

Utilization of Mass Media among Farmers in Ikwere Local Government Area of Rivers State, Nigeria

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Abstract: *The study analyzed the utilization of mass media by farmers in Ikwere local government area of Rivers state, Nigeria. Specifically, it identified the available mass media in the study area, ascertained the extent of use of these mass media, assessed the perceived effectiveness of mass media and identified constraints militating against the use of mass media. A sample of 180 farmers was obtained using multistage sampling technique. Data were elicited from the farmers using a set of structured questionnaire and were analyzed using percentages, mean statistic and bar chart. Result revealed that television (90.83%), radio (89.17%) and mobile phone (81.00%) constituted the most available mass media in the study area. It also showed that radio ($M = 2.38$), television ($M = 2.10$) and mobile phones ($M = 2.20$) were the utilized mass media in the study area. Furthermore, mass media were perceived to be effective at replication of information (89%), creation of awareness (85.9%), training of farmers (79.2%), dissemination of innovations (79%) and overcoming language and location barriers (79%). Erratic power supply (91.67%), institutional barriers (91.50%), limited coverage of farmers' needs (80.34%), and inadequate credit (80.17%) were the major constraints to the use of mass media.*

Keywords: *utilization, mass media, farmers, Nigeria*

I. Introduction

In Africa, about 65% of the total labour force is employed in the agricultural sector, which contributes about 32% of the continent's gross domestic product (GDP) [1]. Apart from the North and Southern African countries, some oil-producing countries in the gulf of Guinea and notable exceptions such as Nigeria, Cote d'Ivoire, and Cameroon, agriculture accounts for half or more of the working populations [2]. As [2] further observes, African agricultural population stands at 530 million people and is expected to exceed 580 million people by 2020. The population relying on agriculture thus accounts for 48% of the total population (almost 70% in East Africa). A special feature of the African agriculture in comparison to the rest of the world over the last 30 years is that the sector has continued to absorb a large proportion of the working population; half of all new entrants to Africa's working population have turned to agriculture, whereas in Asia, this statistic is only 30%. In the developed world, the number of farmers is on the decline [2].

While the world's population has grown by 60% in the last 30 years, Africa's population has more than doubled. According to official statistics, only a dozen African countries have not seen their population double over this period, especially countries in North Africa that began their demographic transition earlier. This is also the case with the Southern African region which has been hit hard by the AIDS pandemic [2].

The most direct consequence of population growth is that agriculture in Africa has now more mouths to feed. In fact food requirements in the continent have grown at the same rate with population growth even at a more rapid rate, as diets in urban areas are more diversified and richer in animal products [2]. This situation coupled with the rising food prices in the international market has mounted more pressure on the African agriculture. Experts estimate that rising food prices have driven a lot of people into poverty in developing countries since June 2010, as food costs rise to near the levels of 2008 [1].

Meeting the demand for food is thus an essential pre-requisite for successful economic, social and political development, and it can be achieved either through domestic production or imports. In Africa, there is insufficient domestic production, and the continent spends about \$30 billion to \$50 billion yearly to import food. This deprives the continent of funds needed on infrastructure and social amenities [1]. They went on to posit that if continental food supplies do not increase, Africa will spend about \$150 billion on food import by 2030.

The large gap between potential and current crop yields in Africa means that increased food production is attainable. Africa's low agricultural productivity has many causes, including scarce and scant knowledge of improved practices, low use of improved seed, low fertilizer use, inadequate irrigation, conflict, absence of strong institutions, ineffective policies, lack of incentives and prevalence of diseases [1]. However, most of these problems can be solved through the timely and adequate dissemination of agricultural innovations.

Mass media constitute the main vehicle for wide and rapid transmission of agricultural information to farmers. According to [3] the mass media teach new skills, attitudes and behaviours and are therefore, a mobility multiplier with the capacity to communicate to large groups of people. As [4] noted mass media are used to reach a large number of people quickly. It is particularly useful in making large number of people aware of new ideas and practices, or alerting them to sudden emergencies. While the amount of detailed information that can be transmitted through mass media is limited, they can serve as an important and valuable function in stimulating farmers' interest in new ideas. Once stimulated or made aware through mass media, farmers may seek additional information from neighbours, friends, extension agents or progressive farmers in the area (Behrens and Evans, 1984).

