

*Full Length Research Paper*

# Assessment of mass media performance in agricultural information dissemination to rural farmers in Girei Local Government Area of Adamawa State, Nigeria

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Accepted 11 June, 2018

## Abstract

This study assessed mass media performance in agricultural information dissemination to rural farmers in Girei Local Government Area of Adamawa State, Nigeria. The specific objectives of the study were to: identify the socio-economic characteristics of the respondents; examine the languages used by mass media stations in broadcasting agricultural programmes; assess the performance of mass media in agricultural information dissemination; identify the respondents' preferred languages for receiving agricultural information; and, identify the factors militating against mass media performance. Multistage random sampling procedure was employed in the selection of 115 farmer respondents and purposive sampling technique was used to select one respondent from each of the five mass media involved in the study. Descriptive statistics (frequencies, percentages and means) and the Likert-type rating style (a 5-point rating scale) were employed in the analyses of the data generated. The major findings indicate that the performance of Radio Gotel (RG) was the only one rated as good. The performances of the rest of the mass media were all rated as bad, with the exception of the Adamawa Broadcasting Corporation, the performance of which was rated as very bad. The most preferred languages identified for receiving agricultural information are Hausa and English as indicated by 47% and 30% of the respondents respectively. Some of the major problems identified are adequate funding for agricultural programmes; erratic or sometimes lack of electricity supply. It was concluded that limited number of days for which agricultural programmes are being featured and the languages (English and Hausa) used in the dissemination of agricultural information were insufficient, and this translates to low agricultural productivity. The major recommendations made were: mass media stations should also broadcast agricultural information in native or indigenous languages of the respondents. The number of days for which agricultural information is disseminated per week should be increased to at least a minimum of three days per week by all the mass media stations studied. Extension workers should create awareness on the use of computer to promote computer literacy. Government needs to improve power supply to enable the mass media to perform effectively. Farmers should imbibe the use of the Global System for Mobile communications (GSM) in accessing farm information.

**Keywords:** Analysis, mass media, performance, agricultural information dissemination, rural farmers.

## INTRODUCTION

Information and communication are twin indispensable ingredients required for effective transfer of agricultural technologies. For farmers to benefit from such technologies, they must have access to information

about them in order to adopt same. One of the major functions of agricultural extension is to make use of different approaches and methods in transferring information on agricultural technologies to the endusers.

Mass media channels in agricultural information dissemination are generally very essential and effective in reaching a large number of audience in a very short time. They are very important sources of agricultural information to farmers, and they also constitute a method of notifying farmers of new developments (Ani *et al.*, 1997). According to Raufu (2003), mass media are the modern means of giving information to a large number of people. The mass media channels include radio, television and internet, etc. and others which are capable of transmitting messages to a large number of audience at the same time.

In Nigeria, various communication media are being used to transmit agricultural information to farmers in line with the national policy on agriculture. The communication media include radio, television, the internet, magazines, pamphlets and newspapers, among others (Dare, 1990). Yawson *et al.* (2010) noted that mass media (electronic and print) are playing very important roles in creating awareness about new agricultural technologies among farmers. In developing countries such as Nigeria, latest mass media have made their place for backing up the agricultural sector through extension activities (Qamar, 2006). Among other sources of information, radio and television constitute the highest preference for information dissemination (Okwu and Dauda, 2011). Radio, for instance, is a popular medium for information as well as attitude change (Ray, 2003). Omenesa (1997) also observed that radio programmes are usually timely and capable of extending messages to the audience no matter where they may be as long as they have a receiver with adequate supply of power.

Many mass media channels, including both electronic and print, are available in Adamawa State. However, many farmers in the rural areas seem to be lagging behind in accessing information about recent improved agricultural practices. This lack of awareness about or untimely access to agricultural information by rural farmers could be blamed largely on the performance or otherwise of the mass media stations existing in the state than on extension workers who largely depend on the far less effective face-to-face method of information transfer. Since majority of the rural farmers in Adamawa State are illiterates, it is expected that they will rely more on electronic mass media than the print. This narrows the concern for whether information is or is not being adequately communicated in a way that rural people will benefit maximally from the agricultural programmes being broadcasted by the existing mass media channels in the state. It is against this backdrop that this study was designed to assess the performance of selected mass media in the state.

