Communication Mechanisms of Farmers for Acquisition of Information on Farm Mechanization

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ABSTRACT

Sources of information help the farmer to get acquainted with agriculture technological innovations, technological recommendations and new farm implements. Therefore, present study was conducted in Solapur and Ahmednagar district of Maharashtra state to know the communication mechanisms of farmers for acquisition of information on farm mechanization and to study the relationship of sources of information with knowledge and utilization of farm implements. From the findings of the study it can be concluded that overall, majority of the respondents had used personal localite source of information to medium extent and personal cosmopolite sources of information to low extent. Overall, it is concluded that friends, neighours, progressive farmers, relatives and agro service centers are the major source of information to the majority. Majority of them obtained information from Agriculture Assistant. Scientists of Agricultural Universities and KVK experts were also the important sources of information for them. There was a highly significant and positive relationship between the communication sources of the respondents with their knowledge level and utilization index about farm implements. This exhibits the important role of change agents in transfer of technology to the farmers.

Key words: *Farm mechanization; Sources of information; Personal localite sources; Personal cosmopolite sources;*

Agricultural mechanization implies the use of various power sources and improved farm tools and equipments, with a view to reduce the drudgery of the human beings and draught animals, enhance the cropping intensity, precision and timelines of efficiency in utilization of various crop inputs and reduce the losses at different stages of crop production. Communication mechanisms i.e. sources of information helps the farmers to get acquainted with agriculture technological innovations, technological recommendations and new farm implements. Keeping this in view, the present study was undertaken with the following objectives:

i. To know the communication mechanisms of farmers for acquisition of information on farm mechanization.
ii. To study the relationship of sources of information with knowledge and utilization of farm implements

METHODOLOGY

The present study was conducted in Solapur and Ahmednagar district of Maharashtra state. Total 288 representative farmers were selected from the 16 villages and eight tahsils in these districts. In this study, source of information refers to the frequency of contact or exposure of the respondent to different information sources like personal localite, personal cosmopolite for obtaining the information on farm mechanization.

The data were collected through specially developed interview schedule; thereafter the data were analyzed, tabulated and interpreted with suitable statistical instruments like frequency, average and correlation coefficient.

RESULTS AND DISCUSSION

Different sources of information have their own contribution and role in the transfer of information related to farm mechanization. In this study, source of information refers to the frequency of contact or exposure of the respondent to different information

sources for obtaining the agriculture information. The extent of use of information sources is measured by taking into consideration the possible personal localite and personal cosmopolite sources available to the respondents.

I. *Personal localite source of information* : Here it referred to the frequency of contact or exposure of the respondent to local personnel's such as friends, neighbors, relatives, progressive farmers and local leaders for obtaining the agriculture information. The distribution of the respondents according to their extent of use of personal localite sources of information is given in Table 1. The data from the Table 1 revealed that in irrigated area about one half (46.53%) of the respondents had used personal localite sources of information to high extent, followed by medium (43.06%) and low extent (10.42%) use of personal localite sources of information. In rainfed area, 59.72 per cent of the respondents had used personal localite sources of information to medium extent, followed by high extent (27.08%) and low extent (13.19%) use of personal localite sources of information. Overall, 51.39 per cent of the respondents had used personal localite sources of information to medium extent, followed by high extent (36.81%) and low (11.81%) extent use of personal localite sources of information.

From this it can be concluded that majority of the respondents had medium to high level use of personal localite sources of information. The findings are in line with the findings of *Aitwade (2012)*.

Along with these categories of extent of use of personal localite source of information, an attempt has been made to place the respondents as per different personal localite sources of information e.g friends, relatives and other. The frequency- wise distribution of respondents according to different personal localite sources of information is given in Table 2.

From Table 2, in irrigated area it was observed that overall; friends were the major source of information to respondents. Overall, 51.74 per cent respondents seek information once in week from friends, followed by neighours (42.71%), progressive farmers (32.99%) and relatives (31.94%). While considering local leaders, it was observed that more than half of respondents (57.29%) never contacted the local leaders for seeking agriculture information. From Table 2, it is depicted that agro service centers was also one of the important source of information where he trust more and must visited. The findings are in line with the findings of *Sharma (2010)* and *Dhere (2012)*.