A study conducted in Faisaland district has established that by and large mass media proved relatively popular among the farming community [6]. The cost of extension advice through mass media was considerably low as compared to individual and group methods [7]. However, the mass media involve one-way communication from information source to the receivers. They permit limited and delayed feedback, which of course is essential for effective communication [8].

[9] stated that creation of awareness is the first step in the adoption process. Supporting this, [10] asserted that production and distribution of printed material helps farmers in the transfer of new information and technologies. Printing helps in preserving the technologies in the form of books/booklets, magazines, newspapers, and brochures [4]. According to a study conducted in the central Punjab, majority of the farmers consulted pamphlets, magazines and newspapers for getting information regarding sugarcane production technologies [11]. The common electronic media, radio and television are regarded as very effective in communicating the latest knowledge for the support of development [12].

While there is a growing recognition of the relevance of mass media in the dissemination of agricultural information in other parts of the world, it appears not to be the same in Nigeria. Some studies [13;14] found out that most farmers in Imo state relied on farmers' groups and extension agents as sources of agricultural information. However, the utilization of mass media in agriculture in Nigeria has become very paramount considering the declining extension coverage [15] and the growing need to boost food production in the continent. The potentials of mass media such as speed, mass coverage and low cost in the dissemination of information further necessitate their use in agriculture. It is against this backdrop that the following research questions are being asked: what are the available mass media in the study area? To what extent are the mass media being utilized by the farmers? what are the perceived roles of mass media in agricultural production? What is the perceived effectiveness of mass media in agricultural production? And what factors militate against the use of mass media by the farmers in the study area?

Objectives of the study

The broad objective of the study is to assess the utilization of mass media among farmers in Ikwere Local government area of Rivers state. Specifically, the study seeks to:

1. describe the socioeconomic characteristics of the farmers;
2. identify the available mass media in the study area;
3. ascertain the extent of utilization of these mass media;
4. identify the perceived roles of mass media play in the study area;
5. assess the perceived effectiveness of mass media in the study area; and
6. identify the factors that affect the use of mass media in the study area.

II. Methodology

The study was carried out in Ikwere local government area of Rivers State, Nigeria. It is among the 23 local government areas that make up Rivers State. It lies within latitude 4°15'-5°15' North and longitude 6°30' – 7°15' East. The population stands at 400,000 people (National Population Commission, NPC, 2006). The average rainfall of the area ranges between 2000mm and 2600mm per annum. The local government area has two distinct seasons – rainy season which begins from March and ends in November and the dry season which begins in December and ends in February. The major crops grown in the area include maize (*Zea mays*), cassava (*Manihot esculenta*), sweet potato (*Ipomea batatas*), oil palm (*Elaeis guineensis*), rubber (*Hivea brasiliensis*) and cocoa (*Theobroma cacao*) [17].

The population for the study comprised all the people whose primary occupation is farming in the local government area. Multistage sampling technique was used to select the sample. The first stage involved the selection of five communities out of the eleven communities in the LGA. The second stage involved the selection of four villages from each of the selected communities using simple random sampling technique to give a total of 20 villages. The third and final stage comprised the selection of six farmers from each of the 20 villages selected to give a total of 120 farmers.

Data were obtained from both primary and secondary sources. Primary data were obtained from the farmers using a set of structured questionnaire. Secondary data were obtained from text books, journals, periodicals, internet and government official papers. Data were analyzed using simple statistical tools.

III. Results And Discussion

Socioeconomic characteristics

Data in Table 1 show that majority (56.36%) of the farmers was within the age range of 21 – 40 years and the mean age was found to be 40 years. This implies that the farmers were still in their economically active ages and can engage effectively in agriculture. A majority (53.60%) of the farmers was female. This indicates the dominance of women in agricultural production. As observed by [18] women perform certain important roles in agricultural production in Africa. The result also reveals that a majority (63.6%) of the farmers was married.