### Statement of the Problem

Agricultural technologies are key to improved agricultural production anywhere in the world. One of

the major ways this great benefit can be achieved is when the farmers, especially those in the rural areas, adopt the innovations and continue to practice them until when there is another improvement that is better than the present. This improvement is possible when the farmers get awareness on such technologies and, better still, access and afford them. In this regard, information dissemination is another key factor. For the information to be adequately and timely disseminated, mass media are key players. This is because, in the past, much of the activities of extension workers were done through the face-to-face extension contacts, a tedious and time-consuming approach. There is therefore, the need to shift from this traditional method of reaching farmers to a more effective, faster and wider means to cover a wide spectrum of the clientele. This makes it imperative and apparent that the mass media scale up their efforts towards ensuring that programmes through which farmers can be reached and educated are broadcasted properly and timely. After all, they are established with the goal of informing, educating and entertaining their listeners, depending on which aspect is the need of the individuals concerned.

Taking the important role mass media play or are expected to play in the dissemination of agricultural information that can improve rural farmers' production and productivity, it is important to understand some important facts about their performance. This calls for consideration of the types of activities they carry out with regards to the conduct and broadcast of agricultural programmes that could make them to be said to have been effective or otherwise. At the moment, the various measures of performance by each of the selected mass media channels for this study and their ability to create positive effects in the farmers' production are not known. This is basically because there is no study conducted on this important topic in the study area, to the best of the knowledge of the researcher. There is therefore, a need to investigate this issue, especially considering the proximity of the study area to the state. Thus, the study was designed to assess the performance of the selected mass media channels in the study area. The following specific objectives were therefore, stated to elicit the required information:

### Objectives of the Study

The broad objective of this study was to assess mass media performance in agricultural information dissemination to rural farmers in the study area. The specific objectives were to:

- i. describe the socio-economic characteristics of the respondents;
- ii. identify the languages used in broadcasting agricultural programmes;

- iii. assess the performance of mass media in agricultural information dissemination in the study area;
- iv. identify the preferred language(s) used for receiving agricultural information; and,
- v. identify the factors militating against mass media performance in the study area.

### **Justification of the Study**

The findings of this study can help agricultural extension experts to understand the performance of mass media channels as compared to the expectations of the rural audience. They can also give very good ideas to the media houses in the state during their planning stages on how and what to do in order to contribute meaningfully to agricultural development and the knowledge, skills and attitude of rural farmers towards agricultural innovations in the study area. Results on the challenges and constraints affecting mass media channels' performance in the dissemination of agricultural information programmes can be addressed accordingly by all the stakeholders.

### **Scope of the Study**

The study considered only the rural farmers in Girei Local Government Area. It also involved only the electronic mass media that are within Adamawa State namely, the Adamawa Television (ATV), the Adamawa Broadcasting Cooperation (ABC), the Nigeria Television Authority (NTA), Gotel Television (GTV) and the Radio Gotel (RG).

## **METHODOLOGY**

### **The Study Area**

The study was conducted in Girei Local Government Area of Adamawa State, Nigeria. It is located on latitude  $9^{\circ}11'$  and  $9^{\circ}39'$  north and longitude  $12^{\circ}11'$  and  $12^{\circ}49'$  east of the equator. The study area has a land mass of about 2186 Sq. Km and has only one district. The socio-political arrangement in area comprises 10 electoral wards, namely Girei 1, Girei 2, Modire, Jera Banyo, Jera Bakari, Gereng, Tambo, Dakri, Damare and Wuro Dole. It is bordered by Song Local Government Area to the north, Furore Local Government Area to the east, while the River Benue acts as a physical boundary between the local government area, Yola-North and Demsa Local Government Areas. Girei Local Government Area has a population of 129,995 (NPC, 2006). The average annual rainfall is about 792mm. The natural vegetation in the area is the Sudan savannah type, which is characterized by light forest in the areas around the hills

and mountains. The main occupations of the people in the area are farming and rearing of animals. There are also some civil servants and small-scale traders in the area. The major tribes found in the area are the Fulani, Hausa and Bata. Its nearness to the state capital provides advantage for marketing of agricultural produce. Some major crops cultivated in the area are sorghum, maize, rice, groundnuts and cowpea.

