

MASS MEDIA AND ITS ROLE IN AGRICULTURAL TECHNOLOGY TRANSFER: THE CASE OF DENDI AND EJERE WEREDAS, OROMIA, ETHIOPIA

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Abstract

Agricultural extension organizations are entrusted with a primary task of utilization of mass media for disseminating agricultural technology to farmers. Among the mass Medias, radio is found to be the most important means of communicating agricultural information to rural inhabitants. All farmers belonging to the rural union councils of Dendi and Ejere weredas were considered for the study. Multistage random sampling technique was used to draw a sample. The list regarding the rural union councils and villages of the district was obtained from the District Officer of Agriculture. Three peasant associations (PA) were randomly selected from each of the weredas and 30 farmers were also randomly selected from each PA which comprised a total of 180 respondents. Analysis was done by using Statistical Package for Social Sciences (SPSS). According to the findings the mean value of age of farmers was 38 with an average family size of 5. On average, formal education level was grade 5. Majority of farmers (93.9%) own radio set and they tend to follow agricultural programs in Amharic and Oromifa languages. Preferences of farmers for obtaining agricultural information in the future, mobile telephone was ranking at the top (score=274) with mean value 3.86, while Radio (223) attained the 2nd position with mean value of 3.54. Therefore expanding the ownership of radio to large population plays a vital role in dissemination of improved agricultural technologies in the study area. In addition, cell phone coverage is very important to farmers for communication of information related to agricultural technology transfer and marketing of products.

Key Words: Radio, Agriculture, Technology, farmers

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Introduction

Nothing seems more important in agricultural development than the dissemination of latest agricultural technologies among farmers. Agricultural extension organizations are entrusted with a primary task of utilization of mass Media for transferring information related to agricultural technology. Mass media can be classified as print media and electronic media. Print media include words, pictures and diagram to convey precise and clear information on a mass scale. Farmers can use printed material for a long period of time as permanent reminder and can use it repeatedly. Print media can effectively be used if their form and content are tailored to the needs and interest of the target audience, offer options and facilitate decision making, encourage the adaptation of technology to local situation, provide a more explicit treatment of sustainability in relation to the technical content, and give information on the economic and financial implications of any recommended technologies, including the uncertainties and risks involved. The print media gain popularity and attract the attention of the end users when they address the real problems faced by the farmers and provide feasible solutions to them. Extension worker can use printed material along with other communication channels to reinforce the learning process of farmers (Shahid *etal*,2007).

Electronic media can play a vital role in informing farmers in the situation of urgency and current development. Farmers can be informed quickly and swiftly about diseases and pest control, flood, and changing weather (Muhammad, 2005). Farmers can also get appropriate advices of experts through these media to cope up with the emerging problems (Albarran, 2002). Important electronic media pertinent to agriculture include radio,

television, audio/video cassettes, telephone, internet, agri-help line, and mobile phone.

Among electronic media, radio is found to be the important means of communicating agricultural information to the rural farmers. In the opinion of Kuponiyi (2000), radio is one of the broadcast medium which the rural populations are very familiar with and which almost all experts identified to be the most appropriate for rural emancipation program. This is because radio beats distance and has immediate effect on farmers. Furthermore, radio is favored as a medium of communication in rural communities because of the advantages ascribed to it, in form of transcending the barrier of illiteracy and demanding less intellectual exertion than the print media messages (Folarin, 1990).

For dissemination of Agricultural technologies various methods/media are being employed by the extension wing involving both interpersonal and impersonal contacts (Muhammad, 2005). Various extension methods are useful in various situations and the selection of the most appropriate method is the key function of the extension agent (Nisha, 2006; Okunade, 2007). Among various extension methods, use of media is useful in creating awareness and stimulates interest, along with large coverage of the audience (Hussain, 1997; Okunade, 2007). In this era of information revolution, the use of electronic media seems inevitable to accomplish the task of Agricultural technology transfer on account of coverage and speed. Electronic media, being source of information and entertainment, can play a vital role to transform attitude and interest. Among the mass media, electronic media have their own distinctive place in technology transfer.

Therefore, in this study, an attempt has been made to assess the level of utilization of mass media by farmers for information regarding agricultural technology in the selected Weredas, Dendi and Ejere, of Ethiopia.

Materials and Methods

The study was conducted in Oromia region west shoa zone in two weredas of Dendi and Ejere . All farmers living in the rural union councils of the district were considered as research population of the study. Multistage random sampling technique was used to draw the sample. The list regarding the rural union councils and villages of the district was obtained from office of the District Officer Agriculture. From each of the two weredas, three peasant associations (PA) were randomly selected and 30 farmers were also randomly selected from each (PA) as sample for the study. For selecting appropriate sample size, the table for determining sample size (Fitzgibbon and Morris, 1987) was consulted. Thus, the sample comprised 180 respondents from the six peasant associations. The respondents were interviewed through a reliable and validated interview schedule. Data were collected personally with the help of an interview schedule which were then tabulated, analyzed through Statistical Package for Social Sciences (SPSS), interpreted and discussed to draw conclusions.

Results and Discussion

3.1 Socio-economic Characteristics of the Farmers

3.1.1 Age, Educational Background and Family size

The mean value of age of farmers (respondents) was 38 with a minimum value of 24 and maximum of 76. The average family size was 5 with a maximum and minimum family size of 13 and 1, respectively. There is also

a significant difference among respondents in this regard. The formal educational background of the respondents ranges from extreme illiteracy (no formal education) up to grade 12 level. The average formal education level is grade 5.

