essential to the agricultural and industrial growth of emerging nations³. Alam and Haque (2014), who contend that the majority of farmers in rural areas still lack information and current agricultural knowledge, also support this point of view.

When it comes to quickly and widely disseminating agricultural information, mass media methods are usually helpful. They serve as effective means of informing farmers about new developments and emergencies, as well as sources of agricultural knowledge. When it comes to spreading knowledge about farm growth and, consequently, poverty alleviation, the mass media may be quite helpful. They are regarded as an essential resource for advancing agricultural growth and have the ability to reduce poverty. Gopalakrishna, (2005).

For small-scale farmers to thrive and grow, they need to have access to agricultural knowledge. Many media outlets are useful for spreading important farming knowledge, connecting distant populations, and improving agricultural methods. With instances like MVIWATA FM in Tanzania, radio stands out among the other media forms as a potent instrument. Established in August 2020, MVIWATA FM is a radio station dedicated to providing support to Tanzania's small-scale farmers. The Food and Agriculture Organization (FAO) of the United Nations, in collaboration with the Forest and Farm Facility (FFF), is supporting the effort. Imparting improved farming techniques and offering agricultural advice services are the radio's main goals in order to support small-scale farmers' growth. Working together with experts in journalism and agriculture, MVIWATA FM creates shows covering a variety of subjects important to farmers.

One noteworthy initiative, "Better production, better lives for the farmers' family," helps farmers increase yields by helping them with pest control and agricultural preparation. "Uzalishaji endelevu," or "Sustainable production," is another initiative that teaches farmers about economical horticulture agricultural techniques and integrated pest management. In addition, the radio tackles important issues including land dispute resolution, market accessibility, social responsibility, and crop diversification, all of which support the overall growth of farming communities. United Nations Food and Agriculture Organization, (2022).

Another important participant in the spread of agricultural knowledge is Farm Radio, which operates in several African nations such as Tanzania, Ghana, Malawi, Kenya, Mali, Uganda, Burkina Faso, and Ethiopia. This radio station promotes two-way conversations between farmers and officials by emphasizing interactive programming. For example, listeners are asked questions on agriculture during their weekly show on enhanced vegetable production, which covers subjects including the advantages of growing vegetables, managing soil fertility, and seasonal production calendars. With nearly 70,000 farmers gaining from the information shared and 69% putting the lessons gained to use, Farm Radio's success is clear. Farm Radio Tanzania (2023)

A bimonthly radio program covering all stages of crop growth throughout the year is presented by East-West Seed Knowledge Transfer Foundation-supported Kahama FM, located in Tanzania. Callers can ask agricultural specialists questions and get their doubts about various farming topics answered on the show. Planting a home garden, organic manure, vegetable varieties, business and production planning, and the fundamentals of tomato production are among the subjects discussed. According to the East-West Seed Knowledge Transfer Foundation (2023–2024)

A big part of agricultural knowledge dissemination comes from television, seen by shows like Citizen Television and Edutainment TV. Funded by the United States Agency for International Development (USAID), Citizen Television, which covers Kenya, Tanzania, and Uganda, produces shows like "Makutano Junction," a soap opera that tackles the emotional, social, and commercial difficulties in agribusiness. "Don't Lose the Plot," another reality show, is centered on developing agricultural leaders and strengthening African agricultural institutions. (<https://dai-global-development.com>.) With operations in Kenya, Tanzania, Rwanda, and Uganda, Edutainment TV provides creative agricultural programming, such as the well-liked "Shamba Shape Up." The topics of agricultural innovation covered in this series include horticulture farming, soil conservation, and dairy methods. These TV shows support sustainable farming methods and reach a variety of audiences, which helps to spread agricultural knowledge more widely. (<https://www.g-frans.org>)

According to Catherine M. O et al (2014) on their study which they looked at how agricultural news was covered in Tanzanian newspapers from 2009 to 2013. For the study, 840 editions of four newspapers such as; Mwananchi, Habari Leo, The Guardian, and Daily News, were chosen. A checklist was used to gather the data, which were then analyzed with SPSS and Microsoft Excel. Only 836 (1.3%) of the 63,609 news items in all four newspaper editions, according to the study's findings, were on agriculture. Between 2010 and 2012, the percentage of published agricultural news pieces varied from 0.79 percent to 1.92 percent. Mwananchi came in second with an average of 39.4 agricultural articles, behind Habari Leo's 61.4 average. In all of the newspapers, agricultural information was only 4.9% prominent.

To sum up, radio and television are just two examples of the many media outlets that are vital in giving small-scale farmers the agricultural knowledge they need. The development of sustainable and better farming practices is greatly aided by programs like MVIWATA FM, Farm Radio, Kahama FM, Citizen Television, and Edutainment TV, which also provide farmers throughout Africa with useful knowledge and skills.

