



ASSESSMENT OF RADIO AND TELEVISION ROLE IN AGRICULTURAL INFORMATION TRANSFER AMONG FARMERS IN KATSINA-ALA LOCAL GOVERNMENT AREA OF BENUE STATE, NIGERIA



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Abstract: Before the advent of radio and television, information dissemination was one of the biggest problems agriculturists faced in informing and receiving feedback from farmers on agricultural innovations; their invention has made communication easier, especially among the rural farmers. The study assessed the role of radio and television in agricultural information transfer among farmers in Katsina-Ala local government area of Benue State, Nigeria. Simple random sampling technique was adopted in collecting data. Data were collected from primary source by survey using structured questionnaire administered on 144 respondents (farmers) selected randomly from four council wards. Data collected were analyzed and presented using descriptive statistics. Results revealed that 97.2% of the respondents listen to radio, 91.7% listen to agricultural programmes on radio, 69.4% spent at least one hour on listening to radio in a day. The results of the findings further reveal that 86.7% obtained information on fertilizer application through radio, 36.8% obtained information on rearing of improved breeds of livestock through television. 77.8% adopted insects/pest control based on information obtained through radio, 36.1% adopted rearing of improved breeds of livestock based on information obtained through television. On problems encountered from radio; 77.8% of the programmes presented were not respondents' interactive and 45.8% poor reception of television signals. It is recommended that agricultural programmes presented by radio stations should be made interactive and television booster station should be established in the area to enhance reception of television signals.

Keywords: Assessment, radio, television, agriculture, information, transfer, farmers

Introduction

Information needs, accessibility, utilization is dictated by circumstances man finds himself. The environment that people interact with from the cradle influences man in the process of achieving his ambition in the areas of economic, social, cultural and spiritual wellbeing. Information itself is not mobile but needs a vehicle of dissemination from one man to another and from place to place. Information has to be widely disseminated regardless of whether one is an urban or rural inhabitant. The medium of dissemination could be called a channel. Advancement in technology has made it possible for human beings to communicate easily irrespective of geographical location through the aid of telephones, telegram, fax, radiophone, television, e-mail, telex, internet, etc. (Issa, 1997).

Information is a valuable resource required in any society; thus acquiring and using information is critical and important activities in human existence. Information is used for different reasons. Some use it for health; advancement in knowledge, others for politics. Information is a vital resource which provides impetus for a nation's social, cultural, spiritual, political, economic, scientific, technological advancement and greater socio-political equity; efficient governance, power and fellowship. Thus, one can rightly point out that information has always played an important role in human life; hence, a basic human need (Muhammed, 1994).

Information means different things to different people. To some, it may be in form of news on radio or television and the print media; to others, it may be a medical report which may be used for taking health decision; to an investor, financial report of an organization is a vital information to decide whether to stake one's investment in such business or to divest; to some, is the stock analysis

and daily trading in the stock market. To law enforcement agents, information is a tool to carry out thorough investigation and absence of timely and up-to-date information could lead to loss of life and property. Information is now accepted as an important factor in the sustained development of any society because it reduces uncertainty, and enhances awareness of possible actions to take to solve problems. Lack of information is argued to act as a barrier to development because of importance of information provision in capacity building and empowering communities (Apata and Ogunrewo, 2010).

Mass media offer powerful channels for communicating agricultural messages and related information which can enhance the capacity building of farmers. Broadcast media have the ability to disseminate information to large audience efficiently; radio and television are most famous channels among farmers. The media is one of the best sources of spreading information about new technologies/innovations of agriculture among farmers and is faster than personal contacts. Communication technology is playing very essential role in creating awareness about different agricultural technologies among farmers (Nazari and Hassan, 2011).

Information is a critical economic resource when utilised, it is capable of increasing the knowledge state of an individual in decision making. Information is a processed data that assists individuals in making the right decisions to enhance and improve life. Transistor radio has been in use several decades before the invention of other information communication channels. Its existence could be dated back to the twentieth century (Popoola, 2009).