Table 1. Socioeconomic characteristics of farmers of Ejere and Dendi wereda

Variables	No. of respondents	Mean value	Minimum	Maximum	Variance	t	Sig. (2-tailed)
Age	180	38	24	76	112.52	36.24	.000***
Family size	180	5	1	13	7.63	18.20	.000***
Education level	180		0	12	8.98	9.85	.000***

3.2. Awareness of electronic media

The awareness level of farmers on availability of agricultural information through electronic media is vital because farmers who are well aware of transfer of agricultural information through various electronic media are likely to be in a better position to use/adopt the information for their use.

According to this survey, extension field staff and radio broadcast were sources of information for new agricultural technology by majority of the respondents, followed by fellow farmers. Television was the lowest among the information sources for the respondents (Table 2).

Table 2. Distribution of the respondents according to their agricultural information sources

Source of Agricultural info.	No.*	%
Radio	120	67.00
T.V.	14	8.00
Extension field staff	168	93.33
Fellow farmers	114	63.33

- Farmers gave multiple responses

It is evident from Table 2 that respondents utilized more than one source to meet their agricultural information needs. These results are in line with Nazam (2000) who found that 68.8% of the respondents became aware of modern technology through radio while extension worker served as sources of information for 23.3% of respondents.

Awareness on the importance of owning a radio set for obtaining agricultural information was very high. The majority of the respondents (93.9%) own a radio set and they follow agricultural programs in Amharic language. Moreover, farmers were following agricultural information in Radio of Oromifa language (96.7%).

Most farmers were followers of Fana broadcasting corporation (FBC) of Amharic and Oromifa languages, 74.4 and 95.6 percent, respectively. With regard to television broadcast, the distribution was very scant as compared to radio broadcast, which was 19.4, 35.0 and 42.2 percent of Amharic, Oromifa in national broadcast, and Oromia TV, respectively (Table 3).

Table 3. Distribution of media services and its impact on agricultural techno-transfer

Electronic Media	Awareness	
	No.	%
Agricultural Radio Broadcast		
National Radio (Amharic)	169	93.9
National Radio (Oromifa)	174	96.7
Fana Broadcasting Corporation (FBC): Amharic	134	74.4
Fana Broadcasting Corporation (FBC): Oromifa	172	95.6
Agricultural TV Telecasts		
ETV(Amharic)	35	19.4
ETV(Oromifa)	63	35
Oromia TV	76	42.2
Telephone Service		
Telephone (Agricultural Contacts)	6	3.3
Government Number (Office of Wereda Ministry of Agriculture)	2	100
Mobile Phone	102	56.7

- Farmers gave multiple responses

The service of telephone system in the area was assessed, accordingly, only 3.3 percent of them have access to telephone services. Contact of farmers with Wereda Office of Agriculture was very good, and almost all had access to information on agricultural technology.

3.3 Significance of Radio Agricultural Programmes to Farmers

As shown on table 4, 79.5 % of the farmers expressed that radio agricultural programmes were relevant to them, while only 1.7% of the farmers were of the opinion that the radio agricultural programmes were not relevant to their agricultural activities. The finding of the study implied that radio agricultural programmes were useful for acquiring knowledge in improving their agricultural practices (Table 4). Omenesa (1997) 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 .

Table 4: Distribution of respondents based on the relevance of radio agricultural programmes (n=180)

Relevance of Radio Programs	Frequency	Percentage
Highly relevant	64	35.6
Very relevant	79	43.9
Partially relevant	26	14.4
Relevant	8	4.4
Not relevant	3	1.7

Source: Field Survey, 2014

3.4 Extent of agricultural information obtained through television

The extent of agricultural information obtained through television, as indicated earlier, was very low. The vast majority (86.7%) of the respondents receive only up to 25% of agricultural information through TV. Quite a few respondents (6.7%) receive 25-50% and also 6.7% obtained 50-75% of information through this media (Table 5).

Table 5. Extent of agricultural information obtained through TV

S.N	Extent of information	No	Percent
1	Very low (up to 25%)	156	86.7
2	Low (25-50%)	12	6.7
3	Medium (50-75%)	12	6.7
4	High (Above 75%)	0	0
Total			100

3.4. Future Preferences of Electronic Media as Agricultural Information Source

It is fairly possible that farmers continue using electronic media and many join them in the future to obtain technological information. In this study, respondents were asked on the level of usage of electronic media against a given scale 1-5 (where 1= least and 5= best). Based on the data, the degree of usage electronic media ranges from very low to medium (Table 6).

Concerning the type of media they prefer to obtain Agricultural information in the future, Mobile phone was at the top (score=274) with mean value of 3.86, indicating medium level of preference. Radio (223) acquired the 2nd position with mean value 3.54 showing preference level between low and medium but tended more towards medium. Agriculture help-line (score=84), and TV (29), 3rd, and 4th positions with mean values 2.71 and 1.93, respectively (Table 6).

.Table 6. Respondents future preferences of electronic media for getting Agricultural Information (n=180)

Electronic media	No.	Score	Rank Order	Mean	SD
Mobile	71	274	1	3.86	0.92
Radio	63	223	2	3.54	0.77
Agri-help line	31	84	3	2.71	0.71
TV	15	29	4	1.93	1.02

Source: Field Survey, 2014

Conclusion

The study had indicated that most farmers still rely on field extension staff for technological information with radio broadcast and fellow farmers as second and third, respectively, preferences. Other media sources (television, mobile phone, etc.) were less used due to unavailability and affordability. With the advent of expansion of mobile phone network in the country farmers had indicated to use it for future communication to obtain technological information at Dendi and Ejere Weredas.

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