The Economic Commission for Africa (ECA, 2012) estimates that 80% of the impoverished on the continent and 70% of

Africans reside in rural areas and rely on agriculture as their primary source of income, therefore the Africa's economy is based much on agriculture. Approximately 20% of Africa's GDP, 60% of its work force, and 20% of the continent's overall merchandise exports are attributed to this industry. In actuality, 90% of African rural inhabitants rely mostly on agriculture for their income. The United Republic of Tanzania (URT, 2008) reports that the agricultural sector employs 85% of its labour force, generates 75% of foreign exchange profits, and accounts for 85% of exports. It also makes up roughly 25.8% of the country's GDP.

STATEMENT OF THE PROBLEM

Adequate and relevant information from any means of communication is one of the key requirements for increased productivity and increased income, which could ultimately lead to poverty reduction among the food producers (Nkrumah, 2008). In this regard, communication technology is playing very important role in raising awareness on different agricultural technologies among farmers. For example, the mass media offer powerful channels for transferring agricultural messages and related information which can enhance poverty reduction of rural farmers. Mass media have the ability to disseminate information to large audiences efficiently (Nazari & Hassan, 2011). In addition, Mahmood and Sheikh (2005) assert that the mass media constitute one the best sources of disseminating information on new technologies and new agricultural innovations of among farmers, and are faster than personal contacts. The effectiveness of agricultural development initiatives in underdeveloped nations is mostly contingent upon the type and degree to which mass media is employed to galvanize public support for development. Planners in developing nations understand that efficient use of the mass media can accelerate agricultural growth Purushothaman, (2003).

Though the mass media has demonstrated its ability to provide agricultural information that encourages and facilitates the adoption of innovation in agricultural development for both rural and urban communities, it is unclear how these media can help farmers in Tanzania gain access to and use agricultural information that encourages and facilitates the adoption of innovation in agricultural development. The Gairo district served as a case study to evaluate the ways in which mass media might make it easier to get and apply agricultural information for fostering innovation adoption and addressing obstacles to Tanzania's agricultural development. In particular, the research sought to:

- a) Determine the various mass media outlets that farmers utilize to obtain agricultural information.
- b) Analyzing the accuracy of agricultural news that farmers obtain from the media.
- c) Finding the media outlets that feature more inventive farming techniques
- d) To determine whether agricultural communication via the media can increase agricultural output or the uptake of innovative farming techniques.
- e) Determining the obstacles farmers encounter when obtaining agricultural information from the media and suggesting ways to overcome those obstacles

THEORETICAL FRAME WORK

Theories are coherent explanations based on reasoning that link possible causes to their results. Usually created to make predictions or to better understanding of the real world, models are simplified representations of reality or a person's view of a possible world. The theory applied in this study is as follows;

Diffusion of Innovation Theory

Both at the individual and societal levels innovation spread. People evaluate the effects of innovation on a personal level using the diffusion of innovation model procedure. Social innovation moves from a small, focused user base to a large, diffused user base as it permeates people or society. A communal innovation choice is made when all members of a society agree to embrace an innovation, as in a democratic society. An authority innovation choice is one that, for instance, is implemented by the government on society. Adoption is contingent upon an individual's capacity to perceive a concept, action, or outcome as innovative or unique. This makes it possible for disseminating.

Innovation in journalism has been recognized as important by researchers of the field. A popular conclusion is that the journalism industry struggles to adjust to change and employs a variety of coping strategies, such as using professional norms and practices as justifications for not innovating. Such research, however, does not demonstrate how research in journalism studies has influenced the knowledge that academics have about innovation processes. Journalism and media researchers consider news innovation as normative, participatory, and experimental, as evidenced by the field of journalism and media studies. Scholarship in journalism studies has also concentrated on innovation as a process that incorporates components of audience participation, structure, system, and network. Valerie B et al (2020)

According to Steen S (2009) on his recent research findings indicate that online journalism is far less inventive than many

academics and researchers projected ten years ago. However, studies on online journalism have tended to focus only on online news journalism, ignoring the breadth of new genres and styles that are constantly emerging on the internet. The study is based on the idea that innovation is a process that involves the interaction of individual agency and organizational structures. According to his research, individual action has been undervalued in earlier studies as a factor influencing innovation processes in online newsrooms. Instead, a substantive grounded theory of innovation in online newspapers consists of five elements: newsroom autonomy, newsroom work culture, management's role, the applicability of new technology, and creative individuals.