Radio and television are important media for diffusion of technical, systematic and scientific information to people. In countries where literacy level is very low especially in rural areas the choice of mass media for information

dissemination is very important. In this context, radio and television play a major role in transfer of modern agricultural technology to educated and uneducated farmers within a short time for farmer communities (Nazari and Hasbullah, 2008).

Television broadcasting has become the most pervasive means of information diffusion in many societies. It can disseminate information with lightning speed and impact, as well as infuse viewers with imagery and values in subtle, perhaps almost imperceptible manners. Television is one of the dynamic and prestigious medium of information dissemination owing to the fact that it delivers information in a dramatic audio and visual manner to an extensive and various audiences which makes it a much sought-after medium of information dissemination (Cassata and Asante, 1979). Television over the years is known for educating and informative roles and is majorly been applied to disseminate different types of information ranging from agricultural, political, religion, socio-cultural and often been used to facilitate teaching and learning. Television is an effective tool in expressing abstract concepts or ideas. Abstract concepts are usually produced and conveyed with words (Bates, 1998). Television plays significant role in creating awareness and knowledge about latest agriculture technologies information among farmers (Mahmood and Sheik, 2005).

The advent of radio and television have tremendously transformed the way information is disseminated, prior to its invention, people most especially in primitive African society had their peculiar ways of disseminating information such as the use of town criers and assembling people in strategic locations in the village such as market square to disseminate information to them. These means of information dissemination were associated with many problems including their inability to reach a large number of people outside the assembled place within a short period of time, how to manage a large crowd among others. In Nigeria, different signs and objects were used to disseminate information. The objects used had their own limitations. The advancement in information and communication technology has brought other means of information dissemination such as radio, television, internet, mobile phones, fax, telex and telegram among others (Familusi and Owoeye, 2014).

Mazher *et al.* (2003) assessed the rate of watching agricultural programmes on television in Ethiopia and found that 56.7% of farmers watched agricultural programmes on television, among the viewers, 11.1% watched agricultural telecasts frequently, 48.5% occasionally and 40.4% rarely. Familushi and Owoeye (2014) assessed the use of radio and other means of information dissemination among the residents of Ado-Ekiti, Nigeria and identified that 98% of the rural farmers obtained agricultural information from radio, while 85.7% obtained information on agricultural technologies from television. Mirani *et al.* (2002) compared the frequency of farmers obtaining agricultural innovations between radio and television in Pakistan, and rated television below average as an information source for the farmers. According to White (2008), as long as a preponderance of developing countries, especially Africans reside in rural areas and most of them are illiterate, radio is an invaluable medium that can speak to millions. Television broadcasts reach only those who are living in the urban areas and those who can afford to by a television set.

Mohammed (2013) studied coverage area of some selected television and radio stations in Ethiopia and discovered that the product of the press (newspapers, magazines, etc.)

“can be stopped at national frontiers but radio and television are not respecter of territorial limits”. Radio and television signals go across mountains and oceans with no difficulties. Thus, for developing countries especially those with mountainous and rugged terrains with very poor transportation facilities, radio is the best medium to reach the rural mass for all kinds of information. Rice and Akin (2003) pointed out the importance of relevance on radio and television to disseminate information, owing to their ability to remote areas and transcend the illiteracy barriers. Okwu *et al.* (2007) the affordability access and low cost of production of information has made radio a potential medium that can fill information needs of many farm families. The use of radio and television has resulted in heightening the level of public knowledge in different fields (Buren, 2000).

This study is aimed at examining the role of radio and television in obtaining agricultural information transfer among farmers within the study area.

