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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 this primary task for which they use a variety of extension teaching methods/media. Among the mass media means of communication, radio is found to be the most important means of communicating agricultural information to the rural farmers. The study was conducted in Ethiopia, Oromia region west shoa zone two weredas of Dendi and Ejere . All the 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 (Ext.). From each of the two weredas, three peasant associations (PA) were selected randomly. From each of the selected villages, 30 farmers were selected at random. The sample comprised 180 respondents. Analysis was done by using Statistical Package for Social Sciences (SPSS), interpreted and discussed to draw conclusions. According to the result indicated, the mean value of age of farmers was 38 .Regarding family sizes; the average family size is 5. The average formal education level is grade 5. Majority of them (93.9%) have radio and they follow agricultural programs in Amharic language. Moreover, there are farmers following agricultural information in Radio of Oromifa language (96.7%).

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There was a great variation of followers in Fana broadcasting corporation (FBC) of Amharic and Oromifa 74.4 and 95.6 percent respectively. The future intention for getting Agricultural information indicates improving mean value in each case as compared to the present use of electronic media. Concerning the preference for obtaining Agricultural information in future, Mobil was at the top (score=274) with mean value 3.86 indicating medium level of preference. Radio (223) acquired the 2nd position with mean value 3.54 showing preference levels between low and medium but tended more towards medium. 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 to this, cell phone coverage is very important for farmers to farmers information exchange purposes.

Key Words: Radio; Agriculture; Technology; farmers; Media

1. Introduction

Nothing seems more important in agricultural development than the dissemination of latest agricultural technologies among the farmers. Agricultural extension organizations are entrusted with this primary task for which they use a variety of extension teaching methods/media. Television is one of the media being used for this purpose both by public and private sectors. The present paper aims to assess the role of television in agricultural technology transfer (Sher Muhammad.et.al,2004).

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 long period as permanent reminder and can use again and again. 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 to inform farmers in the situation of urgency and emergency. Farmers can be informed quickly and

swiftly about diseases and pest control, flood, and changing weather (Muhammad,2005). Farmers can also get the appropriate advices of experts through these media to cope with the emerging problems. In this way the farmers can get hold of their future planning in a better way. The electronic devices used for communication can be regarded as electronic media (Albarran, 2002). Important electronic media pertinent to agriculture include radio, television, audio/video cassettes, telephone, internet, agri. help line, and mobile phone.

Among the mass media means of communication, radio is found to be the most 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 massages (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 stimu-

lates 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 media, electronic media have their own distinctive place in technology transfer.

2. MATERIALS AND METHODS

The study was conducted in Oromia region west shoa zone two weredas of Dendi and Ejere . All the 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 (Ext.).From each of the two weredas, three peasant associations (PA) were selected randomly. From each of the selected villages, 30 farmers were selected at random. For selecting appropriate sample size, the table for determin-

ing sample size (Fitzgibbon and Morris, 1987) was consulted. Thus, the sample comprised 180 respondents. 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.

3. RESULTS AND DISCUSSION

3.1 Socio-economic Characteristics of the Farmers

3.1.1 Age, Educational Background and Family size

The result in table1 indicates mean value of age is 38 with minimum value of 24 and maximum of 76. There is a significant difference in age among the respondents. Regarding family size, the average family size is 5 with a maximum and minimum family size of 13 and 1 respectively. There is also a significant difference among respondents on this regard. The formal education background of the respondents ranges from extreme illiteracy rate (nothing formal education) 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	5	0	12	8.98	9.85	.000***

3.2. Awareness of electronic media

The awareness about the availability of agricultural information through electronic media seems the primary step towards using electronic media for agriculture purposes. This is paramount because the farmers who are well aware of the availability of agricultural information through various electronic media are

likely to be in a better position to use/adopt the information.

Farmers always need information about the usage of improved agricultural technologies using various information sources like radio, TV, extension field staff and fellow farmers. Farmers may get information from any source. Their responses in this regard are given in 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

The data given in Table 2 reveal that extension field staff and radio were used as information sources by majority of the respondents followed by fellow farmers, which was a source of agricultural information. However, the TV was the lowest among the information sources of the respondents.