### **Sources of Data and Methods of Data Collection**

Data for the study were obtained from primary and secondary sources. The primary data were collected with the aid of a validated, well-structured questionnaire, which was used to obtain the data from the respondents. The secondary information used were obtained from textbooks, journals and the internet.

### **Sampling Techniques and Sample size**

Multistage random sampling technique was employed in the selection of wards, villages and respondents. A proportionate (30%) sampling was made which constituted the number of the respondents that were involved in the study. In this case, in the first stage, five wards were selected out of the ten existing wards in the study area by randomly picking five out of the ten folded names of the wards. In the second stage, a total of 14 villages were selected randomly from the list of the entire villages existing in all the wards. In the third stage, 30% of the number of farmers from each of the lists obtained from each village were selected at random, giving a total number of 115 respondents. Purposive sampling was used in selecting the respondents who stood for their respective media stations which were considered in the study. Therefore, one staff member recommended by the management of each of the mass media channels was used as the respondent. Therefore, the responses to questions addressed to the media houses in the form of information or data were elicited from the responding staff on behalf of their respective media stations.

### **Methods of Data Analysis**

Frequencies, percentages, means and the Likert-type rating scale were used for data analysis. The descriptive statistics were used to address objectives i, ii, iv and v. Objective iii was analyzed using the Likert-type rating style on a 5-point rating scale. In this case, the media houses were scored based on the number of days they broadcast agricultural programmes in a week. Therefore, the performance of a media station that broadcasts up to 5 days or more in a week was rated as very excellent. Similarly, the performance of the medium that broadcasts 4 days, 3 days, 2 days and 1

day in a week was rated as excellent, good, bad and very bad respectively.

## RESULTS AND DISCUSSION

### Socio-economic Characteristics of the Farmer Respondents

The results depicted in Table 1 indicate that, majority (87%) of the respondents were males. The large difference between the two sex groups might be attributed to cultural and/or religious factors, which usually place women on the disadvantaged position in most parts of the northern states of Nigeria. This could be the reason why female participation in the study was relatively very low. The African Farmer (1994) and the results of studies conducted by Olayemi and Ikpi (1995) also support the reason believed to be the reason why only 13% of women were involved in this study.

Table 2 shows that majority (69%) of the respondents were married, 26% were single, while the widowed ones constituted only 5%. The results suggest that, agricultural activities are mostly carried out in the study area by married people, as compared to the number of the single and widowed respondents. The respondents have an average of age of 32.7 years. This age is usually considered as an active age category in most agricultural activities. The table also shows that 78% of the respondents had a minimum of secondary education and represent majority of them. The respondents therefore, have good educational backgrounds to access and process agricultural information disseminated from mass media stations. The distribution of the respondents' years of farming experience have an average of 10.9 years. This could be considered as an important asset for the respondents because it is quite a good period within which an individual must have had a lot of information on whatever crop they cultivate for their livelihood.

### Language(s) Used in Broadcasting Agricultural Programmes

Table 3 depicts the distribution of the types of languages used by the mass media channels in broadcasting agricultural programmes. The results show that ATV, RG and ABC use Hausa language in broadcasting their agricultural programmes, while the NTA and GTV use the English language. These results are in agreement with the report of the work of Oladele (2005) in which he reported that the English language was commonly used by mass media, though the dominance was not so prominent in the farm broadcast programmes. The results, however, disagree with the report of Egbokhare (2004) in which he reported that the languages used in broadcast in Adamawa State were only Hausa and Adamawa Fulfulde. This

disagreement of the reports could be attributed to the fact that within the space of thirteen years that separated the two studies much development and changes have taken place in the state in particular and the country in general. Therefore, the increase and availability of technology in recent years and the migration of people from various places might have necessitated the use of English which in the past years was not much in use.

