

ROLE OF MASS MEDIA IN DISSEMINATING AGRICULTURAL INFORMATION TO FARMERS OF NEDUMANGAD BLOCK IN KERALA

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Abstract: The main objective of the study was to identify and analyze the role of mass media in dissemination agricultural information. Population of the study consist of 1040 farmers registered to four Krishi Bhavans in Nedumangad block. A sample 156 was selected. Survey method using questionnaire was adopted to collect data. From the study it is clear that farmers consider television as most important mass media which disseminate current information pertaining to their needs. Farmers depend mostly on traditional mass media like television radio and magazines. They are less aware of agricultural supports available through modern Medias like Internet

Keywords: Mass Media, Agricultural Information, Television, Radio, Internet, Agricultural Productivity

1.0 Introduction

Agriculture has been a part of human life since the beginning of the human race and the need for agricultural information is as old as agriculture itself. Agricultural development can be stimulated only if farmers get adequate and relevant information at the right time .Utilization of improved agriculture technology by the farmers to a large extent depends upon the effective communication channels to which they are generally exposed directly or indirectly. Sharma (2003) states that, "Quick dissemination of technological information from the Agricultural Research System to the farmers in the field and reporting of farmers' feedback to the research system is one of the critical inputs in transfer of agricultural technology. The success of agricultural development programmes depends largely on the nature and extent of use of mass media for disseminating relevant information to farmers disseminating relevant information to farmers.

Mass media is the only possible way of wide and rapid transmission of information to farmers. Radio and Television have been acclaimed to be the most effective media for diffusing the scientific knowledge to the masses, as they transfer modern agricultural technology to literate and illiterate farmers alike even in interior areas, within short time. The farmers can easily understand the operations, technology and instruction through television. Newspaper and farm magazine have a vital role in communication of agricultural information among farmers. Increasing rate of literacy in the country offers new promises and prospects for utilizing print medium as a means of mass communication. Effective communication of new research findings and technologies in agriculture to rural farmers using media remains a promising strategy for increasing agricultural productivity

2.0 Objectives of the study

Major objectives of the study are:

1. To identify the mass media used by farmers for getting agricultural information
2. To analyze the role of mass media in disseminating agricultural information
3. To identify the use of internet by farmers for gathering information
4. To identify the usefulness of information provided by different medias
5. To identify the impact of mass media on agricultural productivity

3.0 Hypothesis

H1: There is a no significant association between use of magazine and impact on agricultural productivity.

H2: There is a no significant association between use of Radio and impact on agricultural productivity.

H3: There is a no significant association between use of television and impact on agricultural productivity.

4.0 Review of Literature

Dash, Kumar, and Mahra.(2017) study investigated communication behaviour of rural youth in Udham Singh Nagar District of Uttarakhand state, India. Data was collected through stratified random sampling with proportionate allocation for selecting 120 respondents from the study area. The study revealed that majority of respondents had medium level mass media exposure. Television was used mostly for entertainment, political and agricultural purpose in their own homes at night time. Majority of them were found satisfied with the information shown in the television via different agricultural programs and therefore inclined towards accepting that information. The analysis of qualitative data indicated youth keenness to use information through mass media. The present study recommended that mass media infrastructure should be encouraged and utilized by rural youth in the rural areas to facilitate customized information delivery in a right time.

Khan, Rahman, and Nasir Uddin (2017) undertook a study to determine the effectiveness of selected mass media in agricultural technology transfer to farmers of Bangladesh and identify the influential factors affecting the effectiveness of mass media in technology transfer to farmers. The study was conducted in three villages of Gouripur sub-district under Mymensingh district in Bangladesh. One hundred ten farmers were interviewed using a structured questionnaire for data collection .Both descriptive and inferential statistics were used to analyze the collected data. Television was most popular mass media compared to radio, leaflet, poster and farm magazine based on the farmer's responses. Out of eight characteristics, farmer's education, extension contact and use of media had positively significant with the effectiveness of mass media. Multiple regression analysis revealed that 39.3% of the total variation in perceived effectiveness of mass media explained by two variables, namely education and use of media and identified as influential factors affecting the effectiveness of selected mass media.