The result further shows that a majority (99.1%) of the farmers received one form of formal education or the other. The acquisition of formal education enables farmers to access information from mass media especially the ones in print. It was also revealed that majority (72.80%) of the farmers had a household size of 1 – 6 persons and the mean household size was 5 persons. This implies that the study area was dominated by fairly large households. Large households can promote the access to agricultural information as every household member is a potential source of information. The result also shows that a majority (41.80%) of the farmers had a monthly income of USD301 – 500 and the mean monthly income was USD343.43. The earning of income can encourage farmers to purchase mass media devices which would promote their access to agricultural information. The result finally revealed that a majority (84.50%). Membership of social organizations could encourage the spread of agricultural information among farmers.

Table 1: Distribution of farmers according to their socioeconomic characteristic

| Socioeconomic characteristics | % | M |
|---|-------|--------|
| Age (Year) | | |
| ≤ 20 | 0.91 | |
| 21 - 40 | 56.36 | 40 |
| 41 - 60 | 39.09 | |
| > 60 | 3.64 | |
| Sex | | |
| Male | 46.4 | |
| Female | 53.60 | |
| Marital status | | |
| Single | 21.90 | |
| Married | 63.60 | |
| Divorced | 3.60 | |
| Widowed | 10.90 | |
| Level of education | | |
| No formal education | 0.90 | |
| Primary education | 20.00 | |
| Secondary education | 52.70 | |
| Tertiary education | 26.40 | |
| Household size (Number of persons) | | |
| 1 - 6 | 72.80 | |
| 7 - 12 | 27.20 | 5 |
| Monthly Income (US Dollars) | | |
| ≤ 100 | 2.70 | |
| 101 – 300 | 38.20 | |
| 301 – 500 | 41.80 | 343.43 |
| > 500 | 17.30 | |
| Membership of social organizations | | |
| Yes | 84.50 | |
| No | 15.50 | |

Source: Field Survey Data, 2015

Availability of mass media

Entries in Figure 1 show that television (90.83%) was the most available mass medium in the study area followed by radio (89.17%), mobile phones (81.00%), pamphlets/handbills (79.17%), posters (75.00%) and bulletin/newspapers/magazine (72.50%). However, computer and internet (37.50%) and e-mail (14.17%) were the least available mass media in the study area. According to [19] the affordability and capacity of some

devices to convey information visually or audibly make them useful to people with limited formal education or exposure to technology. This may have accounted for the popularity of television and radio in the study area. On the other hand, the relatively high cost of computer and internet and the technicality associated with their use may have limited their availability in the study area. According to [20] people are reluctant to use advanced technologies such as internet because they do not have the required skills or expertise.