### Mass Media Performance in Agricultural Information Dissemination

Table 4 depicts the number of days the mass media houses feature agricultural programmes in a week. Of all the mass media channels studied, Radio-Gotel is the only one that features agricultural programmes for three days in a week. This performance is rated as good. This is because, the farmer audience has the opportunity to listen to agricultural programmes on one of the three in a week. Even in the event that he misses the first programme, he still has two other chances to hook up. Even if he misses two broadcasts he can still prepare to listen to the programmes on the one left if he is really serious and interested. The more the number of days of airing agricultural information programmes the more the farmers' possibility of getting the opportunity to listen to programmes. This is supported by the findings of a study carried out by Dralega (2007), in which he noted that access to timely information is needed in each step of the agricultural process. ATV, NTA and GTV all feature agricultural programmes for two days in a week. Their performance is rated as bad. The ABC features agricultural programmes only once in a week and is therefore, rated as very bad. The implication of broadcasting agricultural programmes for a few number of days in a week implies that farmers may likely miss the programme(s) when, for instance, they are being broadcasted just for one or two days in a week, taking into cognizance the fact that they usually spend much of their times on the farm. The reason(s) why most of the mass media channels feature agricultural programmes only for few days could be attributed to lack of funds, among others, to pay for such agricultural programmes.

### Preferred Language(s) for Receiving Agricultural Information

Table 5 presents the respondents' preferences for the languages in which they are to receive agricultural information. The results indicate that the most preferred language by most (47%) of them is Hausa. The second most preferred language is English as indicated by 30% of the respondents. This is followed by Fulfulde (13%) and Bata (10%). The possible reason why majority of the respondents preferred the two popular

**Table 1.** Sampled Wards, Villages, Registered Farmers and Respondents.

<b>Wards</b>	<b>Villages</b>	<b>No. of Registered Farmers</b>	<b>No. of Respondents/Village</b>
WuroDole	Wuro- Dole	20	6
	Jambilamba	60	18
	Malam Madugu	20	6
Modire	Modire	30	9
	Jamboree	30	9
	Takunde	10	3
Damare	Bajabure	30	9
	Lainde	30	9
	Tappare	20	6
Gerei 1	Zumore	50	15
	Batare	20	6
	Sabon-Gari	10	3
Gerei 2	Maiturare	30	9
	Jarrenga	24	7
<b>05</b>	<b>14</b>	<b>384</b>	<b>115</b>

**Table 2.** Distribution of the Respondents Based on their Socio-economic Characteristics.

<b>Socio-economic Characteristic</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Mean</b>
<b>Sex</b>			
Male	100	87	
Female	15	13	
<b>Age</b>			<b>32.7</b>
18-28	11	10	
29-38	26	23	
39-48	41	36	
49-58	28	24	
Above 58	09	08	
<b>Marital Status</b>			
Single	30	26	
Married	79	69	
widowed	06	05	
<b>Level of Education</b>			
Primary	25	22	
Secondary	44	38	
Diploma	33	29	
First Degree	09	08	
Postgraduate Levels	04	03	
<b>Household Size</b>			<b>8.3</b>
1-5	52	45	
6-10	44	38	
11-15	17	15	
Above 15	02	02	
<b>Farming Experience</b>			<b>10.9</b>
1-5	27	24	
6-10	44	38	
11-15	44	38	

Source: Field Survey, 2017.

languages in spite of the fact that they are not their original or native languages could be attributed to the fact that by due to migration of people from one place to another the respondents comprise many different tribes

living together in the area. Those who prefer Fulfulde and Bata could be the actual indigenes of the study area. This suggests that majority of the people of the area cannot speak or understand the indigenous languages.

**Table 3.** Languages used in Disseminating Information.

Mass Medium	Language used in Broadcast
ATV	Hausa
NTA	English
GTV	English
RG	Hausa
ABC	English

Source: Field Survey, 2017.

**Table 4.** Performance of Mass Media Stations in Broadcasts.

Mass Medium	Number of Days/Week	Performance Rating
ATV	2	Bad
NTA	2	Bad
GTV	2	Bad
RG	3	Good
ABC	1	Very bad

Source: Field Survey, 2017.

**Table 5.** Preferred Language(s) by Respondents.

Preferred Language	Frequency	Percentage
Hausa	54	47
English	34	30
Fulfulde	15	13
Bata	12	10
<b>Total</b>	<b>115</b>	<b>100</b>

Source: Field Survey, 2017.