Process for the Diffusion of Innovation Model

The diffusion of innovation model describes the five steps a particular user takes to decide whether or not to accept an innovation. The initial phase, knowledge, delineates the instant a user becomes aware of an innovation and may proceed to investigate its mechanism. Once a user has done enough study to formulate an opinion regarding the innovation, the second stage, persuasion, takes place. The decision made in step three will determine whether or not the user accepts the innovation. A user will apply the new invention and evaluate its effectiveness in helping them accomplish their goals during the implementation stage. The user will evaluate the success of the decision to apply the innovation in step five, confirmation.

Awareness of the need for an innovation, choosing to adopt (or reject) the innovation, using the innovation initially to test it, and ongoing use are the processes by which a person adopts an innovation and wherefore dissemination is accomplished. This approach has been successfully applied in a variety of industries, including marketing, public relations, social work, agriculture and public health, which are why the researcher used this model for this study.

LITERATURE REVIEW

The literature on the subject of the study is reviewed in this part. The following topics are covered in the literature review, which is arranged around broad themes: the role of the media in providing agricultural information, the kinds of media that are used to provide agricultural information, the difficulties farmers encounter in obtaining agricultural information through the media, and the research gap that the study attempted to fill.

In developing countries, the adoption of agricultural innovations is significantly influenced by mass media campaigns, employing various platforms such as radio, television, and social media to disseminate information about novel agricultural technologies and practices (Hudson, 2018 ; Busungu et al., 2019; Shukla & Mohapatra, 2018 ; Seeger, 2019). Leveraging mass media enables the widespread and easily accessible distribution of information, overcoming barriers such as literacy constraints, geographical distance, and cost considerations (Joseph, 2017). Research indicates that farmers actively engaging with mass media campaigns, particularly through interactive tools like mobile phones, demonstrate a higher likelihood of adopting new farming techniques and practices. Furthermore, these campaigns offer farmers access to specialized services, including SMS advisories and automated weather forecasts, further enriching their knowledge, and promoting the adoption of innovative practices. In essence, mass media campaigns play a pivotal role in raising awareness and facilitating the widespread adoption of agricultural innovations in developing countries.

According to Rampal (2019), there is no doubt that media has had a significant impact on the lives of rural communities. In terms of agriculture, they have given farmers a range of options and simplified the process of selling their produce by doing away with middlemen through online platforms. The adoption of information and communication technology has been a major factor in India's progress. To accelerate rural development, we need to create novel approaches that connect the building of essential ICT infrastructure to the creation of human and social infrastructure.

According to Ruth M (2021), WhatsApp gives reporters and editors in this news gathering network the ability to communicate, obtain news, and shape newsroom behavior. Even at affluent companies, newsgathering faces significant challenges due to practical limits like transportation issues, which are not addressed by the platform. Within this network, WhatsApp allows journalists to communicate more effectively, but because of preexisting social connections, it is also influenced and physically limited by those connections.

The primary sources of vital information on the natural world and environmental risk are a growing number of media outlets, including newspapers, television, and social media sites on the Internet. Environmental journalists continue to be vital to shining light on events throughout the world, even in the face of significant revolutionizes in the news industry that have tended to limit the number of full-time newspaper reporters. David B. S et al (2022)

Role of mass media in accessing agricultural information in Tanzania

The mass media are thought to be the most efficient medium for rapidly spreading information among farmers and are regarded as an effective tool for doing so (Kakade, 2013). Furthermore, especially in the rural regions of developing nations, the mass media play a crucial role in supplying information that enables the rural people to make judgements about their farming activities that are well-informed (Lwoga, 2010). For example, a study conducted in Nigeria by Ariyo (2013) discovered that the majority of farmers learn about agricultural advancements from the media. Additionally, Abu Hassan et al. (2009) studied how farming communities in rural areas used the media and discovered that most of them continued to rely on "traditional mass media" like radio, television, and newspapers. This suggests that these mass media sources could be useful for providing farmers in rural areas with information about agriculture. Additionally, print media was determined to be the primary source of agricultural information in a study conducted in Pakistan by Farooq (2007).

Since Tanzania gained its independence, the country's mass media have changed with time (Kasanga, 1999). According to Tanzania Media Fund [TMF], 2012, there are currently approximately 47 FM radio stations, 537 registered newspapers, 12 television stations, and 25 cable television operators in Tanzania. However, Mlozi et al. (2012) state that farmer-to-farmer extension and agricultural extension personnel are the primary means of disseminating agricultural information in Tanzania.

Types of mass media used in accessing agricultural information

Farm magazine, flyers, newsletters, newspapers, pamphlets, radio, and television are examples of mass media (Dare, 1990). Print and electronic media are the two general categories into which the mass media can be divided (Farooq, 2007). Farmers have used radio, television, newspapers, and other mass media communication channels to obtain knowledge about agriculture.

In his research, Mtega (2018) examined how Tanzanian farmers used television and radio to get farming-related information. The results show that radio is more accessible and owned by more farmers than television. Among the seven sources of agricultural knowledge were television and radio. Factors such as language, accessibility, gender-based labour division, quantity of shows shown and broadcasting time awareness all affected how they were used.