II. *Personal cosmopolite source of information:* Here, it referred to the frequency of contact or exposure of the respondent to extension personnel from Agricultural Department, Panchayat Samiti, Agricultural Universities, Agricultural Research Stations and Krishi Vigyan Kendra's for obtaining the agriculture information. The distribution of the respondents according to their extent of use of personal cosmopolite sources of information is given in Table 3.

The data from the Table 3 revealed that in irrigated area, 56.25 per cent of the respondents had used personal cosmopolite sources of information to low extent, followed by medium extent (40.97%) and high extent (2.78 per cent). In rainfed area, large majority (74.31%) had used personal cosmopolite sources of information to low extent, followed by medium extent (20.83%) and 4.86 per cent of the respondents had used to high extent. Overall, about two third of the respondents (65.28%) had use personal cosmopolite source of information to low extent, followed by medium

Table 1. Distribution of the respondents according to their extent of use of personal localite source of information

Sources of info. (score)	Irrigated (n=144)	Rainfed (n=144)	Overall (N=288)
Low (up to 12)	15(10.42)	19(13.19)	34(11.81)
Medium (13 to 24)	62(43.06)	86(59.72)	148(51.39)
High (above 24)	67(46.53)	39(27.08)	106(36.81)
Total	144	144	288
Mean	23.42	20.19	21.81

(Figures in the parentheses indicate percentages)

Table 3. Distribution of the respondents according to their extent of use of personal cosmopolite sources of information

Category	Irrigated (n=144)	Rainfed (n=144)	Overall (N=288)
Low (Up to 22)	81(56.25)	107(74.31)	188(65.28)
Medium (23 to 44)	59(40.97)	30(20.83)	89(30.90)
High (Above 44)	4(2.78)	7(4.86)	11(3.82)
Total	144	144	288
Mean	22.40	17.47	19.93

(Figures in the parentheses indicate percentages)

Table 2. Distribution of the respondents according to use of personal localite sources of information

Organization	Irrigated (n=144)						Rainfed (n=144)						Overall (N=288)					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Friends	79	19	30	1	0	15	70	19	43	4	-	8	149	38	73	5	-	23
	(54.86)	(13.19)	(20.83)	(0.69)	(0.00)	(10.42)	(48.61)	(13.19)	(29.86)	(2.78)	-	(5.56)	(51.74)	(13.19)	(25.35)	(1.74)	-	(7.99)
Neighours	69	21	41	5	-	8	54	25	38	12	-	15	123	46	79	17	-	23
	(47.92)	(14.58)	(28.47)	(3.47)	-	(5.56)	(37.50)	(17.36)	(26.39)	(8.33)	-	(10.42)	(42.71	(15.97)	(27.43)	(5.90)	-	(7.99)
Relatives	52	18	47	6	3	18	40	14	37	23	-	30	92	32	84	29	3	48
	(36.11)	(12.50)	(32.64)	(4.17)	(2.08)	(12.50)	(27.78)	(9.72)	(25.69)	(15.97)	-	(20.83)	(31.94)	(11.11)	(29.17)	(10.07)	(1.04)	(16.67)
Progressive	57	14	49	9	1	14	38	8	49	19	-	30	95	22	98	28	1	44
Farmers	(39.58)	(9.72)	(34.03	(6.25)	(0.69)	(9.72)	(26.39)	(5.56)	(34.03)	(13.19)	-	(20.83)	(32.99)	(7.64)	(34.03)	(9.72)	(0.35)	(15.28)
Local	21	7	22	15	3	76	14	0	11	17	13	89	35	7	33	32	16	165
Leaders	(14.58)	(4.86)	(15.28)	(10.42)	(2.08)	(52.78)	(9.72)	(0.00)	(7.64)	(11.81)	(9.03)	(61.81)	(12.15)	(2.43)	(11.46)	(11.11)	(5.56)	(57.29)
Agro Service	15	18	39	62	1	9	14	5	29	81	-	15	29	23	68	143	1	24
Centers	(10.42)	(12.50)	(27.08)	(43.06)	(0.69)	(6.25)	(9.72)	(3.47)	(20.14)	(56.25)	-	(10.42)	(10.07)	(7.99)	(23.61)	(49.65)	(0.35)	(8.33)