This position falls in line with the report of Moring (2007), which indicated that in the regions of Finland where Swedish is prominent, Swedish is used by the media, whereas in the places where the Finnish is the prominent language, especially in bilingual families, the media's language is Finnish. This result suggests that if agricultural programmes are broadcasted in Hausa language majority of the respondents will understand the messages and will also be highly interested in listening to the programmes at every time. That could be the reason why the Hausa language is preferred by the majority. However, if the broadcast is made in any other language, the implication is that not many of them will either be interested neither will they understand it.

Though the majority of the respondents have attained at least the secondary educational level, it is possible that some words or terminologies that may be used in the broadcasts may be too difficult to be understood by many of them, probably because of the fact that the respondents' levels of education are much lower than those of the media staff (Kawtrakul *et al.*, 2004). Considering the fact that these channels do not provide the opportunity for immediate interaction in terms of questions and answers, the listeners may benefit just minimally. Some of the respondents who prefer

receiving agricultural information in Fulfulde did indicate that they understand the language better than all the other ones. Still, those few of them who prefer the Bata language neither understand nor speak the Hausa or English because, probably, they are not much exposed.

### **Problems Militating Against Mass Media Performance**

The problems militating against mass media performance in agricultural information dissemination are presented in Table 6. The table shows that government interference is one of the problems militating against the performance of the ATV and the ABC. This problem may be rooted in the assumption that both the mass media channels are owned by the Adamawa State Government. They may be politically controlled and hence, affect their transmission of programmes. However, the NTA, GTV and RG have indicated that there is no interference by either the state or federal governments. The reason that could be responsible for this non-interference is that the NTA is owned by the Federal Government and so their transmission programmes are well-funded and are not interfered with by the state government.

**Table 6.** Problems Affecting Mass Media Performance.

<b>Problem</b>	<b>ATV</b>	<b>NTA</b>	<b>GTV</b>	<b>RG</b>	<b>ABC</b>
Government Interference	Yes	No	No	No	Yes
Lack of Sponsors/funding of Agricultural Programmes	No	No	Yes	Yes	No
Lack of Agricultural Professionals in the Medium	Yes	No	Yes	Yes	Yes
Language Barrier	No	Yes	Yes	Yes	No
Limited Coverage or Transmission/Range	Yes	Yes	Yes	Yes	Yes
Erratic Power Supply	Yes	No	Yes	No	No
Absence of or Weak Service Signals	Yes	Yes	Yes	Yes	Yes
Lack of Bureau Offices in Rural Areas	No	No	No	No	Yes
Wavelength Does Not Reach the Rural Areas	Yes	Yes	Yes	Yes	Yes

In addition, they may be less affected by the politics going on in the state since they are not directly under the control of the state government or its officials. On the other hand, the GTV and RG are not affected by either the state or federal governments because they are privately owned and are therefore, insulated from government interference. This implies that the two mass media houses (ATV and ABC) are owned by the Adamawa State Government and are therefore, being under the direct control of the politicians, especially those of them whose party produced the sitting governor.

Inadequate fund was also identified as a problem militating against the GTV and RG in the transmission of agricultural programmes. This is probably because they are privately owned stations and the government has no business in funding agricultural programmes in their stations. If the broadcast of such agricultural programmes is to happen, it requires the intervention of philanthropists and business tycoons since such stations are profit oriented. However, the ATV, NTA and ABC all indicated that lack of fund is not a problem. This is probably because they are government owned stations and are, therefore, being financed or funded from the government coffers. The results in the table also indicate that the absence of agricultural professionals in the mass media stations is a constraint in the dissemination of agricultural information for the GTV, RG and ABC. The reason for this could be attributed to the unwillingness of the private owners of the mass media (especially the GTV and RG which belong to an individual) to employ agricultural experts, since such agricultural personnel may not have been fully trained in mass communication. However, the ATV and NTA indicated that they do not lack professional agriculturalists that could be responsible for anchoring agricultural programmes. This is partially because the government is not much concerned with the immediate or short term benefits, but are rather interested in the long term impact and development of the agricultural and other social activities of the indigenes of the state. The results in the table further show that language barrier is one of the problems impeding the