RESEARCH METHODOLOGY

This study employed a cross-sectional research approach. The design enables a researcher to gather data simultaneously at one location. The acceptability of this type of research design is determined by the aims of the investigation. We looked at two communities in the Morogoro region: Ibuti and Ihenje in the Gairo district. The Gairo district was chosen due to its high level of agricultural production among small-scale farmers and its relatively better mass media infrastructure as compared to other rural districts (Kato, 2007).

Both non-random and random sampling strategies were applied in this investigation. The villages and wards included in the study were selected through the use of purposeful sampling. According to John and Christensen (2004), purposive sampling depends on the researcher's judgment, which is based on a few well-known criteria. Ibuti and Ihenje, two Gairo villages, were specifically chosen in this sense. In comparison to other villages, these areas are rich in agricultural output and have a comparatively developed mass media infrastructure. The creation of a sampling frame was necessary for the sampling procedure.

As a result, in collaboration with the Village Executive Officer (VEO) in each village, a list of every farmer in the chosen villages was compiled and kept in the government office. In order to create a sample size of 384 respondents, 192 respondents were chosen at random from each hamlet. According to Saunders et al. (2007), a sample size of 30 or more typically yields a sampling distribution that is similar to the normal distribution; furthermore, a sample's distribution will be more similar to the normal distribution the bigger its absolute size. Given that simple random sampling offers every case in the population an equal probability of being included in the sample, it was employed (Singleton, 1993).

384 respondents completed a schedule-based questionnaire that was used to gather data from the respondents. The questionnaire included closed-ended questions. To add to the information, focus group discussions and firsthand observation were also conducted. The Statistical Package for Social Sciences (SPSS) version 16.1 was used to code and summarize the quantitative data obtained from the questionnaire before it was analyzed. In their data analysis, the researchers used descriptive statistics like frequencies and percentages. On the other hand, content analysis was used to qualitative data.

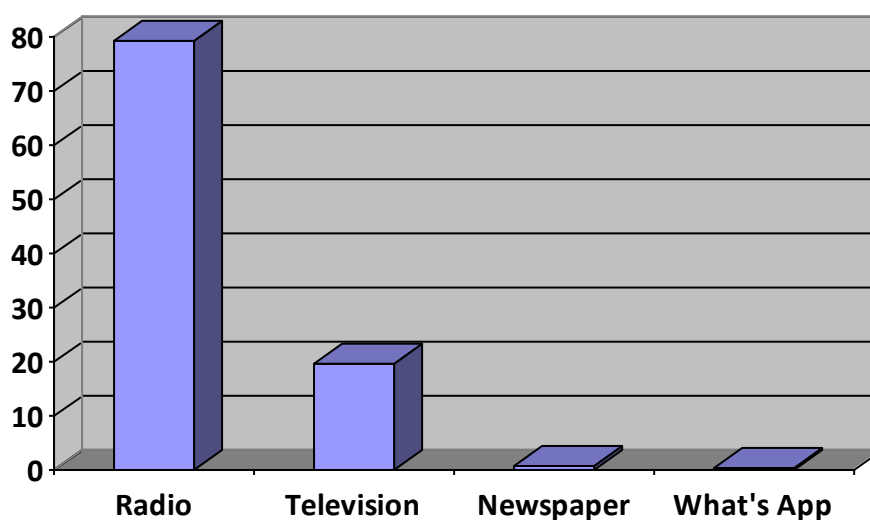
RESULTS AND ANALYSIS

The research findings are presented in this chapter along with a discussion of the results. the discussion centered on the study's goals.

Table 1; Source of mass media used by farmers in accessing agricultural information

Source	Freq.	Percent	Cum.
Radio	305	79.43	79.43
Television	75	19.53	98.96
Newspaper	3	0.78	99.74
What's App	1	0.26	100
Total	384	100	