(Figures in the parentheses indicate percentages); 1=Once in week; 2= Once in Fortnight; 3=Once in month; 4=Once in season; 5=Some time in season; 6=Never

Table 4. Distribution of the respondents according to use of personal cosmopolite source of information

Organization	Irrigated (n=144)						Rainfed (n=144)						Overall (N=288)					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Agril.	10	4	60	48	4	18	13	13	58	34	1	25	23	17	118	82	5	43
Asstt.	(6.94)	(2.78)	(41.67)	(33.33)	(2.78)	(12.50)	(9.03)	(9.03)	(40.28)	(23.61)	(0.69)	(17.36)	(7.99)	(5.90)	(40.97)	(28.47)	(1.74)	(14.93)
Agril.	1	2	14	35	36	56	7	3	24	17	8	85	8	5	38	52	44	141
Supervisor	(0.69)	(1.39)	(9.72)	(24.31)	(25.00)	(38.89)	(4.86)	(2.08)	(16.67)	(11.81)	(5.56)	(59.03)	(2.78)	(1.74)	(13.19)	(18.06)	(15.28)	(48.96)
Taluka	1	-	14	47	33	49	1	-	14	29	37	63	2	-	28	76	70	112
Agri. Offic.	(0.69)	-	(9.72)	(32.64)	(22.92)	(34.03)	(0.69)	-	(9.72)	(20.14)	(25.69)	(43.75)	(0.69)	-	(9.72)	(26.39)	(24.31)	(38.89)
Sub Divi.	-	-	1	13	20	110	-	-	2	8	13	121	-	-	3	21	33	231
Agril. Offi.	-	-	(0.69)	(9.03)	(13.89)	(76.39)	-	-	(1.39)	(5.56)	(9.03)	(84.03)	-	-	(1.04)	(7.29)	(11.46)	(80.21)
Supdt. Agri.	-	-	1	2	7	134	-	-	2	6	7	129	-	-	3	8	14	263
Officer	-	-	(0.69	(1.39)	(4.86)	(93.06)	-	-	(1.39)	(4.17)	(4.86)	(89.58)	-	-	(1.04)	(2.78)	(4.86)	(91.32)
University	18	9	30	32	22	33	1	1	5	30	49	58	19	10	35	62	71	91
Scientist	(12.5)	(6.25)	(20.83	(22.22)	(15.28)	(22.92)	(0.69)	(0.69)	(3.47)	(20.83)	(34.03)	(40.28)	(6.60)	(3.47)	(12.15)	(21.53)	(24.65)	(31.60)
KVK	-	4	5	31	42	62	-	-	9	20	35	80	-	4	14	51	77	142
Expert	-	(2.78)	(3.47)	(21.53)	(29.17)	(43.06)	-	-	(6.25)	(13.89)	(24.31)	(55.56)	-	(1.39)	(4.86)	(17.71)	(26.74)	(49.31)

(Figures in the parentheses indicate percentages); 1=Once in week; 2= Once in Fortnight; 3=Once in month; 4=Once in season; 5=Some time in season; 6=Never

(30.90%) and high extent (3.82%).

From this it can be concluded that frequency of contact or exposure of the respondent to the personal cosmopolite sources was comparatively more in irrigated area than rainfed area. This might be observed because respondents in irrigated area are having sound economic position and more awareness than rainfed area. The distribution of respondents as per their use of personal cosmopolite sources of information e.g Agricultural Department, Agricultural Universities, Agricultural Research Stations, Krishi Vigyan Kendra's etc. for obtaining the agriculture information is given in Table 4.