Singh and singh (2017) conducted a study in Rajgarh District, Block Khilchipur, Zeerapur, Sarangapur, Narsingharh, Bioara, and Rajgarh M.P. during the year 2013-14 to find out the utilization level of communication channels of wheat growers and find out the association between social participation of respondents and utilization level of communication channels. The study revealed that television was the most utilized communication channel followed by progressive farmers and radio study also revealed that there was a positive and significant relationship between social participation of respondent and utilization level of communication channel

Mgbakor, Iyobor and Okezie (2013) conducted a study to investigate the socioeconomic efforts of mass media on farmers in Ika North East Local Government Area of Delta State, Nigeria. It was designed to know the kind of services provided by extension workers to increasing farm output. A total of ninety six (96) farmers were randomly selected and interviewed. From the tables, simple descriptive statistical tools were used such as: frequency table and percentage. The findings show that visit of extension workers to farmers were aimed at teaching them modern technologies, majority of the benefits from extension services were due to usefulness of the innovations. The major constraints militating against the used mass media were inadequate capital, language, frequency modulation, power shortage, time of programmes, price of battery and mode of presentation.

5.0 Methodology

The user group under consideration consist of farmers registered to four KrishiBhavans in Nedumangad block. The farmers with landholding of more than one acre were obtained from registers maintained by Krishi Bhavan for providing agriculture incentives provided by central and state governments. Farmers with more than 1 acre registered in Krishi Bhavans in the four selected blocks are 1040. Sample size of fifteen percentages (156) of farmers is selected. A total of 170 farmers were identified and questionnaire was distributed. Of this 156(91.76%) of the farmers responded and were interviewed with the help of questionnaire.

Survey using questionnaire was resorted to collect data from user group. The questionnaire in Malayalam was designed to collect data .This was served in person and in many cases the details received through questionnaire was supplemented with personal interview for less educated farmers.

6.0 Data analysis**Table 1- Socio Demographic Profile**

Category	Frequency(N=156)	Percentage
Age		
<40	2	1.28%
41-50	47	30.13%
51-60	60	38.5%
>60	47	30.1%

Education		
upto7th	26	16.7%
upto10th	99	63.5%
College	31	19.9%

The socio demographic profile of the respondents is presented in Table.1 Age of the farmers, gender, education, occupation and other related variables were categorized for the purpose of data analysis. The proportion of farmers was higher in the age group of 51- 60 years. Education wise, the respondents were grouped into three: i.e. up to 7th standard, 10th standard and college educated. Among 156 respondents majority (63.5%) passed were found to have completed 10th standard.

Table 2 - Mass Media Used By Farmers

Sources	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
TV	36	35	30	30	131	83.97
Magazine	28	19	25	20	92	58.97
Radio	5	9	10	5	29	18.59
Internet	2	3	4	4	13	8.33

From table 2 it is clear that farmers identified television (83.97 %) as most important mass media in disseminating agricultural information. Magazines emerged as the second most popular mass media (58.97%). Radio as a source of information was identified by 18.59 percent of respondents. Only about 8 percent respondents depend on n internet for information. There is no significant variation in the opinion of respondents in different blocks.

Table 3 - Use of Agriculture Magazines

Magazine	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
YES	31	24	21	24	100	64.10
NO	9	12	19	16	56	35.90
Total	40	36	40	40	156	100.00

Respondents were asked whether depend on agricultural information from magazines in their day to day agriculture practice. From table 3it is clear that 64.10 % of the farmers subscribe one or other type of agricultural magazine and adopt the agricultural information provided in them in their day to day agricultural practice. There is no significant variation in the opinion of respondents in different blocks.

Table 4- Magazines Subscribed by Respondents

Name of magazine	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
Kerala Karshakan	25	23	17	14	79	50.64
Karshakasree	14	3	7	14	38	24.35
Karshikadeepam	0	0	1	0	1	0.64
Rubber Magazine	0	0	1	0	1	0.64

Even in this digital era, printed magazines still continue to be a source of information in the field of agriculture. From table it is clear that half of the respondents subscribe to Kerala Karshakan, the official publication of Farm Information Bureau, Government of Kerala, as its subscription is mediated by KrishiBhavans for the farmers registered there. Karshakasree, the magazine published by Malayala Manorama Group, is subscribed to by 38 percent farmers. Karshikadeepam and Rubber Magazine are subscribed by two farmers. There is no significant variation in the opinion of respondents in different blocks.

Table 5- Use of Radio for Agricultural Information

Radio	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
Yes	5	8	13	9	35	22.44
No	35	28	27	31	121	77.56
Total	40	36	40	40	156	100.00

Radio is the traditional mss media used by farmers. Benefit of radio is that even illiterate people can use it even during their working hours. Many of the old farmers are still using radio out of habit. From the table 5 it is clear that only 22.44 percent of farmers listen and adopt the agricultural information disseminated through radio. This

can be attributed to widespread use of television by respondents. There is no significant variation in the opinion of respondents in different blocks.