Materials and Methods

Katsina-Ala is one of the 23 Local Government Areas (LGA) in Benue State, Nigeria. The LGA is located on Longitude 9.5° east and Latitude 9.5° north; it is bounded by Taraba State in the east, Buruku LGA in the west, Ukum and Logo LGAs in the north and Kwande with Ushongo LGAs in the South. It has an average land area of 812 square kilometres and a population of about 957,508 people (NPC, 2006). The population is made up of Tiv people as the majority, Etulo, Idoma, Igbo and others local tribes. It lies in tropical rainforest and open grassland with river Katsina-Ala passing through the entire LGA. The eastern part of the LGA consists of undulating hills known as Gasema hills. The Climate of Katsina-Ala LGA manifest in two distinct seasons, wet and rainy seasons; wet season starts in April to October and dry season begins in November to March, with an average annual temperature ranging from 32°C to 38°C and an annual rainfall of 1250 mm (Anon, 2005).

Most of the inhabitants of Katsina-Ala LGA are predominantly peasant farmers producing tuber crops (especially yam and cassava), vegetables, legumes, and cereal crops (like maize, rice, millet and guinea corn/sorghum). Katsina-Ala LGA has a large river with great potential for viable fishing, dry season farming through irrigation and inland water ways (NPC, 2006). Simple random sampling was adopted. Four council wards were purposefully selected based on their utilization of radio and television and 36 respondents were selected randomly from each of the council wards selected making a total of 144 respondents. The primary data were obtained through the use of structured questionnaire. Data for this study were analyzed and the objectives achieved using descriptive statistics.

Results and Discussion

Listening to radio

Results in Table 1 show that 97.2% of the respondents listened to radio, 2.8% do not listen to radio. Majority of the respondents (97.2%) listen to radio. Radio is one of the simplest and commonest ways of disseminating information to people in the rural areas. Radio is made in different forms; big, medium and small. Radio signals are received almost everywhere in the rural area, it is also affordable. The affordability and good signal reception of transistor radio has made it available in almost all the rural areas. Apart from that the cost of maintaining a small transistor radio is cheap which make it affordable by many

people. Farmers should be encouraged to listen to radio for information on agricultural innovations.

Watching television

Results in Table 1 indicate that the percentage of respondents who watched television is 30.6% and those that did not watch television is 69.4%. This is an indication that a few people in the area owned and watched television. Television is an audio-visual means of disseminating information; it combines both audio and visuals which make the audience to retain in their memory what has been shown on it several months after such a programme was presented. However its utilization in the study area was low compare to radio, television is not as portable as radio therefore its use is limited to the house, unlike radio which people move with it, do other things and at the same time and listen to it.

Listening to agricultural programmes on radio

Results in Table 1 reveal that the percentage of the respondents who listen to agricultural programmes on radio is 91.7%, while that of non-listeners is 7.6%. A high proportion (91.7%) of the respondents listen to agricultural programmes on radio, transistor radio is cheap and easy to maintain. Cheap and affordability nature of a transistor radio has made it to be utilized by many people. Also the presence of a private radio station in the study area which transmits some of its programmes in vernacular could also be one of the factors responsible for many respondents listening to radio programmes. This corroborates Okwu *et al.* (2007) who reported that radio is one of the medium in disseminating agricultural innovations to farmers in the rural areas. Farmers should be encourage to listen to radio for agricultural programmes, because by so doing they would obtain vital information concerning agriculture which would improve their farm productivity and raise their standard of living.

Watching agricultural programmes on television

Results in Table 1 indicate that the percentage of non-watchers of agricultural programmes on television is 63.9%, while that of watchers of agricultural programme is 36.1%. A major proportion (63.9%) of the respondents did not watch agricultural programmes on television. The cost of acquiring a television set is higher than a transistor radio. Apart from the cost, the absence of electricity in some parts of the study area hampers the use of television by rural farmers as most of the television sets cannot be operated without electricity, except for a few farmers who could afford to buy a generator. Similarly, the reception of television signals in the rural area is very poor unless it is complemented with a satellite disc/cable which could also be an additional cost to a farmer. Because of problems associated with the use of television for dissemination of agricultural information such as poor reception of signals, provision of satellite disc/cable, acquisition of generating set among others, its use is more concentrated in the urban centres than in the rural areas.

