

USING BROADCAST MEDIA TO TEACH NIGERIAN FARMERS MODERN AGRICULTURE: CASE STUDY OF NATIONAL AGRICULTURAL EXTENSION AND RESEARCH LIAISON SERVICES (NAERLS), ZARIA

Omenesa, Z. E. and Shittu, A. R.A.

Abstract

The article situates radio and television vehicles' usage institutionally in the Nigerian Agricultural Extension System. It discusses the radio and television vehicles' importance for teaching Nigerian farmers modern agricultural methods, including an overview of its origins in the country. The focus is on National Agricultural Research and Extension Liaison Services' (NAERLS) development of, as well as rationale and strategies for applying those mass media vehicles to teach modern agriculture. Included here is an examination of the organization's yearly countrywide communication assessment survey for 2004. Conclusions and recommendations on usage and requirements were presented.

Introduction

One major concern in the last three decades in Nigeria has been how to attain self-sufficiency in food production. One reason for this is the realization that despite Government's huge investment ; in agriculture the desired impact is not being felt due, partly, to ineffective technology transfers mechanisms. This has led to the introduction of numerous agricultural development programmes on technology transfer. The programmes are considered here under two major periods, which characterize the development of agriculture in Nigeria: the colonial, and the postcolonial periods.

The Colonial Period

During the colonial period, an effort was made at establishing basic institutions that supported agricultural development and gathering of scientific information through experimentation. One was an elementary extension service, which started in 1912 at Moor Plantation, Ibadan. Later, the Schools of Agriculture at Ibadan and Samaru, the Forestry Schools at Ibadan and the Veterinary Training School at Vom were established to train junior technical staff.

These agencies' functions were the promotion and distribution of new planting materials especially cash crop seedlings such as oil palm, cocoa, rubber, cotton, and groundnuts. Extension education was done through demonstrations in farm centres and personal contact with farmers. Expatriate officers working in Nigeria then had the responsibility both for research and extension work (Raza et al., 1991). Although, much scientific information was accumulated during this period, agricultural extension performed below expectation. This is because, apart from creating awareness on improved technologies among peasants on export crops to a certain extent, technological change in agricultural practices resulting from the extension efforts was slow and unimpressive (Atala and Abdullahi, 1988).

The Post-Colonial Period

At independence, the then Western Regional Government embarked on Farm Settlement Schemes to entice young school leavers to farming, facilitate extension work and raise food production. More of these were established in the East and Mid-West in the early 1960s. These schemes failed principally because of mismanagement. The methods of extension were usually ad-hoc in nature. There was little guidance available on its contents, presentation or means of execution. The then regional ministries of agriculture provided the main extension services to farmers in Nigeria this was followed by other extension approaches in the 1970s, when several institutions were established to perform agricultural extension functions. This was the era of the National Accelerated Food Production Programme (1974), the River Basin Development Authorities (1975) and the Operation Feed the Nation in 1976. Three years later the Green Revolution Programme was launched. These programmes were to provide subsidized agricultural inputs to farmers. The extension worker did more than advising on agricultural matters, but also handled input supplies and in

some cases credit administration. Upon this, several unsuccessful extension-training approaches which included pre-season, World Bank assisted project that led to the introduction of Agricultural Development Projects (ADPs) were offered. Due to the weaknesses of the previous systems, the training and visit (T & V) extension system was adopted 1986. This involves a systematic training programme for the Village Extension Worker (VEW) combined with frequent visit to farmers' fields. An important feature in the system is the area of research extension linkage. Subject Matter Specialists (SMSs) and other ADP staff are kept abreast of research findings through participation in:

- a) Adaptive research activities, which were jointly undertaken by research and Extension staff.
- b) Monthly Technology Review Meeting (MTRM) where researchers from research institutes and universities train SMSs¹ on technologies required to solve identified problems combined with the review of such problems.

Alongside these activities, radio and television farm programme were broadcast to complement the field demonstrations and extension visits. Similarly, print media was used. An objective of the Nigerian government agricultural policy in the area of agricultural extension and technology transfer is to disseminate useful and practical information, ensure practical application of such knowledge and mobilize farmers' to improve their welfare (FGN, 1988). One strategy in achieving this objective is establishing communication channels among researchers, extension agents and farmers.