It is evident from Table 2 that the respondents used more than one source to meet their agricultural information needs. These results are in line with Nazam (2000) 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 respectively.

The data collected regarding the awareness about various aspects of electronic media in the context of agri.information dissemination among farmers were obtained, which are depicted in Table 3 which reveals that awareness about Agricultural radio and Tv broadcasts, mobile phone, land line phone which are pertinent to agricultural information technology transfer.

Awareness about the importance of having radio for transmission of agricultural information is very high. Majority of them (93.9%) have radio and they follow agricultural programs in Amharic language.

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

Moreover, there are farmers following agricultural information in Radio of Oromifa language (96.7%).

There was a great variation of followers in Fana broadcasting corporation (FBC) of Amharic and Oromifa 74.4 and 95.6 percent respectively. Regarding Tv broadcast, the distribution was very low as compared to radio broadcast which was 19.4, 35 and 42.2 percent respectively of Amharic, Oromifa in national broadcast and Oromia TV respectively.

The service of telephone in the area was assessed and evaluated. According to our assessment, only 3.3 percent of them have access for telephone for agricultural information services. The contact of wereda office of agri-

culture is very good and almost 100 percent of them contact the farmers for agricultural information transformation.

3.2.1 Extent of agricultural information obtained through TV

The extent of information obtained through agricultural broadcasts may be considered as an indicator of effectiveness of television as an information source for the farmers. The data in this regard Table 4, show that a vast majority (86.70%) of the respondents got only up to 25% agricultural information through TV Quite a few respondents (6.7%) got 25-50% and 50-75% information through agricultural broadcasts respectively.

Table 4. 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

3.3. Significance of Radio Agricultural Programmes

Table 5 of the result indicated that 35.6 % of the farmers expressed that radio agricultural programmes were highly relevant to their agricultural activities, 43.9 % of the farmers were of the view that the radio agricultural programmes were very relevant to them, 14.4% of the farmers agreed that the radio agricultural programmes were partially relevant to their agricultural activities, 4.4% of the farmers were of the view that the radio agricultural programmes

were relevant 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 are relevant as a result of the knowledge gained that helps in improving their agricultural activities. Omelesa (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 5: 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. Future preferences of electronic media as Agricultural information sources

It is fairly possible that the farmers who are the present users of electronic media may use them in future. On the other hand, it may also be possible that the non users of electronic media (due to some reasons) might have leaning to use them in future. Keeping in view, these possibilities, the respondents were asked about the future preferences of using electronic media against a given scale 1-5 (where 1= least and 5= best). Based on the data, weighted score, rank order, mean, and standard deviation were calculated as presented in Table 6, which reflects that the preference for using the electronic media under study ranges from very

low to medium. The future intention for getting Agricultural information indicates improving mean value in each case as compared to the present use of electronic media. Concerning the preference for obtaining Agricultural information in future, Mobil was at the top (score=274) with mean value 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. These mean values depict that the preference ranged from low to medium.

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

4. Conclusion and Recommendation

The study has shown that there is a significant difference among respondents in age, family size and formal education with mean value of 38, 5 and grade 5 respectively and Extension

field staff and radio were used as information sources by majority of the respondents followed by fellow farmers, which was a source of agricultural information following this There was a great variation of followers in Fana

broadcasting corporation (FBC) of Amharic and Oromifa 74.4 and 95.6 percent respectively. Regarding Tv broadcast, the distribution was very low as compared to radio broadcast which was 19.4, 35 and 42.2 percent respectively of Amharic, Oromifa in national broadcast and Oromia TV respectively.

Concerning the preference for obtaining Agricultural information in future, Mobil was at the top (score=274) with mean value 3.86 indicating medium level of preference. Radio (223) acquired the 2nd position with mean value 3.54 showing preference levels between low and medium but tended more towards medium and the following recommendation has made based on the finding of present study:

- ✓ There is urgent need to intensify both print and electronic media despite the effort made so far so that the circulation of agricultural and non agricultural information would be enhanced more in the future. Therefore ,agricultural technology uptake will be increased by the end users .
- ✓ Based on the information gap we observed, the use of farmers' field day and farmers training center both on station and on farm case would significantly enhance the uptake and sustainable use of agricultural technologies by all level of farmers.

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