

Measuring the Impact on Farmers of Agricultural Radio and Television Programs in Southwest Nigeria



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Abstract

In Nigeria, as in many other countries, limited numbers of extension agents (one to 4,000 farmers) make it impossible to reach all farmers by interpersonal means. For this reason, radio and, more recently, television have been used by agricultural organizations to disseminate relevant agricultural information to larger numbers of farm families at minimal cost and to areas hitherto not accessible to extension agents on a regular basis. While prior studies have confirmed that these radio programs have large audiences, there has been less attention to the perceptions farmers hold about the specific benefits these programs provide. The purpose of this study was to examine the performance of two long-running Nigerian agricultural programs, one for radio and the second for TV, as perceived by 198 randomly selected farmers in Oyo State of southwest Nigeria. Results indicate a very positive assessment of both specific program components and the value of the two programs for improving agricultural production across 12 perceptual dimensions.

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Nearly two thirds of the respondents listen to both programs. Even though radio is currently utilized more than television by most farmers, they perceive that the television program is providing very useful content.

Background and Introduction

In Nigeria, as in many other countries, limited numbers of extension agents (one to 4,000 farmers) make it impossible to reach all farmers by interpersonal means. Thus, although there have been a number of documented project successes in which extension agents have personally delivered useful research-based information (Akinpelu, 1987), mass media alternatives to reaching large numbers of farmers are an essential supplement.

Both radio and television have been successfully used in agricultural extension in many countries (Ogunmilade, 1984). Evidence from previous research indicates that people's attitudes and perceptions may be influenced by their media use (Anigwe, 1990; Olowu, 1993; Yahaya and Akinboye, 1999; and Yahaya and Omokhaye, 2001). In an earlier study conducted in Southwest Nigeria, Patel and Ekpere (1978) reported that 83 percent of the farmers listen to radio farm programs. Similarly, Olowu and Igodan (1989) reported that farmers generally obtain information from the radio, and of about 34 percent of the farmers who sought information from the radio, 31 percent actually obtained useful information from it. These researchers also discovered that farmers' educational level was significantly related to the media from which they sought specific information, particularly information on marketing, pesticides and herbicides. Age of farmers also was significantly related to the media that farmers used to find information on improved technologies. In another study, Olowu (1991) found that the viewing of agricultural television programs is significantly and positively related to knowledge of improved farm practices.

Because of their popularity and ability to reach farmers, radio and, more recently, television have been used by agricultural organizations in Nigeria to disseminate relevant agricultural information to larger numbers of farm families at minimal

cost and to areas previously not accessible to extension agents on a regular basis. While prior studies have confirmed that these radio programs have large audiences, there has been less attention to the perceptions farmers hold about the specific benefits these programs provide.

This study examined how farmers perceive the information benefits of two long-running agricultural programs on two electronic media channels (radio and television) in selected communities in Southwest Nigeria. The radio program is *Agbeloba* (Farmers Are Kings), and the TV program is *Ejekaroko* (Let's Go Farming). These two programs are transmitted by Broadcasting Corporation of Oyo State (BCOS) radio and television stations. Both programs are broadcast weekly in the Yoruba Language on Thursdays from 6.35 p.m. to 7 p.m. (*Agbeloba*) and on Tuesdays between 5.30 p.m. and 6 p.m. (*Ejekaroko*). The two programs have been part of the corporation's programs since its inception. The forerunner of *Agbeloba* was *Agbe Mase* (I Will Take to Farming), which was broadcast by the Western Nigeria Broadcasting Corporation (WNBC) in 1957. Some 23 years later in 1979, the television broadcast of *Ere Agbe* (The Gains of Farming) was broadcast on Western Nigeria Television Station (WNTV) (WNTV, 1979). This program would later be named *Ejekaroko*. In addition to carrying agricultural advertising, the two programs convey directly research-based agricultural recommendations using researchers, extension personnel and farmers themselves.