Statement of the Problem

This problem addressed in this paper will be the extent and use of radio and television broadcasts for teaching Nigerian farmers modern agricultural methods. Discussions of mass media application to inform rural people usually raise the problem of access and relevance of information; here the paper attempts an examination of those issues through documenting NAERLS's farming radio and television programs structure. In this regard, it will also examine NAERLS's relationships with similar programs in the states.

It is hoped that the discussions will facilitate understanding and wider spread in the vehicles' use to boost farming and consequently, food production. This is pertinent given the present strive to get youths to embrace agriculture due to urban unemployment, governments' increased attention to providing infrastructural facilities water, and the greater availability of agricultural loans. This issue is important because of the present increased number of radio and television stations - federal, state and privately run, requiring relevant rural programming since rural people constitute the largest population of the audiences. All states now have at least a radio and television stations. Also, the Federal Government's established in 2004/5 twenty NTA broadcast stations in Ife, Zaria, Kafanchan, Katsina, Oyo, Ogbomosho, and other local government headquarters across the country. Additionally, several frequency modulation (FM) radio broadcast stations have been established within the period.

Theoretical Framework

Innovation diffusion and the Two-step-flow theories are considered suitable to frame this papers discussion. Discussions on these theories and their defects for development follow in subsequent paragraphs. The diffusion theory suggests that communication channels should transfer new technological ideas (in this case agricultural) from development agencies (such as research institutes) to farmer and other users; it should mobilize the people to accept modern methods (Servaes, 1995). However, due to criticism that the orientation is top-down and one way, the theory has been extended to integrate two-way interpersonal communications in the society. Mowlana (1995), states that, diffusion theory's concern is the pattern and rate of spread of innovative ideas within different societal strata.

The limitations of diffusion theory are: First, it's wrong assumption that communication alone without appropriate socio-economic and political structural changes and support can generate agricultural development. Another is the fallacy that development is equal to higher productivity and, product consumption by the majority in a society. Lastly, is the theory's inherent notion that adoption of innovative agricultural knowledge is the key to greater production, even if only a few benefits.

The two-step flow theory involves messages from the mass media, which gets to opinion leaders who spread the information through interpersonal interaction to their followers. Here the opinion leaders' influences on their followers make them to believe and accept the leaders' advice" (Servaes, 1995). Subsequent extension of the theory shows that, it is a multi-step flow of information.. In addition to the

information flow from opinion leaders to followers, followers also usually inform opinion leaders of new ideas, which the leaders spread further to others who are ignorant of the ideas. The limitation in this theory is its media centeredness that leads to the view of communication as things the media do to people (Servaes, 1995).

The theory suggests that mass media are channels for creating awareness among the population about new agricultural knowledge/technique. Also, interpersonal communication is the best means to influence people to change their attitudes to and adopt new agricultural practices at the decision stage when they are making up their minds on whether or not to adopt.

Teaching Agriculture by Air

Electronic communication has become one of those wonders of the modern world, which has transformed the world into a global village. Its immediacy and use of both sound and vision have made distant teaching and learning a pleasure. Radio and television farm broadcasts qualities make them suitable channels for achieving the objective of teaching farmers new agricultural technologies. Omenesa (1992) observed that, radio programmes are usually timely and capable of extending the message to the audience no matter where they may be as long as they have receivers with adequate supply of power. The absence of such facilities as roads, light and water are no hindrance to radio reception. Similarly, difficult topography, distance, time and socio-political exigencies do not hinder the performance of radio. He also observed that, illiteracy is no barrier because the audience's own language is used to convey the messages. Various studies have shown that radio is effective in communicating with farmers (Yazidu, 1973; Voh, 1979; Bogunjoko, 1983; and Zaria, 1984).

Television on the other hand has dual advantage of vision and hearing. It has immediacy and gives the message as it happens in true life with all the vitality surrounding the occasion (Omenesa, 1994). Moemeka (1995) argues that, although people regard television as an entertainment channel for the rich, the rural people actually need the medium most. They need it the most for its technological capabilities to educate and promote development. It is suited for distance teaching and practical demonstrations. He argues that, despite high cost of television set that makes it unaffordable

to the poor; and the lack of electricity in rural areas, which may render its operation difficult in rural areas, it still has important roles to play in rural development. This is because government officials who control rural development policies and projects live in urban centres and television is a main medium that can influence them and the rich entrepreneurs who have capital to invest in agriculture or its downstream industries.