Table 6- Radio Programs Heard By Farmers

Name of program	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
KarshikaMegala Varthakal	5	4	11	6	26	16.66
Kissan Vani	0	2	7	2	11	7.05
HarithaThalam	0	1	6	0	7	4.48
VaylumVeedum	0	0	3	0	3	1.92

Agricultural related programs available through radio were identified and presented to the respondents. Radio programs identified were Karshika Megala Varthakal, Kissan vani, HarithaThalam and Vaylum Veedum. Among the 156 respondents 16.66 percent are in the habit of listening to Karshika Megala Varthakal. Kissan Vani and HarithaThalam are listened by 7.05 and 4.48 percent respectively. Valayum Veedum was listened to by 1.92 % .There is a significant variation in programs heard by respondents in different blocks.

Table 7- Use of Television

TV	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
Yes	26	27	31	35	119	76.28
No	14	9	9	5	37	23.72
Total	40	36	40	40	156	100.00

Most of the household surveyed have a television .Majority of the farmers watch agriculture programs and use the information disseminated through them in their agricultural practice. Among the 156 respondents, 76.28 percent pay attention to agricultural programs broadcasted in TV and apply them in their agriculture practise. There is no significant variation in the opinion of respondents in different blocks.

Table 8- Agricultural Programs Viewed

Programs	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
Krishidarshan	25	25	30	30	110	92.44
Kissan Krishideepam	25	24	30	24	103	86.55
NattuPacha	20	21	25	17	83	69.75
Harithakeralam	19	17	19	11	66	55.46
BhoomiGeetham	18	16	17	8	59	49.58
NallaMannu	15	14	20	10	59	49.58
Bhoomi Malayalam	18	12	17	8	55	46.22
Njattu vela	10	5	9	9	33	27.73
Noorumeni	5	6	5	8	24	20.17

All the channels in television have a slot devoted to agriculture and include programs from agriculture news to new agricultural techniques and practices. Agricultural programs are aired through the government broadcasting channel Doordarshan and Private channels. Most of the farmers are viewers of Doordarshan as they don't subscribe to private television channels. Krishidarshan in Doordarshan is viewed by 92.44 percent of respondents. Kissan Krishideepam (Asianet) is viewed by 86.55 percent, NattuPacha (Manorama News) by 69.75 percent, Harithakeralam (Jeevan TV) by 55.46 percent, BhoomiGeetham (Kairali) and NallaMannu (Asianet News) by 49.58 percent, Bhoomi Malayalam (Surya) 46.22 percent, Njattuvella (MediaOne) by 27.73 percent and Noorumeni (Shalom TV) by 20.17 percent of the respondents. There is no significant variation in the opinion of respondents in different blocks.

Table 9- Use of Internet

Use of Internet	Anad	Panavoor	Aruvikkara	Karakulam	Total	Percentage
Yes	7	5	6	12	30	19.23
No	33	31	34	28	126	80.77
Total	40	36	40	40	156	100

Internet can be used effectively to disseminate agricultural information at a faster rate.use of internet would help to modernize agriculture. Respondents access to internet was analysed and the results are presented in Table 9. Among the 156 respondents only 19.23 percent use internet and rest do not have access to these facilities. There is no significant variation in the opinion of respondents in different blocks

Table 10- Level of Usefulness of Information Provided by Media

Media	Not useful	Not very useful	Moderately useful	Very useful	Extremely useful
Magazine	14(-8.97%)	8(-5.13%)	34(-21.79%)	63(-40.38%)	37(-23.72%)
Radio	119(-76.28%)	16(-10.26%)	14(-8.97%)	4(-2.56%)	3(-1.92%)
Television	1(-0.64%)	2(-1.28%)	8(-5.13%)	9(-5.77%)	136(-87.18%)
Internet	142(-91.03%)	3(-1.92%)	6(-3.85%)	3(-1.92%)	2(-1.28%)

Medias provide agricultural information in different formats to the farmers. Even though information provided may be informative and attractive, they only adopt that information which they feel useful. Therefore, farmers were asked to rate their perception of various sources of agricultural information as ‘not useful’, ‘not very useful’, ‘Moderately useful’, ‘very useful’ and ‘extremely useful’. From table it is clear 87.18 percent of the respondents rated information provided by TV as extremely useful. Information provided by radio and internet was rated as not useful by 76.28% and 91.03% of respondents respectively.