performance of the NTA, GTV and RG. Egbokhare (2004) also reported a similar problem in the findings of his study, where he mentioned that the nature and types of language barriers include linguistic diversity and deficit. Kawtrakul (2004) also supported this finding when he reported that multilingual usage and translation into many native languages is necessary because the end users do not master the source language due to low level of education. The report of Oladele (2005) also supports the finding of this by indicating that a multilingual farm broadcast covers a prevalent location language and the other languages of those involved in farming activities within the coverage of the broadcast. This is a very important factor because majority of farmer listeners do not only find it difficult to understand the language (English) used in transmission, but they prefer receiving information in a particular language which, unfortunately, is not the one favored or used by the three mass media. On the other hand, the ATV and ABC do not experience language barrier problems probably because, being the state owned stations, the policy establishing those stations must have considered the language best understood by the majority of the indigenes of the state for whom the mass media are decisively established to serve. This is because the state has a more localized audience to consider when compared to the Federal Government and privately owned mass media stations who might have the entire nation in focus.

The ATV, NTA, GTV, RG and ABC all agreed that limited coverage and limited transmission range is a problem affecting their performance. However, ordinarily and logically speaking, this should not have been a problem considering the fact that if booster stations were stationed across the entire state, strong signals can be received in all the local government areas. Therefore, the fact that this is a problem could simply imply that the private owners, the state and federal governments might not have been really interested in widening the scope of coverage for reasons best known to them. May be, the decision not to provide booster stations could be associated with the reasons that may not be unconnected with some econ-

omic considerations. Erratic power supply was also indicated by the ATV and ABC as a problem that has a great bearing on their performance. Reliance of government owned stations on the Power Holding Company of Nigeria (PHCN) could be the reason why these stations experience this problem. However, the NTA, GTV and RG do not experience the problem of erratic power supply. This could be attributed to the fact that they already have alternative plans by providing standby generators which takeover work during the times that the national grid supply has failed due to incessant power outage. This good plan could be attributed to the fact that the NTA is a federal government television station, while the GTV and RG are private stations that have been adequately provided for. The Federal Government might be considered to be strong enough to fund the running of its television station. Likewise, the television and radio stations owned by individuals are also well funded since apart from the functions of informing, educating and entertaining their audience, they are profit oriented and so they have plans to ensure that those who patronize them are not disappointed. Thus, they do not consider interrupted power supply by the PHCN as a problem that can affect their performance.

## CONCLUSION

Majority of the respondents prefer the dissemination of agricultural information by the mass media to be done in Hausa Language. However, broadcasting farm information in various other languages including the native ones will cover more audience and yield better results. The ATV, NTA and GTV are not performing well in the dissemination of agricultural programmes. The RG's performance has been considered and rated to be generally good. Hausa language is the most preferred by most of the respondents and therefore, broadcast of agricultural information in that language will attract a greater number of audience and hence, bring about the desired changes in our farmers' production yields. Most of the respondents have no interest in mass media programmes as far as their agricultural production is concerned, mainly because the languages that are mostly used for broadcasting agricultural information programmes are not their most preferred languages if they were to be given the privilege of making a choice. Limited number of days of broadcast per week, limited network services and use of languages that are not really preferred by majority of the respondents are problems that have contributed immensely to the lack of awareness on agricultural technologies and hence, poor production.

## RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made:

i. Mass media stations should endeavor to increase the number of days they broadcast agricultural

programmes to at least a minimum of three days in a week.

ii. The mass media should broadcast agricultural information in farmers' native languages as well as in the two most preferred languages (Hausa and English).

iii. The mass media stations should work harder to ensure that they adequately cover all the rural and remote areas in their transmissions.

iv. Government, philanthropists and non-governmental organizations should come in to fund agricultural programmes in mass media stations.

v. Extension workers should create awareness on the use of computer to promote computer literacy, and farmers should imbibe the use of the Global System for Mobile communications (GSM) in accessing farm information.

vi. Government needs to improve power supply to enable the mass media to perform effectively.