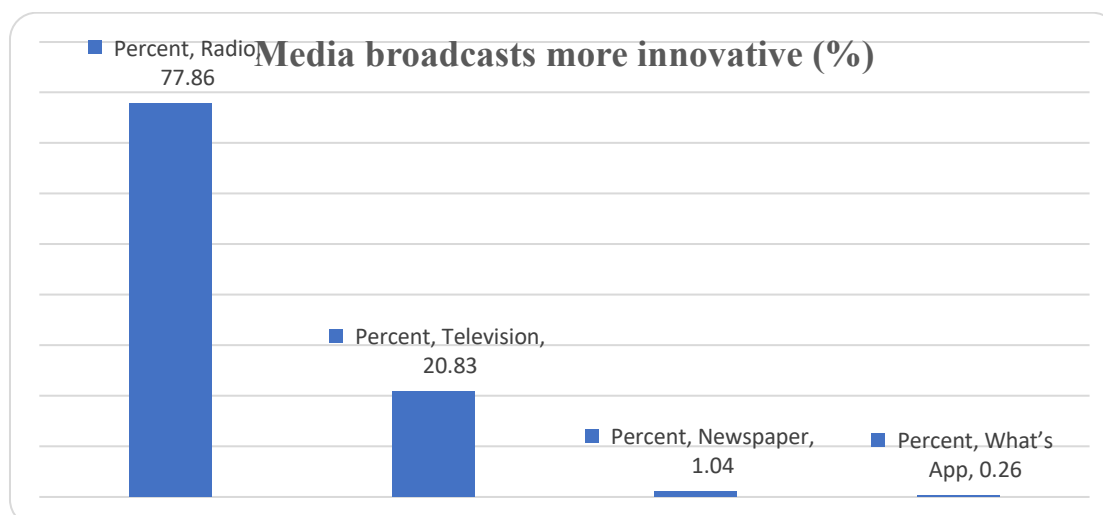
Sources of information (%)



As it shows on the table and chart above, radio is leading with 79.43 percent, follows by television on how the famers get and receive the agricultural information, therefore the source of the agricultural information is radio and television;
****Radio Dominance (79.43%):**** The majority of farmers primarily rely on radio for accessing agricultural information, making it a crucial medium for communication.
****Television Usage (19.53%):**** While less dominant, television remains a significant source for farmers to obtain agricultural information, potentially indicating the importance of visual content.

Table 2; Which media broadcasts more innovative methods on farming?

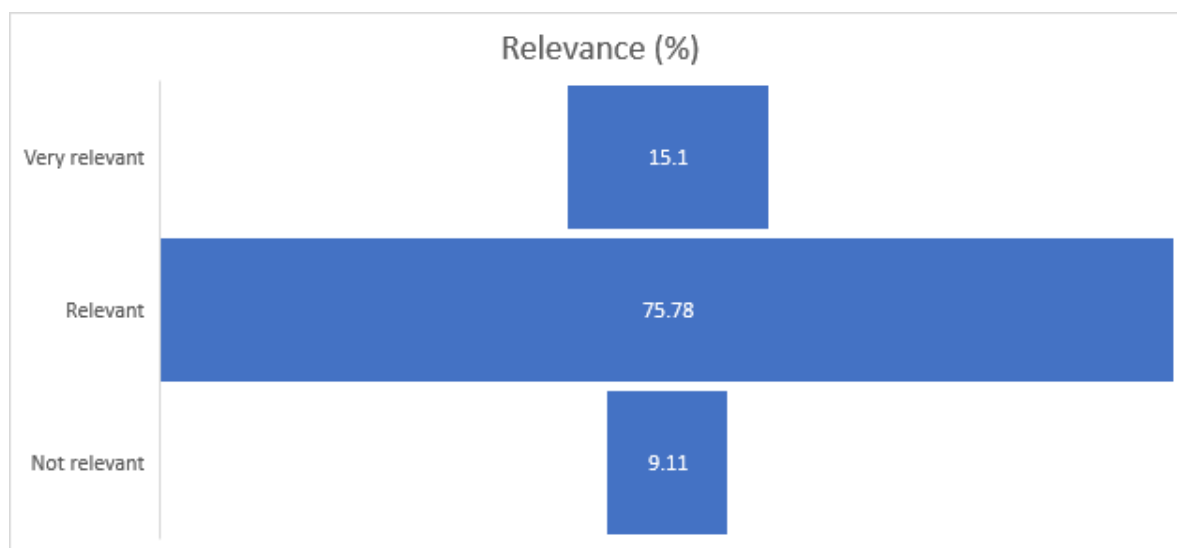
Source	Freq.	Percent	Cum.
Radio	299	77.86	77.86
Television	80	20.83	98.7
Newspaper	4	1.04	99.74
What's App	1	0.26	100
Total	384	100	



Here, the results shows among all the media Radio is the channel of media Which media broadcasts more innovative methods on farming, according to the farmers who had been surveyed, the total of 384, 299 which is equivalent to 77.86% declared that radio broadcast more innovative methods for agriculture, and once you applied them can see the best product; therefore Radio Leading in Innovation (77.86%): ** Radio is perceived as the primary source for broadcasting innovative farming methods, potentially highlighting the effectiveness of audio-based content.