Hours spent listening to agricultural programmes on radio

Results in Table 1 show the duration and percentage of respondents that listen to Agricultural programmes on Radio as: 1, h 69.4%; 2, h 26.4%; 3, h 2.1%; none, 1.4%. A high proportion (69.4%) of the respondents spent at least 1 h listening to agricultural programmes on radio. This implies that due to good reception of radio signals in the study area many people listen to it. Radio is one of the fastest means of disseminating agricultural information to farmers, a transistor radio is affordable, people listen to radio and at the same time do other things, it is also cheap to buy and maintain. This confirms Okwu *et al.* (2007)

who stated that a radio set is affordable to be owned by everybody. Agricultural technology information meant for farmers should be disseminated through radio.

Table 1: Distribution of Respondents by frequency of obtaining Information on Agricultural Technologies through Radio and Television

Variables	Frequency	Percentage
Radio listening		
Listeners	140	97.2
Non-listeners	4	2.8
Television watching		
Watchers	44	30.6
Non watchers	100	69.4
Listening to agricultural programmes on radio		
Listeners	132	91.7
Non-listeners	11	7.6
Watching agricultural programmes on television		
Non-watchers	92	63.9
Watchers	52	36.1
Hours listening to agricultural programmes on radio		
1	100	69.4
2	38	26.4
3	3	2.1
None	2	1.4
Hours watching agricultural programmes on television		
1	66	45.8
None	50	34.7
2	20	13.9
3	8	4.9
Frequency of listening to agricultural programmes on radio		
Occasionally	60	41.7
Frequently	51	35.4
Rarely	31	21.5
Others (not at all)	2	1.4
Frequency of watching agricultural programmes on television		
Rarely	85	56.3
Occasionally	44	30.6
Frequently	19	13.2
Sources of information on agricultural technologies		
Fellow farmers	46	31.9
Electronic media	27	18.8
Agro-chemical dealers	25	17.4
Extension agents	22	15.3
The print media	18	12.5
Others	6	4.2

Hours spent watching agricultural programmes on television

Results in Table 1 show that the duration and percentage of respondents that watch agricultural programmes on Television as: 1 h, 45.8%; less than 1 h, 34.7%; 2 h, 13.9% and 3 h, 4.9%. A meagre proportion (45.8%) of the respondents spent at least 1 h watching agricultural programmes on television. This is an indication that despite several challenges encountered by people in obtaining agricultural information through television, people make use of television in obtaining agricultural innovations information. Most agricultural technology information obtained through television are usually practically demonstrated because, television is an audio-visual means of information dissemination so many farmers would not experience any difficulty in using such information obtained through television.

Frequency of listening to agricultural programmes on radio

Results in Table 1 indicate that the percentage frequency of the respondents in listening to Agricultural programmes on Radio as: occasionally, 41.7%; frequently, 35.4%; rarely, 21.5% and do not listen at all, 1.4%. A meagre proportion (41.7%) of the respondents occasionally listens to agricultural programme on radio. Most radio stations have their schedule of programmes without consideration to farmers' time. This is because farmers are not the only set of people who listen to radio; some agricultural programmes are presented when farmers are on their farm, making it difficult for them to listen and benefit from such programmes. Farmers too have their own schedule; therefore it would be proper for such programmes to be presented at a time convenient to farmers if such programmes are meant for their benefit.

Frequency of watching agricultural programmes on television

Results in Table 1 reveal the frequency of respondents in watching Agricultural programmes on Television stood at rarely, 56.3%; occasionally, 30.6% and frequently, 13.2%. A high proportion (56.3%) of the respondents rarely watched agricultural programmes on television. This implies that television programmes are not widely accessed by farmers due to either erratic power (electricity) supply or absence of electricity in many

villages for farmers who owned a television set. Also non-availability of local television signals in the study area has prevented many farmers from acquiring and watching agricultural programmes on television. High cost of a television set is another challenge; many farmers cannot afford a television set.