In addition to Moemeka's (1995), argument, many urban resident workers, businessmen and women as well as retirees operate farms in the outlying rural areas, growing commercial cassava, maize and keeping large poultry farms. Also because many Nigerian urbanites have relations in rural areas, using television, messages on agriculture will still get down to the rural dwellers through their urban relatives, according to multiple-steps information flow theory. Further, Moemeka (1995) recommended the use of integrated method of communication for rural development. The integrated method combines both mass media and interpersonal methods like extension agents, community development and agricultural development projects' methods. The advantage is that it eliminates the limitations inherent in the sole use of interpersonal channels like slowness in reaching large farm population and high costs. Also the integrated method eliminates deficiency of broadcast media such as its fleeting messages.

Onyibe and Omenesa (2002), found in a recent media consumption and preferences survey of an audience in Kano State, that listening to radio and watching television confirmed their perception about value of new technology in agricultural practices. They expressed awareness of new improved seeds like ICSV-400 sorghum variety, and Ife brown cowpea introduced to them by KNARDA. Further, they learnt about other high yielding and early maturing qualities and problems of different crops, popularized through radio.

The Nigerian Television coverage at 1983 is 80% of Nigeria population and 70% of Nigeria land mass (Adaba, 1984). By now, the coverage at the worst would have neared 90% due to the new broadcast stations that have emerged including: NTA, Kastina, KSTV, Kaduna Kano CTV, AIT Independent television, etc.

NAERLS Agricultural Broadcasting Functions

The National Agricultural Extension and Research Liaison Services (NAERLS) realised these advantages long ago and has tapped them to fullest advantage. The institute national mandates, assigns it the duty to produce agricultural radio and television programmes. The NAERLS Unit, which has been performing the job, is the Farm Broadcasts Programme. This programme was started in the late 1960's, when the radio broadcast was introduced for disseminating agricultural information in the northern states. The messages relayed mainly in Hausa were well received by the farming families most of which had transistor radio sets. In all, six programmes in Hausa and one in English have been developed and aired through FRCN Kaduna. NAERLS radio programmes are received in Nigeria and neighbouring West African countries. The programmes are produced every week, and last thirty minutes each. They include Noma Karkara in which farmers' questions are answered; Mu Koma Gona: Filin Manoman, also for answering farmers' questions; filin Kungiyoyi Manoma, a programme designed to educate farmers on how to organise clubs and societies; Noman Zamani and Kiwoce - kiwoce which is targeted at livestock farmers. The English language programme is "Down to Earth". The messages sensitised farmers to the need to adopt modern agricultural practices. This helped extension agents who had face-to-face contact with the farming communities in explaining agricultural extension packages.

After NAERLS received the mandate to provide extension support services to the entire country the Farm Broadcasts Programme expanded its radio programmes to include other Nigerian languages. Presently, these are: Igbo, Kanuri, Nupe, Fulfulde, Yoruba, Pidgin English and English. To ensure that each language zone is adequately catered for in the programmes, each Zonal liaison office has a radio producer/broadcaster. They liaise with the Universities, Research Institutes, Polytechnic and ADPs in their zones to produce programmes that will serve their peculiar needs. Such programmes are then aired by the local radio stations.

Farm Broadcast in the States

This synergy between NAERLS and the other organisation and institutes has resulted in such radio programmes as Oba Lokele and liana fun Agbe broadcast from Ibadan for Yoruba speakers and Onye Oru Ubi (Igbo) and "Country Farmer"¹ (Pidgen English) produced by the South Eastern Zonal Liaison Office for Igbo and pidgin English audience. Meanwhile, plans have reached advanced stages for programmes to begin in the north Central and North Eastern Zonal Officers.

When television emerged; on the mass communication arena in Nigeria, the NAERLS was quick to seize the golden opportunity to make its farm broadcasts meet the challenges of the day. Since 1972, NAERLS has been producing television programmes in Hausa. The first of such programmes for disseminating information on improved farming practices was Noma Yanke Talauchi, which hits the airwaves through NTA Kaduna. Many programmes on field crops, livestock, fisheries and home economics have been produced under this title. NAERLS Farm programmes, are now broadcast on NTA stations in Kaduna, Kano, Katsina and Minna broadcast NAERLS Hausa programmes weekly. Apart from agricultural programmes for television stations, the institute provides video coverage for other research institutes.