Purpose and objectives

The purpose of this study was to investigate farmers' perceptions of the informative values of *Agbeloba* and *Ejekaroko* agricultural programs broadcast on radio and television. The specific objectives of the study were as follows:

1. To determine if the two programs actually reach the farmers in the study location where the reception of two media channels is excellent;
2. To examine farmers' perceptions of the informative roles of the two programs across 12 dimensions (discussed later);
3. To determine the relationship between farmers' demographic characteristics (age, gender, educational

status, leadership status and marital status) and perception of the two programs; and

4. To make recommendations, based on findings, to extension, media producers/presenters and practitioners on how to fulfill farmers' media program expectations for agricultural radio and television programs.

Method

The study was conducted in two local government areas of Oyo State in Southwest Nigeria. The area is made up of Akinyele and Ibadan South West Local Government Areas. The choice of Akinyele and Ibadan South West Local Government Areas was made because it has a typical representation of the region as a whole, including both urban and rural settlements. In addition, this area has excellent reception of programs of Broadcasting Corporation of Oyo State (BCOS).

The target population consisted of all farmers in the two local government areas identified above. A random sampling procedure was adopted during the selection of 200 respondents from the entire study area. This is about 15 percent of the farmers on the list of the Extension Officers in the Agricultural Development Project sampled cells. Extension agents compile these lists as a part of their duties, and determine who are primarily farmers. In this study, the list of farmers in sampled villages/wards was obtained from the Extension agent, and then a random sample of these individuals was selected. Questionnaires were administered to the respondents in their homes in person after the day's work between June and August 2001.

One hundred ninety-eight of the 200 farmers selected completed usable questionnaires. This high response rate was achieved because the interviews were conducted by a team of postgraduate research assistants and this author, who personally sat with the farmers and asked questions directly from the questionnaire, filling out answers directly to avoid misinterpretation and inaccurate responses. Twelve farmers, whose educational attainment was sufficient to permit them to read and complete the questionnaires on their own, were permitted to read and respond to the questions on their own. Two of these 12 did not return their questionnaires, leading to the response rate of 198 out of 200.

Measurement of variables

Farmers were asked a series of demographic questions, questions about their listening and viewing of the two programs, and a series of 12 items measuring their perceptions of the programs.

- a) Demographic questions: Farmers were asked to indicate their social and personal data, which they readily provided, including age, gender, marital status, leadership status, educational attainment and media listening and or viewing patterns. This included access to the two radio programs as well as their listening patterns to these two programs.
- b) Listening/viewing questions: Farmers were asked to indicate whether they listen to either the radio program or the TV program, and if so, how often they listen to it.
- c) Perceptions of program value: Farmers responded to 12 statements, half positively worded, and half negatively worded, about the value of the programs. They were asked to respond to each item using a five-point Likert scale with the following ratings: strongly agree, five points; agree, four points; undecided or neutral, three points; disagree, two points and strongly disagree, one point. A maximum score of 60 points was possible, and a minimum score of 12 points. Negatively worded items were reversed before summing the score. At the end, overall perception scores were categorized into "favorable" (30-60 points) and "unfavorable" (less than 30 points).

Results

Results provided in Table 1 show various social and personal characteristics of the respondents. Findings reveal that the majority of respondents are male (80%) and older than 30 years of age (84%). This finding is consistent with previous studies that focused on farmers in Nigeria, which revealed that agriculture is predominantly left in the hands of older farmers. The majority of the respondents are Christians (43%), followed by Muslims (36%) and traditionalists (16%).

Findings also reveal that more than one third of the farmers' educational attainment is informal education (36%). More than

two thirds (68%) of the respondents consider themselves community or social leaders, while nearly one third (31.8 %) are members of village council or associations. Their status in the community suggests that they might play an important role in diffusing information to others in their community. A majority (72%) of the respondents is married.