Table 3; Relevance of agricultural knowledge farmers' gain through the mass media

Response	Freq.	Percent	Cum.
Very relevant	58	15.1	15.1
Relevant	291	75.78	90.89
Not relevant	35	9.11	100
Total	384	100	

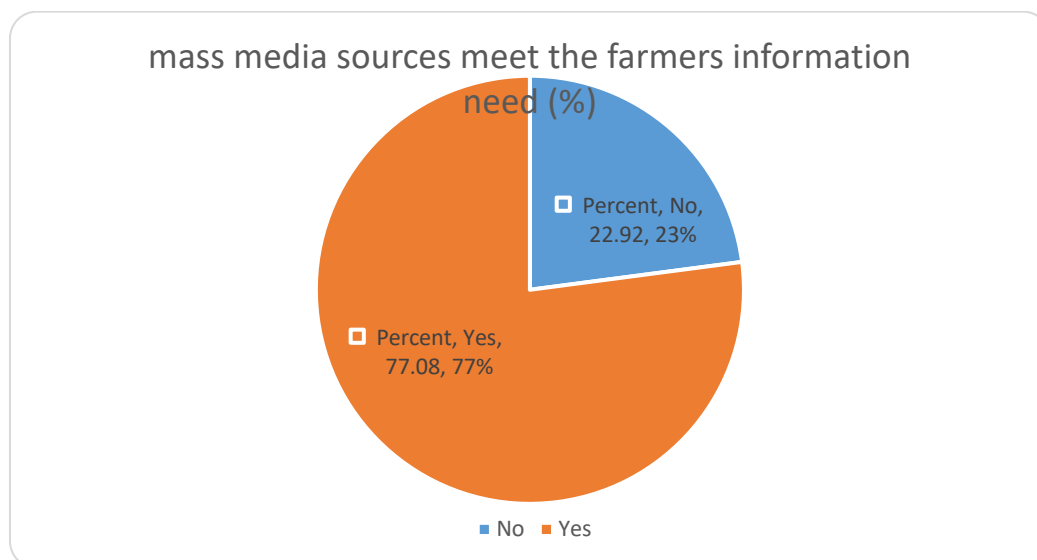


On the side of relevance of agricultural knowledge farmers' gain through the mass media, more than 75 percent of farmers who participated on the research here, acknowledged that the agricultural knowledge which farmers gain through media are relevant to their daily agricultural practices, as a **High Relevance (15.1% Very Relevant, 75.78% Relevant):** The majority of farmers find the agricultural knowledge gained through mass media to be relevant, suggesting that the information provided meets their needs.

Table 4; Do these mass media sources meet the farmers' information need?

Response	Freq.	Percent	Cum.
No	88	22.92	22.92
Yes	296	77.08	100

Total	384	100
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296 out of 384 farmers which is comparable to 77.08 percent of correspondents agreed that the mass media sources as for the agricultural knowledge and information on inculcating, adoption of innovation in agricultural development meets their needs as the **Positive Feedback (77.08%)**. The majority of respondents feel that mass media sources, despite the challenges, generally meet their information needs, indicating the perceived effectiveness of these channels.

Therefore in summary for the table 1, 2, 3 and 4 is - **Dominance of Radio**: Radio is the most widely used mass media source, and it is perceived as the primary source for broadcasting innovative farming methods.

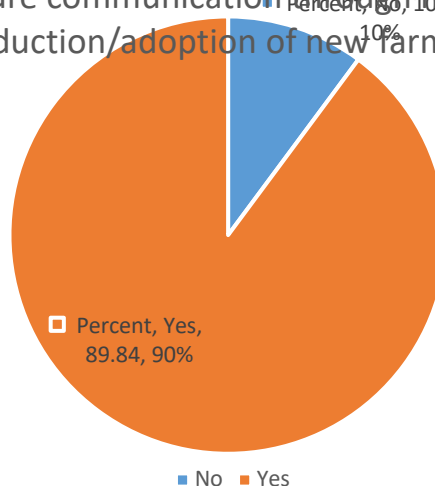
- **High Relevance of Agricultural Knowledge**: The majority of farmers find the agricultural knowledge gained through mass media to be relevant.

- **Meeting Information Needs**: Despite challenges, the majority of respondents feel that mass media sources generally meet their information needs.

Table 5; Do you think that farm/Agriculture communication through media can boost agricultural production/adoption of new farming practices?

Response	Freq.	Percent	Cum.
No	39	10.16	10.16
Yes	345	89.84	100
Total	384	100	

farm/Agriculture communication through media can boost agricultural production/adooption of new farming practices (%)