## REFERENCES

- Agricultural Extension. Pp. 74-81.
- Ani, A. O., Undiandeye, U.C., & Anogie, D.A. (1997). The role of Mass Media in Agricultural Information in Nigeria. Educational forum. pp. 80-85.
- Dare, O. (1990). The Role of the Nigeria Mass Media, in National Rural Development and Transformation. Paper presented at the Media Forum organized by IITA Ibadan. pp. 3-11.
- Dralega, C. A. (2007). Rural women and ICT use in Uganda: communities of practice and communication practices for development. *Proceedings of the 3rd Christina Conference on Women's Studies and the 4th European Gender and ICT Symposium*. University of Helsinki, Finland held from 8-10 March, 2007. [www.en.Wikipedia.org/internet\\_in\\_Africa](http://www.en.Wikipedia.org/internet_in_Africa).
- Egbokhare, F. O. (2004). Breaking Barriers: ICT Language Policy and Development. University of Ibadan Postgraduate School Interdisciplinary Discourse 2003. Odua Printing & Publishing Limited Eleyele, Ibadan. Pp. 4-10.
- Egbokhare, F. O., Oyetade, S. O., Eno-Abasi, U. and Ahmed, H. A. (2001). Language Clusters in Nigeria. CASAS Monograph series, No. 12. Cape Town: South Africa. P. 12.
- Kawtrakul, A., Ninomiya, S., and Keizer, J. (2004). Supporting Multilingualism in Agricultural Information Access. Proceedings of the 4th International Conference of the Asian Federation of Information in Agriculture and The 2nd World Congress on Computers in Agriculture and Natural Resources, August 9-10. Bangkok, Thailand. Pp. 5-15.
- Moring, T. and Husband, C. (2007). "The contribution of Swedish-language media in Finland to linguistic vitality". *International Journal of the Sociology of Language*. Vol. 2007, Issue 187-188. Pp. 75-101, ISSN (Online) 1613-3668, ISSN (Print).



- Moring, T., Husband, C., Visapaa, C. L., Vincze, L., Fomina, J. and Manty, N. N. (2011). "Media Use and Ethnolinguistic Vitality in Bilingual Communities". *Journal of Multilingual and Multicultural Development*. 32 (2). Pp. 169-186. <https://doi.org/10.1080/01434632.2010.541918>
- Nwuzor, B. (2000): *Nature and the Role of Agricultural Extensions in Economic Development*. Enugu ECONAS Publishing. Pp. 48.
- Okwu, O. J. and Dauda, S. (2011): *Extension Communication Channels Usage and Preference by Farmers in Benue State Nigeria*. *Journal Agricultural Extension and Rural Development*. Pp. 88-94.
- Oladele O.I. (2005). *Learning Enhancement Factors Among Farmers in Mezam Division of North West Province of Cameroon*. *Australian Journal of Adult Learning*. 45(2): 223-237. National Population Commission (2006). *National Population Commission Census Report*.
- Omenesa, Z.E. (1997): *Rural Agricultural Radio in Nigeria. An over view of the National Agricultural Extension and Research Liaison Service (NAERLS) Farm Broadcasting*.
- Qamar, K. (2006). *Agricultural extension in Asia and Pacific: Time to revisit and reform*. In: Sharama, V. P. (ed.), *Enhancement of Extension System in Agriculture*. Asian Productivity Org. (Report of the APOSem. Enhancement of Ext. Systems in Agric. held in Pakistan, 2003. Pp. 15-20.
- Raju, P. (1993): *Book on Agricultural Communication Process and Methods*, Snoop Singh Sandu, publish for Oxford and I.B.H. Vol. 30 issue 2. Pp 138-740.
- Raufu, A. (2003): *Mass Media and the Society issue and Perspectives*. Lagos MEEK Associates. pp. 16-26, ISBN 9780571086
- Yawson, D.O., Armah, F. A., Afrifa, E.A., Dadzie, S.K.N. (2010). *Ghana's Fertilizer Subsidy Policy: Early Field Lessons from Farmers in the Central Region*. *Journal of Sustainable Development in Africa*. Clarion University of Pennsylvania, Clarion, Pennsylvania. Vol. 12 No. 3. Pp. 191-203.