Table 11- Impact of on Agricultural Productivity

Impact of ICT	improvement	%	No improvement	%
Productivity	136	87.18	20	12.82
Change in variety of crop	121	77.56	35	22.44
Income	97	62.18	59	37.82
Agriculture wealth	12	7.69	144	92.31
Liberal spending on agriculture	124	79.49	32	20.51
Change in pesticide and fertilizers application	123	78.85	33	21.15
Price of produce	23	14.74	133	85.26

Information from mass media will be used for agricultural activities only if this informations have a impact on agriculture. Responses are shown in Table 12. As a result of the use of information from mass media 87.18 percent of the respondents noticed improvement in Productivity, 77.56 percent felt that there is Change in variety of crop, and 62.18 percent are of the view that it has positively influenced income. Impact was also noticed in Liberal spending on agriculture (79.49%) and Change in pesticide & fertilizers application (78.85%). But no improvement was noticed in Agricultural wealth (92.31%) and price of produce (85.26%).

Table 12- Data and Test of Significance (Chi-Square Test) Showing Association Between Use of Magazine and Impact on Productivity

Variables	Category	Yes	No	Chi square	P value
Crop Productivity	yes	90(88.2%)	12(11.8%)	12.163	0.000*
	no	35(64.8%)	19(35.2%)		
Change in variety of crop	yes	69(67.6%)	33(32.4%)	4.646	0.031*
	no	27(50%)	27(50%)		
Income	yes	61(59.8%)	41(40.2%)	11.329	0.001*
	no	17(31.5%)	37(68.5%)		
Agriculture wealth	yes	3(2.9%)	99(97.1%)	1.619	0.203
	no	0	54(100.0%)		
Liberal spending on agriculture	yes	78(76.5%)	24(23.5%)	5.030	0.025*
	no	32(59.3%)	22(40.7%)		
Change in pesticide and fertilizers application	Yes	75(73.8%)	27(26.8%)	0.106	0.744
	No	41(75.9%)	13(24.1%)		
Price of produce	yes	9(8.8%)	93(91.2%)	0.008	0.928
	no	5(9.3%)	49(90.7%)		

ns: not significant ($P > 0.05$), *: significant ($P < 0.05$).

To assess the association between use of magazine and impact on agricultural productivity, research hypothesis is formulated as H1: There is a no significant association between use of magazine and impact on agriculture .Hypothesis is tested using chi square test. Details are given in the table 4.42.From Table 12, it is observed that there exists statistically significant association between the use of magazines and impact on agricultural productivity such as crop productivity (Chi-square=12.163, $P=0.000 < 0.05$), change in variety of crop (Chi-square=4.646, $P=0.031 < 0.05$), income (Chi-square=11.329, $P=0.001 < 0.05$), liberal spending on agriculture (Chi-square=5.030, $P=0.001 < 0.05$).From Table 4.42 no significant association is noted in agricultural wealth

(Chi-square = 1.916, P=0.203> 0.05) Price of produce(Chi-square=.008, P=0.928>0.05) and Change in pesticide and fertilizers application (Chi-square=.106, P=.744 >0.05). Thus Null hypothesis H1 is partially rejected.

Table 13- Data And Test of Significance (Chi-Square Test) Showing Association Between Use of Radio And Impact on Productivity

Variables	Category	Yes	No	Chi square	P value
Crop Productivity	yes	29(82.9%)	6(17.1%)	.211	0.646
	no	96(79.3%)	25(20.7%)		
Change in variety of crop	Yes	22(62.9%)	13(37.1%)	0.033	0.856
	No	74(61.2%)	47(38.8%)		
Income	Yes	20(57.1%)	15(42.19%)	0.921	0.337
	no	58(47.9%)	63(52.1%)		
Agriculture wealth	yes	3(8.6%)	32(91.4%)	10.575	0.001*
	no	0	121(100%)		
Liberal spending on agriculture	yes	26(74.3%)	9(25.7%)	0.309	0.578
	no	90(74.4%)	31(25.6%)		
Change in pesticide and fertilizers application	Yes	26(74.3%)	9(25.7%)	0.000	0.991
	No	90(74.4%)	31(25.6%)		
Price of produce	Yes	5(14.3%)	30(85.7%)	1.558	0.212
	no	0	112(92.6%)		

ns: not significant (P>0.05), *: significant (P<0.05).

To assess the association between use of Radio and impact on agriculture, research hypothesis is formulated as H2: There is a no significant association between use of Radio and impact on agricultural productivity .Hypothesis is tested using chi square test. From Table 13, it is observed that there exists no statistically significant association between the radio use and impact on agricultural productivity factors such as Crop productivity (Chi-square=0.211, P=0.646>0.05), change in variety of crop (Chi-square=0.033, P=0.856>0.05), income (Chi-square=0.921, P=0.337>0.05) liberal spending on agriculture (Chi-square=0.000, P=0.991>0.05) and price of produce (Chi-square=1.558, P=0.212>0.05). Therefore Null hypothesis H2 is accepted. From Table 4.35, it is seen that the only significant association in Agriculture wealth (Chi-square=10.575, p=0.001<0.05). Therefore Null hypothesis H2 is accepted.