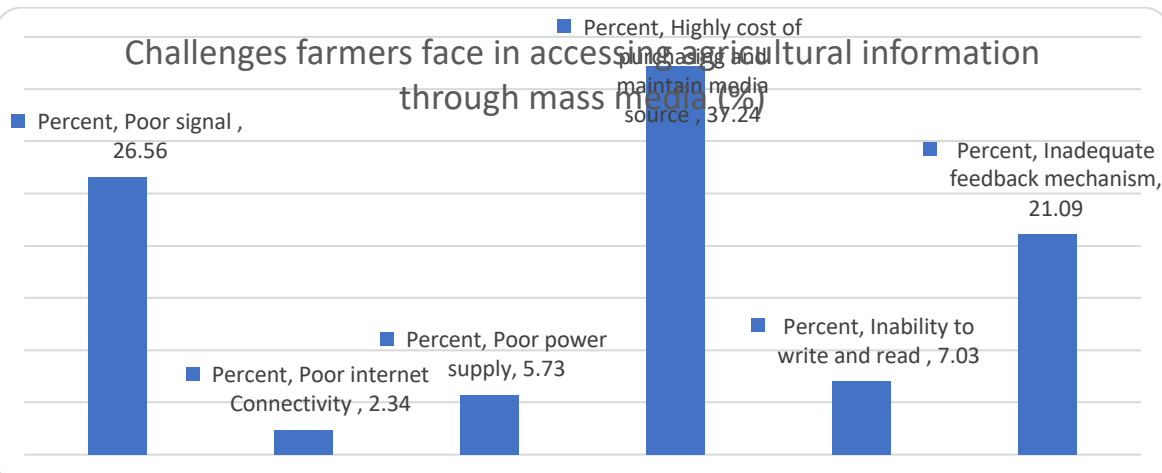


More than 89 percent where as 345 out of 384 farmers who were correspondents on this research confirmed and agreed that the agricultural communication which is done through the media helps a lot on boosting the agricultural production even on adopting the new farming practices for the better production as; the ****Positive Perception (89.84%):**** The majority of respondents believe that farm/agriculture communication through media can positively impact agricultural production and the adoption of new farming practices.

Table 6; Challenges farmers face in accessing agricultural information through mass media

Response	Freq.	Percent	Cum.
Poor signal	102	26.56	26.56
Poor internet Connectivity	9	2.34	28.91
Poor power supply	22	5.73	34.64
Highly cost of purchasing and maintain media source	143	37.24	71.88
Inability to write and read	27	7.03	78.91
Inadequate feedback mechanism	81	21.09	100
Total	384	100	

Challenges farmers face in accessing agricultural information through mass media (%)



Farmers face many challenges on receiving the proper agricultural information and knowledge but according to the results above; the high cost of the purchasing and maintain media source, poor signal during acquiring the information along with the inadequate feedback mechanism were confirmed by the famers who participated in this research that they are the most challenges the faced;

****Poor Signal (26.56%):**** A significant proportion of farmers face challenges due to poor signal quality, impacting their

ability to receive agricultural information through mass media.

****Poor Internet Connectivity (2.34%):**** While a relatively small percentage, poor internet connectivity still contributes to hindrances in accessing agricultural information, particularly in areas with limited connectivity.

****Poor Power Supply (5.73%):**** Inconsistent power supply is another notable challenge, affecting the usability of electronic media sources.

****Highly Cost of Purchasing and Maintaining Media Source (37.24%):**** Financial constraints are a major concern, suggesting that the cost of media sources is a significant barrier for farmers.

****Inability to Write and Read (7.03%):**** A noteworthy percentage of respondents face literacy issues, indicating a potential gap in information accessibility for those with lower literacy levels.

****Inadequate Feedback Mechanism (21.09%):**** A substantial portion of farmers feels that there is a lack of effective mechanisms for providing feedback on the information received, highlighting the importance of two-way communication.

Table 7; CHI-SQUIRE RESULTS

Variable	df	X ²	P-value
****Source of mass media used by farmers in accessing agricultural information*Which media broadcasts more innovative methods on farming?	99	1000	0.0000
Source of mass media used by farmers in accessing agricultural information*Frequency distribution of relevance of agricultural knowledge farmers' gain through the mass media	6	3.663 2	0.722
***Source of mass media used by farmers in accessing agricultural information*Does these mass media sources meet the farmers information need?	3	17.04 78	0.001
***Source of mass media used by farmers in accessing agricultural information*Do you think that farm/Agriculture communication through media can boost agricultural production/adoption of new farming practices?	3	12.67 13	0.005
***Source of mass media used by farmers in accessing agricultural information*Challenges farmers face in accessing agricultural information through mass media	15	64.68 67	0.0000
Which media broadcasts more innovative methods on farming?*Frequency distribution of relevance of agricultural knowledge farmers' gain through the mass media	6	2.1659	0.904
***Which media broadcasts more innovative methods on farming?*Does these mass media sources meet the farmers information need?	3	21.51 45	0.0000
**Which media broadcasts more innovative methods on farming?*Do you think that farm/Agriculture communication through media can boost agricultural production/adoption of new farming practices?	3	9.6573	0.022
***Which media broadcasts more innovative methods on farming?*Challenges farmers face in accessing agricultural information through mass media	15	62.87 35	0.0000
***Frequency distribution of relevance of agricultural knowledge farmers' gain through the mass media*Does these mass media sources meet the farmers information need?	2	80.6535	0.000
***Frequency distribution of relevance of agricultural knowledge farmers' gain through the mass media*Do you think that farm/Agriculture communication through media can boost agricultural production/adoption of new farming practices?	2	83.412	0.0000