Table 1. Distribution of respondents' social and personal characteristics (n = 198)

Characteristics	Frequency	Percentages (%)
Gender:		
Males	159	80.3
Female	39	19.7
Age (Years):		
Young farmers (less than 30 years)	31	15.7
Older farmers (31 years and above)	167	84.3
Religion:		
Islam	71	35.9
Christianity	85	42.9
Traditional	32	16.2
Others	10	5.0
Educational status:		
Informal	72	36.4
Primary	52	26.6
Secondary	59	29.8
Tertiary	10	5.0
None	5	2.5
Leadership status:		
Community/social leader	135	68.2
Council/Association member	63	31.8
Marital status:		
Single	56	28.3
Married	142	71.7

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Table 2. *Distribution of respondents' listening and viewing patterns to "Agbeloba" and "Ejekaroko" programs (n = 198)*

Programs	Frequency	Percentage
Listening/viewing pattern to Agbeloba and Ejekaroko		
<i>Agbeloba</i> only	43	21.7
<i>Ejekaroko</i> only	15	7.6
<i>Agbeloba</i> and <i>Ejekaroko</i>	126	63.6
None	14	7.1
Listening pattern to Agbeloba		
Weekly	89	44.9
Fortnightly	60	30.3
Monthly	19	9.5
None	30	15.2
Viewing pattern of Ejekaroko		
Weekly	59	29.8
Fortnightly	42	21.2
Monthly	44	22.2
None	53	26.8
Areas of interest in the two programs. Numbers and percent of farmers who select the extent to which one of these formats is most effective in "generating their interest" in the programs.		
Advertisement	25	12.6
Presentation format	61	30.8
Relevant information	81	40.9
Others	9	4.5
Not indicated	22	11.1
Perceived need for the programs		
Yes	189	95.5
Undecided	2	1.0
No	7	3.5

Listening and Viewing Patterns

As shown in Table 2, the majority of the farmers who listen to the radio program *Agbeloba* also watch the TV program *Ejekaroko* (64%), while most of the remainder listen to *Agbeloba* alone (22%). Only 7.1 percent do not attend to either of the two programs (7.1%). *Agbeloba* enjoys a large regular audience, with 45 percent saying they listen every week and another 30 percent saying they listen every other week. The TV program *Ejekaroko* has a smaller regular audience, with about 30 percent saying they watch every week and 21 percent every other week. These are still very substantial numbers when considering the total population of farmers in the region. Results show that almost 93 percent of farmers listen to or view one of these programs at least monthly.

Respondents were asked to select what program approach was most effective in generating their interest. Three choice areas were presented, as follows:

Advertisement: Messages included in programs that call for farmer patronage e.g., agrochemical sales and efficacy

Presentation format: Program formats such as discussion, question and answer, and field trips to show case studies of the issues under focus.

Relevant information: Perceived relevancy of content. That is, respondents' interests are maintained due to relevant information obtained from the two programs.

Other: Program approaches that generate interest, other than those above.

Results showed that farmers responded most positively to relevant information that they could apply to their own farming (41%), while another third chose interviews and discussions to be most effective in generating their interest. Only 12 percent selected advertising. Twenty-two percent did not select any of the three as being effective in generating their interest.

Farmers also were asked to make an overall assessment of their perceived need for these programs to improve their farming enterprises. A large majority (96%) indicated a perceived need for the programs.

Perceptions of the Informative Value of the Programs

Each farmer was asked to rate the two programs across 12 dimensions. Half of the items were negatively worded and the other half positively worded. As shown in Table 3, items 1 and 6 focused only on perceptions about the radio program *Agbeloba*. Items 2 and 5 focused only on perceptions about the TV program *Ejekaroko*. The other items asked farmers to provide perceptions about both programs. Results show that the two programs are highly valued across all 12 dimensions, with an overall mean of 4.81 (out of a maximum of 5.0) for the 12 items (with negative item scoring reversed). Advertising (Item 10) was least valued, but even it received a relatively high score. Almost 60 percent strongly disagreed that advertising interfered with program content and understanding. The use of musical interludes (Item 9), which is common across agricultural programs, was also positively evaluated. Item 7, which concerns religious differences, demonstrates that despite religious unrest in Nigeria, at least in farming it is perceived that a farmer of any religious orientation can benefit from these programs. Despite the fact that one quarter of farmers do not view the TV program regularly, they perceive that it is quite valuable as a source of information. Thus, it is likely that access to television, or other barriers not addressed in this study, may be restricting viewership rather than any negative judgment about content. Measures of perception of information quality and its ability to teach new farming techniques indicate high agreement that the programs are beneficial to farmers.