Sources of information on agricultural technologies

Results in Table 1 depict respondents' sources of information on Agricultural technologies as: those fellow farmers, 31.9%; electronic media, 18.8%; agro-chemical dealers, 17.4%; extension agents, 15.3%; the print media, 12.5% and others 4.2%. A greater proportion (31.9%) of the respondents obtained agricultural information through fellow farmers. This is an indication that farmers share agricultural information among themselves. Information obtained from farmers themselves is very reliable and does not cost anything, the more experience farmers share information among themselves and the less experience ones. Farmers should be encouraged to share agricultural information among them. Farmers should be encouraged to form associations which would serve as a platform for sharing agricultural and other information among the group members.

Table 2: Distribution of Respondents by Agricultural Technologies Introduced to Farmers through Radio and Television

Technology introduced	Radio		Television	
	Frequency	Percentage	Frequency	Percentage
Fertilizer application	124	86.7	19	13.2
Sowing methods	112	77.8	32	22.2
Sustainable agricultural practices	101	70.1	43	29.9
Planting of early maturing varieties of crops	104	72.2	40	27.8
Rearing improved breeds of livestock	91	63.2	53	36.8
Planting of diseases resistant varieties of crops	102	70.8	42	29.2
Insects/pest control	109	75.7	35	24.3
Methods of preserving farm produce	105	72.9	39	27.1
Time for sale of farm produce	108	75.0	39	25.0
Formulation and application of agrochemicals	98	68.1	46	31.3
Livestock feeds formulation	91	63.2	53	36.8

*Multiple responses

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The result in Table 2 show information on Agricultural technologies and the percentage of the respondents who obtained each through radio as follows: fertilizer application, 86.7%; sowing methods, 77.8%; sustainable agricultural practices, 70.1%; planting of early maturing varieties of crops, 72.2%; rearing improved breeds of livestock, 63.2%; planting of diseases resistant varieties of crops, 70.8%; insects/pests control, 75.7%; methods of preserving farm produce, 72.9%; time for sale of farm produce, 75.0%; formulation and application of agrochemicals, 68.1% and livestock feeds formulation, 63.2%. While for television, the information on Agricultural technologies and the percentage of the respondents who obtained each through Television are as follows: fertilizer application, 13.2%; sowing methods, 22.2%; sustainable agricultural practices, 29.9%; planting of early maturing varieties of crops, 27.8%; rearing improved breeds of livestock, 36.8%; planting of diseases resistant varieties of crops, 29.2%; insects/pests control, 24.3%; methods of preserving farm produce, 27.1%; time for sale of farm produce, 25.0%; formulation and application of agrochemicals, 31.3% and livestock feeds formulation, 36.8%. This is an indication that the use of radio for obtaining agricultural information is very high. Radio has many advantages over television in information

gathering among peasant farmers because of its portability and affordability also the present of a private radio station in the study has enhance its usage as most people would want to listen to programmes of their interest especially those that are presented in vernacular. Farmers should be encouraged to listen to radio for agricultural and other important information.

Result in Table 3 show the Agricultural technologies and percentages of respondents who adopted them through the use of radio as: fertilizer application, 72.2%; sowing methods, 75.1%; sustainable agricultural practices, 72.2%; planting of early maturing varieties of crops, 67.4%; rearing improved breeds of livestock, 63.9%; planting of diseases resistant varieties of crops, 73.6%; insects/pests control, 77.8%; methods of preserving farm produce, 70.1%; time for sale of farm produce, 71.5%; formulation and application of agro-chemicals, 70.8% and livestock feeds formulation, 62.5%. While for Television the Agricultural technologies and percentages of respondents who adopted them through the use of Television include: fertilizer application, 27.8%; sowing methods, 24.3%; sustainable agricultural practices, 27.1%; planting of early maturing varieties of crops, 32.6%; rearing improved breeds of livestock, 36.1%; planting of diseases resistant varieties of crops, 26.4%; insects/pests control, 22.2%;