Field Situation Assessment of Agricultural Programme Production in Nigeria

The agricultural radio and television programme production are problem solving oriented. Logically all programmes produced are based on the outcome of seasonal field agricultural production assessment in Nigeria. The 2004 wet season assessment was jointly conducted by scientists from NAERLS and Project Coordinating Unit (PCU) from 22nd September - 6th October 2004. The purpose of the survey was to assess the performance of the wet season agricultural production with specific reference : crop and livestock performance, conditions affecting technology transfer, adoption and constraints to agricultural production. Twenty-seven states and the FCT were covered for the study using a combination of Rapid Rural Appraisal techniques, interview schedules and structured questionnaire. The study teams closely worked with Ministry of Agriculture and ADP officials to collect and screen data before final collation.

Results of Farm Broadcast Assessment

In the case of agricultural media assessment, the use of radio and television programmes was found to be an important source of getting information across to farmers. Table 1, presents the various radio and television programmes produced and aired in the states. Twenty-six of the 28 state ADPs and FCT (92.86%) produced farm-related radio programmes. Thirty of the 36 (83.33%) radio programmes are produced in local Nigerian languages and mostly aired in State radio stations while Katsina Agricultural and Rural Development Authority (KTARDA) airs its programmes in both State and Federal radio stations. Twenty-three out of the 29 ADPs television programmes (79.31%) are produced in local Nigerian languages and broadcast on state television stations. It was found that farmers and other listeners tended to understand the Nigerian language programmes better. Fewer radio programmes were produced in 2004. The number was 38 compared to 40 in 2003. However, more (29) television programmes were produced in 2004, compared to 22 produced in 2003.

Facilities for mobile video viewing and television viewing centres were also investigated. Seventeen (17) ADPs have mobile viewing facilities for weekly or monthly shows for farmers. In all, 18 ADPs have TV viewing centers, with the number varying from 6 in FCT to 260 in Adanawa State. Among the major problems reported to be affecting farm broadcast are lack of funds, lack of editing machines (Nasarawa), functional vehicles (Akwa Ibom), and high charges for airing radio and television programmes. Others were lack of mobile training poor electricity supply to rural areas, and inadequate training of maintenance personnel, and consequent lack of repairs of broken down equipment.

Recommendations and Conclusion

In view of the present broadcast stations commercialization and the Federal Government policy on food security, it is suggested that both federal and state governments provide special allocation in agricultural budget each year to ADPs for use to operate their agricultural broadcast programmes. This has become necessary because the extension worker depends on the use of electronic media especially radio to reach most members of his audience who may live in very remote and not easily accessible area. Further, it is recommended that more empirical research be conducted on farmer's reception and use of these media. This is to determine the programmes listenership / viewership profiles as well as farmer's views on the relevance of the contents. The information will further enlighten media producers on appropriate packaging of the learning materials.

The paper has examined the NAERLS perspective of the broad historical process culminating in using agricultural broadcast programmes to teach farmers modern agricultural techniques in Nigeria. A national field survey assessment discussed in the paper reveals that using the broadcast approach to reach farmers have become widely accepted institutionally, nation - wide. That television's usage in this regard seems to be increasing is noteworthy because of its recognised educational capabilities. The farmers reception of and learning from the approach discussed here appears to be high and justifies suggestion for the expansion of the approach in Nigeria.

Table 1: Farm Broadcast Programmes in the State ADPs

State	Radio			Television		
	Name of	Producer Station	Airing Station	Name of Programme	Producer Station	Airing Station
Abia	Radio farmer	ADP	BCA, Umuahia	-	-	-
Adamawa	Noma Yanke Talaucci	ADADP	ABC Yola	Noma arziki Tushen	ATV	ATV Ola
Akwa Ibom	The farmer 34 Otion wan 33	AKADEP	AKBC UYO	The farmer 3	AKADEP	NTA, Uyo
Anambra	Radio farmer	ASADEP	ABS(FM&AM)	The farmer	ASADEP	ABSTV

Bauchi	A koma gona	BSADP BSADP	BRC Buachi FRCN Kadoka	A koma gona Noma	BSADP BSADP	NTA Bauchi
--------	-------------	----------------	---------------------------	---------------------	----------------	---------------

	taushe aiziki			Taushen Arziki		BATV Bauchi
C/River	Fellow farmers	CRADP	CRBC, Calabar	-	-	-
Edo	Farming Hints	Edo ADP	BBS, Benin	Better farming	EDOADEP	Edo Broadcast Service
FCT	Agric-scope Filling Amfani San manoma	FCT ADP '' ''	FRCN Abuja '' ''			
Imo	Radio Farmer	ADP	IBC Owerri	Tele-farmer	ADP	ITV Owerri
Jigawa	Jagorar Manoma	JARDA	FRCN Kaduna Radio Jigsaw	Jagorar manoma	JARDA	NTA -, Dutse
Kaduna	Ku saurara manoma	KADP	FRCN Kaduna	Documentary Profit	KADP/NAERLS	NTA, KSTV, DITV ; Kaduna .
Katsina	Kaatau Sarkin Noma	KTARDA	Katsina State Radio FRCN Kaduna	NA DUKE	ADP	Katsina State TV NTA Katsina