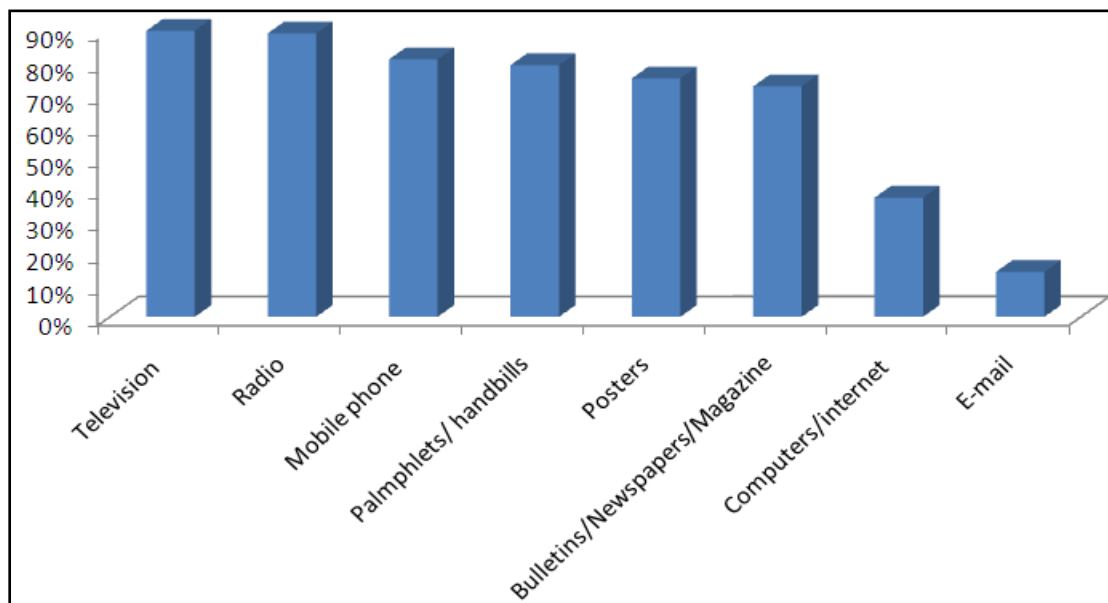


Figure 1: Bar chart showing mass media availability in the study area

Utilization of mass media

Data in Table 3 reveal that radio (M = 2.38), mobile phones (M = 2.20) and television (M = 2.10) were the mass media utilized by farmers in the study area. This result confirms the popularity of television and radio in the dissemination of agricultural information. This is in line with the finding of a study by [21] where television and radio were identified as the most widely used mass media by farmers in Delta state, Nigeria. Similarly, a study in central Punjab showed that more than 56% of farmers listened/watched agricultural programmes on radio and television [22]. However, the low utilization of computer/internet and e-mail in the study area in spite of the fact that many of the farmers were educated could be attributed to the still low level of the infrastructure in many parts of Africa. [23] buttressed this by observing that internet penetration is still low in the sub-Saharan African region compared to advanced regions of the world. This could limit farmers’ access to agricultural information.

Table 3: Distribution of farmers according to mass media utilization

| Mass media | M | S.D |
|-----------------------------|-------|------|
| Radio | 2.38* | 1.01 |
| Television | 2.10* | 0.92 |
| Mobile phones | 2.20* | 1.00 |
| E-mail | 1.38 | 0.34 |
| Bulletin/Newspaper/Magazine | 1.74 | 0.52 |
| Computer and internet | 1.22 | 0.19 |
| Pamphlets/handbills | 1.78 | 0.60 |
| Poster | 1.92 | 0.62 |

Source: Field Survey Data, 2015

* Utilized mass medium

Perceived roles of mass media

Entries in Table 4 reveal that mass media play many roles in agricultural production in the study area. However, the most significant roles included the enhancement of access to market information (93.33%) and the dissemination of information on new technologies (91.67%). According to [19] the most obvious and cross-cutting way mass media can improve agriculture is by improving access to information and making it less costly to obtain. It went further to observe that about 70% of the total costs incurred by farmers in Sri Lanka are informational. Farmers who use mobile phones can save on transport costs [24], an effect that is stronger the more rural an area is [25].

Table 4: Distribution of farmers according to perceived roles of mass media

| Roles | %(*) |
|--|-------------|
| Dissemination of information on new technologies | 91.67 |
| Identification of better markets | 80.80 |
| Enhance access to market information | 93.33 |
| Enhanced storage and retrieval of agricultural information | 76.67 |
| Make the training of farmers easier | 80.83 |
| Reduce the cost of disseminating information | 88.33 |
| Enhance linkage between farmers and research | 88.33 |
| Early warning on pest/diseases and disaster outbreak | 85.88 |
| Promote access to prevailing markets prices of commodities | 80.00 |
| Overcome distance barrier in the transmission of information | 90.00 |
| Faster dissemination of agricultural information | 84.16 |
| Enable access to improved production information | 79.20 |
| Promote interaction between farmers and extension agents | 60.70 |
| Provide information on the sources of agricultural inputs | 79.90 |
| Reducing cost of transportation | 67.71 |
| News | |
| Entertainment | |

Source: Field Survey Data, 2015

*** Multiple Response**

Perceived effectiveness of mass media

Entries in Table 5 reveal that mass media were perceived by the farmers to be effective in all the items listed. However, they were more effective in the replication of information (89.0%), creation of awareness (85.9%), training of farmers (79.2%), overcoming language and location barriers (79.0%) and dissemination of innovations (79.0%). Mass media especially those that combine audio and visual abilities have the potentials of overcoming language barriers since they appeal to the senses of sight and hearing [26]. Farmers tend to retain for a longer time what they see and hear [27].