Table 14-Data and Test of Significance (Chi-Square Test) Showing Association Between Use of Television and Impact on Productivity

Variables	Category	Yes	No	Chi square	P value
Crop Productivity	yes	111(84.1%)	21(15.9%)	8.462	0.004*
	no	14(58.3%)	10(41.7%)		
Change in variety of crop	Yes	83(62.9%)	49(37.1%)	0.651	0.420
	No	13(54.2%)	11(45.8%)		
Income	Yes	72(54.5%)	60(45.5%)	7.091	0.008*
	no	6(25%)	.8(75%)		
Agriculture wealth	yes	3(2.3%)	129(97.7%)	0.556	0.456
	no	0	24(100%)		
Liberal spending on agriculture	yes	98(74.2%)	34(25.8%)	5.740	0.017*
	no	12(50%)	12(50%)		
Change in pesticide and fertilizers application	Yes	101(76.5%)	31(23.5%)	2.092	0.148
	No	18(62.5%)	9(37.5%)		
Price of produce	Yes	13(9.8%)	119(90.2%)	0.803	0.370
	no	1(4.2%)	23(95.8%)		

ns: not significant (P>0.05), *: significant (P<0.05).

To assess the association between use of television and impact on agricultural productivity, research hypothesis is formulated as H3: There is a no significant association between use of television and impact on agricultural productivity. Hypothesis is tested using chi square test. From Table 4.44, it is observed that there exists statistically significant association between the use of television and impact on agricultural productivity such as Crop Productivity (Chi-square= 8.462,p=0.004 <0.05) Income (Chi-square=7.091 ,p= 0.008<0.05) Liberal spending on agriculture (Chi-square=5.740 ,p= 0.017<0.05).From Table 4.44, it is seen that no significant

association is noted in Change in variety of crop (Chi-square= 0.651, $p=0.420>0.05$) Price of produce (Chi-square=0.803, $p=0.370>0.05$) change in pesticide and fertilizers application (Chi-square= 2.092, $p= 0.148>0.05$) and Agriculture wealth (Chi-square= 0.556, $p= 0.456>0.05$) Thus Null hypothesis H3 is partially rejected.

Summary of Findings

1. Television was identified by 83.97 % of farmers as most important mass media in disseminating agricultural information.
2. 64.10 % of the farmers subscribe one or other type of agricultural magazine and adopt the agricultural information provided in them in their day to day agricultural practice
3. Half of the respondents subscribe to Kerala Karshakan, the official publication of Farm Information Bureau, Government of Kerala
4. Only 22.44 percent of farmers listen and adopt the agricultural information disseminated through radio and Karshika Megala Varthakal was the most listened program by these farmers
5. $\frac{3}{4}$ the of the farmers pay attention to agricultural programs broadcasted in TV and apply them in their agriculture practice
6. Krishidarshan(92.44%) in Doordarshan is the most viewed program by the farmers
7. only 19.23 percent of farmers used internet for collecting agricultural information and rest do not have access to internet
8. 87.18 percent of the respondents rated information provided by TV as extremely useful.
9. 87.18 percent of the respondents noticed improvement in Productivity and 62.18 percent are of the view that use of mass media has positively influenced income.
10. There exists statistically significant association between the use of magazines and impact on agricultural productivity such as crop productivity, change in variety of crop, income, liberal spending on agriculture
11. There exists no statistically significant association between the radio use and impact on agricultural productivity factors such as Crop productivity, change in variety of crop, income liberal spending on agriculture and price of produce
12. There exists statistically significant association between the use of television and impact on agricultural productivity such as Crop Productivity, Income and Liberal spending on agriculture

Conclusion

The main objective of the study was to identify and analyze the role of mass media in dissemination agricultural information. From the study it is clear that farmers consider television as most important mass media which disseminate current information pertaining to their needs. Radio as medium for agriculture is considered by older farmers who hear it out of habit. Most of them subscribe agricultural magazines. Internet was used only by a handful of farmers to seeking agricultural information. Farmers feel that use information disseminated by mass media has a positive influence on productivity. Thus it is clear that farmers depend on traditional mass media and less aware of agricultural supports available through modern Medias like Internet. These medias can have an impact in agriculture only if farmers know their availability, how to access them and the reliability of information available through them.

7.0 References

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