methods of preserving farm produce, 29.9%; time for sale of farm produce, 28.5%; formulation and application of agrochemicals, 29.2% and livestock feeds formulation, 37.5%. Majority of the respondents obtained information on technologies adopted through radio. This implies that most of the farmers owned a transistor radio set, listened to it for agricultural information and utilized the information

obtained from it. Also the presence of a private radio station (Ashi Waves FM) in the study area has greatly enhanced farmers' information gathering on agricultural innovations disseminated through radio to improve their agricultural yields in particular and standard of living in general.

Table 3: Distribution of respondents by technologies adopted

Technologies adopted	Radio		Television	
	Frequency	Percentage	Frequency	Percentage
Insects/pests control	112	77.8	32	22.2
Sowing methods	109	75.1	36	24.3
Planting of diseases resistant varieties of crops	106	73.6	38	26.4
Fertilizer application	104	72.2	40	27.8
Sustainable agricultural practices	104	72.2	39	27.1
Time for sale of farm produce	103	71.5	41	28.5
Formulation and application of agrochemicals	102	70.8	42	29.2
Methods of preserving farm produce	101	70.1	43	29.9
Planting of early maturing varieties of crops	97	67.4	47	32.6
Rearing improved breeds of livestock	92	63.9	52	36.1
Livestock feeds formulation	90	62.5	54	37.5
*Multiple responses	*		*	

Table 4: Problems encountered by farmers in obtaining agricultural information through radio and television

Problems encountered	Radio		Television	
	Frequency	Percentage	Frequency	Percentage
Programmes not respondents interactive	112	77.8	32	22.2
Programmes in local language	107	74.3	25	17.4
Programmes presented when farmers were in their farm	102	70.8	42	29.2
Erratic electricity supply	80	55.6	64	44.4
Poor reception	78	54.2	66	45.8
All of the above	80	55.6	63	43.8
*Multiple responses	*		*	

Results in Table 4 reveal that the problems encountered by farmers and percentages of farmers involved in obtaining agricultural information from radio include: programmes in local language, 74.3%; programmes not respondents interactive, 77.8%; programmes presented when farmers were in their farms, 70.8%; poor reception, 54.2%; erratic electricity supply, 55.6% and all of the above, 55.6%. For television the problems encountered by farmers and percentages of farmers involved in obtaining agricultural information from Television include: programmes in vernacular, 17.4%; programmes not respondents interactive, 22.2%; programmes presented when farmers were in their farms, 29.2%; poor reception, 45.8%; erratic electricity supply, 44.4% and all of the above, 43.8%. Majority of the problems concerning obtaining agricultural innovation information on radio and television were programmes presented without consideration to listeners/viewers: (programmes not respondents interactive, programmes in local language and programmes presented when farmers were in their farm). This is a clear indication that either radio or television disseminating information on agricultural technology presented such programmes without consideration to listeners/viewers. Information in all aspects of life is very important, therefore radio and television stations should consider the most appropriate time when farmers would not be engaged in the farm so that farmers would benefit from programmes presented on both radio and television stations.

Conclusion

The advent of radio and television for information dissemination especially its application for transfer of agricultural technology information to farmers has enhanced communication among researchers, policy makers, farmers just to mention a few: radio and television are good channels of communication and an essential platform to transfer technology information to farmers. Based on the findings of the research, radio has significantly played an important role in agricultural technology information transfer and adoption. Information on several technologies was obtained by farmers through radio. About 97% of the farmers listen to radio, 91.7% listen to agricultural programmes on radio, 69.4% spent at least one hour on listening to agricultural programmes on radio and 86.7% obtained agricultural information through radio. Most of the problems encountered by the respondents were that radio and television disseminating the agricultural information was not listeners/viewers oriented.

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