***Frequency distribution of relevance of agricultural knowledge farmers' gain through the mass media*Challenges farmers face in accessing agricultural information through mass media	10	48.0615	0.0000
***Does these mass media sources meet the farmers' information need?*Do you think that farm/Agriculture communication through media can boost agricultural production/adoption of new farming practices?	1	27.5669	0.0000
***Does these mass media sources meet the farmers information need?*Challenges farmers face in accessing agricultural information through mass media	5	32.3236	0.0000
***Do you think that farm/Agriculture communication through media can boost agricultural production/adoption of new farming practices?*Challenges farmers face in accessing agricultural information through mass media	5	15.3556	0.009

*** (sig. at 1%), ** (sig. at 5%) and * (sig. at 10%)

The CHI-SQUIRE results show the statistical relationships between different variables. Here are some key findings;

- **Source of Mass Media Used and Broadcasting Innovative Methods:** The chi-square test results ($\chi^2 = 1000$, $p = 0.0000$) indicate a strong association between the source of mass media used by farmers and the perception of which media broadcasts more innovative farming methods.
- **Source of Mass Media Used and Relevance of Agricultural Knowledge:** There is no significant association ($\chi^2 = 3.6632$, $p = 0.722$) between the source of mass media used and the frequency distribution of the relevance of agricultural knowledge gained by farmers.
- **Source of Mass Media Used and Meeting Farmers' Information Needs:** A significant association ($\chi^2 = 17.0478$, $p = 0.001$) exists between the source of mass media used and the perception of whether these sources meet farmers' information needs.
- **Source of Mass Media Used and Perception on Boosting Agriculture:** Significant associations ($\chi^2 = 12.6713$, $p = 0.005$) exist between the source of mass media used and the perception of whether farm/agriculture communication through media can boost agricultural production/adoption of new farming practices.
- **Source of Mass Media Used and Challenges Faced:** A highly significant association ($\chi^2 = 64.6867$, $p = 0.0000$) exists between the source of mass media used and the challenges farmers face in accessing agricultural information through mass media.

The results suggest that the choice of media source is significantly associated with farmers' perceptions and challenges in accessing agricultural information.

CONCLUSION AND RECOMMENDATION

Based on the study's findings, it can be said that while newspapers, television, and radio are all forms of mass media in the area under investigation, radio was the one that respondents accessed the most frequently. In general, the respondents' radio-based agricultural information was pertinent to their farming endeavors. However, the respondents' access to agricultural information via newspapers and television only somewhat correlated with their farm activities. Farmers encountered difficulties getting agricultural information from the media due to a weak signal, the high cost of buying media sources, and a deficient feedback system. Nonetheless, the following suggestions are offered to enhance accessibility and boost the efficiency of the mass media in distributing agricultural information for agricultural growth in the research area: (i) For instance, the Morogoro region's agricultural extension services require reinforcement, and the Ministry of Agriculture should increase its use of radio and television to provide information to farmers in the study area. To handle agricultural programmes, there is also a need for more skilled presenters who are informed about agriculture.

(ii) Farmers will be informed and able to schedule time to listen to and watch such programming if radio and television agricultural programmes pertinent to their operations are adequately publicized.

(iii) It is advisable to support the creation of listening groups or farm radios for rural farmers.

(iv) In order to make contemporary agricultural mass media sources and facilities accessible and usable in these areas, the government should encourage rural electrification and enhance the rural transport infrastructure.

(v) In a same vein, in order to increase farmers' access to information, the government must provide more print media to rural areas.

(vi) Media owners should make sure that more agricultural programming, particularly in the nights, is aired on radio and television, and that the programming is scheduled at times that are convenient for farmers.

Above all and on top of that, in summary; the government of Tanzania should first, increase internet connectivity to enable better access to information about agricultural policy. Secondly, create free WiFi hotspots in the villages to facilitate quick internet access. Lower internet costs, particularly for farmers and Enhance radios signals to ensure uninterrupted information reception, minimize noise, and highlight the role technology plays in obtaining agricultural information. Therefore, while farmers face challenges in accessing agricultural information through mass media, there is a strong positive perception of the impact of media on agriculture. Addressing challenges related to poor signal, cost, and literacy, and enhancing feedback mechanisms could further improve the effectiveness of agricultural communication through mass media. The choice of media source plays a crucial role in shaping farmers' perceptions and addressing their information needs.

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