More so, mass media have the ability to reach a mass audience scattered over a wide geographic area at a very high speed. This could enhance extension coverage in areas characterized by low number of agricultural extension personnel. It could also enhance the spread of information especially in times of emergency.

Table 5: Distribution of farmers according to perceived effectiveness of mass media

| Effectiveness of mass media | %(*) |
|---|-------------|
| Linkage to research and extension agents | 40.3 |
| Dissemination of innovation | 79.0 |
| Access to markets information | 59.1 |
| Storage and retrieval of information | 67.4 |
| Training of farmers | 79.2 |
| Overcome language and location barriers | 79.0 |
| Replication of information | 89.0 |
| Promote early warning on pest/disease outbreak | 76.8 |
| Provision of information on agricultural inputs | 64.4 |
| Access to weather-related information | 71.6 |
| Access to production technologies | 54.8 |
| Promotion of interaction among farmers | 64.6 |
| Timely delivery of information | |
| Creation of awareness | 85.9 |

Source: Field Survey Data, 2015

Constraints to the utilization of mass media

Entries in Table 6 reveal that a lot of factors were perceived to constrain the use of mass media by farmers in the study area. However, the most significant among them were erratic power supply (91.67%), institutional barriers (91.50%), low coverage of farmers' needs and inadequate credit (80.17%). Most mass media devices require power and the absence of this could interfere with their functioning or use. Similarly, availability of credit enhances farmer's ability to purchase mass media devices. However, the unavailability of this could prevent rural farmers, many of whom are resource-poor to purchase these devices, thus limiting their access to agricultural information. [19s] posited that lack of resources could impede the utilization of mass media by farmers.

Table 6: Distribution of farmers according to constraints to the use of mass media

| Constraints | %(*) |
|------------------------------------|-------|
| Poor infrastructural development | 68.30 |
| Erratic power supply | 91.67 |
| High cost of devices | 69.10 |
| Inadequate skills | 79.10 |
| Peer group influence | 40.00 |
| Inadequate credit | 80.17 |
| Language barrier | 34.16 |
| Policy inconsistency | 75.83 |
| Institutional barriers | 91.50 |
| Time of broadcast of programme | 60.74 |
| Limited coverage of farmers' needs | 80.34 |
| High cost of service | 78.95 |
| Cultural barriers | 46.67 |

Source: Field Survey Data, 2015

* Multiple response

IV. Conclusion

The importance of mass media in agriculture has been on the rise in developing countries following the realization of their potentials in information dissemination. While highly sophisticated mass media tools are widely used in advanced societies, traditional mass media devices are used in developing societies. However, the existence of certain constraints has impeded the full realization of the potentials of mass media thus rendering their contributions to agricultural development minimal. It is therefore recommended that:

1. Extension agency should sustain and improve on the use of mass media in agricultural information dissemination. This is necessary considering the inadequate number of field extension personnel and the ability of mass media devices to disseminate information at high speed, overcoming location and language barriers.
2. Extension personnel should be well trained on the use of mass media devices. This could be achieved by organizing routine capacity building programmes for extension personnel at all cadre on the use of mass media devices.
3. Agricultural information transmitted using mass media channels should be designed to suit the needs of target farmers. This could be achieved by ensuring that the information transmitted is really desired by the farmers and that the channels used are suitable to the farmers. However achieving this requires the engagement of highly skilled personnel both in the assessment/identification of needs and in the design of the agricultural information.
4. Power stability should be improved in rural areas. Majority of the farmers in developing countries reside in rural areas and use mass media channels. Improving power stability will enhance readily and timely access to agricultural information by the farmers.

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