Analysis was also conducted to assess whether perceptions of value for the two programs varied by gender, age, education or leadership status. Results showed that positive assessments of the two programs were not influenced by these demographic characteristics. In all of the demographic classifications considered (male/female; age less than 30/age greater than 30, etc.), more than 90 percent of the respondents gave an overall favorable rating for the two programs.

Table 3. Farmer Perceptions of Value of "Agbeloba" Radio and "Ejekaroko" TV Programs (N = 198)

Item +/-	Mean Score*
1 + Constant listening to <i>Agbeloba</i> (farmers are kings) on radio contributes to farm productivity.	4.89
2 + Watching <i>Ejekaroko</i> (let's go farming) on television provides relevant and current farm information.	4.85
3 + Agricultural information content of the farm broadcasts <i>Agbeloba</i> and <i>Ejekaroko</i> are easy to utilize at the farm level.	4.92
4 - No new farming techniques are learned from either <i>Agbeloba</i> or <i>Ejekaroko</i> .	4.94
5 - Television farm broadcasts in the form of <i>Ejekaroko</i> are useful for only elite farmers.	4.56
6 - <i>Agbeloba</i> radio farm programs cannot lead to easy adoption of new practices by nonliterate farmers.	4.81
7 + A farmer's religion does not influence listening to <i>Agbeloba</i> or <i>Ejekaroko</i> .	4.88
8 - Farmers' social and economic attainment in the community determines which farm program they listen to or watch.	4.83
9 + Musical interludes in <i>Agbeloba</i> and <i>Ejekaroko</i> motivate the listening and viewing patterns of a farm and use of information obtained.	4.70
10 - Advertisements and jingles played during <i>Agbeloba</i> and <i>Ejekaroko</i> farm programs interfere with the smooth running and understanding of the information content.	4.57
11 + A farmer is easily convinced to adopt a recommended innovation in both livestock and crop enterprises from listening to <i>Agbeloba</i> or watching <i>Ejekaroko</i> .	4.95
12 - To obtain relevant information from <i>Agbeloba</i> and <i>Ejekaroko</i> is expensive and time consuming.	4.83
Overall Mean Score for all 12 items	4.81

* Items were rated on a five-point Likert scale with "strongly agree" coded 5 and "strongly disagree" coded 1. Negatively phrased items were reversed so that higher mean scores represent favorable assessments across the 12 dimensions.

In further analysis, chi-square testing showed that there is no significant relationship between farmers' perception of the informative role of a program and the program type ($X^2 = 0.043$; $P > 0.05$). This implies that TV was perceived just as positively in terms of overall value as radio. Hence, either of the programs can be effectively used to disseminate agricultural information to farmers. Since the audience largely overlaps, and since radio as a medium is cheaper to produce, it should continue to receive emphasis. However, results show that many farmers are also watching the TV program.

Conclusions and Recommendations

The study was designed to investigate farmers' perceptions of the informative roles of *Agbeloba* radio and *Ejekaroko* TV programs transmitted by the Broadcasting Corporation of Oyo State. Results show that farmers do receive these programs on their radio and television, and that they perceive that both of the programs have substantial value in terms of relevant agricultural information. These positive results hold across demographic groups (age, marital status, etc.) although there is slightly less satisfaction by those in the lowest educational group. Therefore, it is suggested that the information and presentation components of the two programs be maintained.

Since audience members also rated advertising positively, more effort should be made to recruit additional advertising for the program. Advertising offers substantial opportunities for generating additional needed funding for the programs, and as long as it does not interfere with program benefits, it should be encouraged.

Finally, research should also continue to investigate or assess agricultural programs on various media channels in Nigeria and other developing countries to ensure that information dissemination is not hindered. Such assessment should be based on message content and farmers' utilization for income generation and subsequent household food security and poverty reduction.

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