Table 2: Farm Broadcast Programmes in the State ADPs

State	Radio			Television		
Kebbi	Don manoma Albarkana cikin Kasa	KARDA	KB FRCN Kaduna	Dandalin Jiran Rabo Dandalin Manoma	KARDA KARDA-I FAD	KBTv, Birnin Kebbi KBTv '' a
Lagos	Boluyo	LSADP	Radio Lagos 107.5	Documentary	LSADA	LTV, AIT
Nassarawa	Noma Yanke Mallam Nagona	NADP NADP	FM-Radio NBS	Noma Tauchen Arziki	PADP	NBS-TV Lafiya
Niger	Noma Tushen ceriki Amfani faraticiku Enude bara Naduke Tsharaciniki	ADP ADP	Radio Minna Bida Station Radio Minna	Nduke Estrorinicki	ADP ''	NTA Minna

Ogun	Abeafokosoro	OGADEP, ABK	OGBC,AM	Agboelere	OGADEP, ABK	OGTV, Abeokuta
Ondo	Ise Agbe Agbe Agbe Arokobo dingbe Boloyo	OSRC OSRC ADP	OSRC, AM, Akure OSRC, AM, Akure OSRC, AM, Akure	Ise Agbe Obalagbe Agbe-Asiko	ADP ADP ADP	NTA Akure OSRE TV Akure OSRC TV Akure
Oyo	Agbeloba O-Y-O	OYOADP OYOADP	Radio O-Y-O FRCN Ibandan	Ejekaroke	OYO ADP	BCOS TV, Ibadan
Plateau	Don manoma	FADP	PRTV Jos	Noma Taushen Ariziki Noma Jari	PADP PADP	PRTV-Ray Field PRTV Jos
Rivers	Farmers Guide	RS/ADP	Radio Rivers	Agricultural Today	R/STV & ADP	R/STV, PH
Taraba	Noma Tsohon ciniki	Taraba ADP	TSBS	Noma Tushin Arziki	Taraba ADP	TTV
Yobe	Zauren manoma	ADP	YBC, Damaturu	Noma Taushen Ariziki	ADP	Yobe TV,;; Damaturu
Zamfara	Filin Zamfara Project	ZADP	Zamfara Radio Gusau	Jagoran Mano	JARDA	NTA Dutse

References

- Chekwendu, D.O. and Omenesa, Z.E. (1997). Financial Implication of Radio and Television Agricultural Broadcast in Nigeria. *Journal of Agricultural Extension* /(I), 9-16.
- Chikwendu, D. O. et al (1997). Evaluation of the Effectiveness of Extension Communication Channels for Disseminating Information on Improved Farm Practices to Farmers in Nigeria: NAERLS Research Report.
- McQuail, D. (2000). *McQuails Mass Communication Theory*. 4th ed. London: Sage.
- Moemeka, A.A. (1995). The mass media and sustenance of Rural Development. In Okigbo, C. (Ed.), *Media and sustainable development*. Nairobi: ACCE. Pp 133 - 187.
- Mowlana, H. (1995). Communications and Development Everyone's Problem. In Okegbo, C. (Ed.), *Media and sustainable Development*. Nairobi: ACCE. Pp 26 - 53.
- NAERLS and PCU Report (2004). *Field Situation Assessment of 2004 Wet Season Agricultural Production in Nigeria*. NAERLS, ABU., Zaria.
- Omenesa, Z. E. (1992). The Effect of Radio on Agricultural Development in the Northern States of Nigeria. In *proceedings of the Workshop on Recent Development in Cereal Production in Nigeria*. Durba Hotel, Kaduna.
- Onyibe, J.E. and Omenesa, Z.E. (2002). An audience survey in Kano State. In *Agricultural Information Dissemination*. Zaria: NAERLS.
- Servaes, J. (1995). Communication for Development in a Global Perspective. In Okegbo, C. (Ed.), *Media and sustainable development*. Nairobi: ACCE pp 133 — 187.