Overall it is evident from the Table 4 that the majority (40.97%) of the respondents obtained information from Agriculture Assistant 'once in month' and 18.06 per cent respondents contacted Agril. Supervisors and 26.39 per cent approached to Taluka Agricultural Officer 'once in a season' for getting information. While, large majority respondents never contacted with Sub Divisional Agricultural Officer (80.21%) and District Superintending Agricultural Officer (91.32%) for getting information. Scientists from Agricultural Universities were contacted by 21.53 per cent respondents 'once in a season' and by 24.65 per cent respondents 'sometime in a season' But about half of respondents (49.31%) had never contacted with KVK experts. The findings are in line with the findings of *Dhere (2012)*.

III. *Relationship of sources of information with knowledge and utilization of farm implements*: Correlation coefficient gives an idea of positive or negative relationship between two variables. Efforts were made to work out the relationship of sources of information used by the respondents with their knowledge and utilization of farm implements.

The correlation coefficient between sources of information used by the respondents with knowledge level and utilization index of the farm implements is presented in Table 5.

It is evident from Table 5 that, there was highly significant and positive relationship between the communication sources (personal localite and personal cosmopolite sources of information) of the respondents with their knowledge level about farm implements in irrigated, rainfed and overall (r = 0.188), (r = 0.161) and (r = 0.189), respectively. This indicates that as the sources of information increased there was increase in knowledge of the respondents about farm implements. This may be because of the fact that the respondents are more exposed to new ideas through different sources of information and may have more capacity to acquire knowledge. This exhibits the important role of change agents in transfer of technology to the farmers. The finding is in line with the findings of *Bite (2009) and Sabi et al. (2014)* but contradictory with the findings of *Dange (2012)*.

Similarly, highly significant and positive relationship was observed between communication sources of the respondents with utilization index about farm implements in irrigated, rainfed and overall (r = 0.119), (r = 0.153) and (r = 0.178), respectively. This indicates that as the sources of information increased; there was increase in farm implements utilization by the respondents. This may be because of the fact that the respondents are more exposed to new ideas through different sources of information and may have more capacity to acquire knowledge and adopt new technologies. This exhibits the important role of change agents in transfer of technology to the farmers. The finding is in line with the findings of *Darandale (2010)* and *Singh et al. (2014)*.

Table 5. Correlation coefficient between sources of information used by the respondents with knowledge level and utilization index of the farm implements

Variables	With Knowledge level			With Utilization index		
	'r' value's in irrigated area	'r' value's in rainfed area	'r' value's overall	'r' value's in irrigated area	'r' value's in rainfed area	'r' value's overall
Communication mechanism (Personal localite + Personal cosmopolite	0.188**	0.161**	0.189**	0.119*	0.153**	0.178**

Note: ** Significant at 1 % and * Significant at 5 % level of probability.

CONCLUSION

From the findings of the study it can be concluded that in irrigated area, majority of the respondents had used personal localite sources of information to high extent followed by medium extent, while personal cosmopolite sources of information in low to medium extent. In rainfed area, majority of the respondents had used personal localite source of information to medium extent, while personal cosmopolite sources of information to low extent.

Overall, majority of the respondents had used personal localite source of information to medium extent and personal cosmopolite sources of information to low extent.

Overall it is concluded that friends, neighours, progressive farmers, relatives and agro service centers are the major source of information to the majority, while majority of the respondents never seeking agriculture information from local leaders. Overall, majority of the respondents obtained information from Agriculture Assistant 'once in month' and contacted Agriculture Supervisors and Taluka Agricultural Officer 'once in a season' for getting information. Large majority respondents never contacted with Sub Divisional Agricultural Officer and District Superintending Agricultural Officer for getting information. Scientists of Agricultural Universities and KVK experts were also the important sources of information for the respondents.

Highly significant and positive relationship between the communication sources of the respondents with their knowledge level and utilization index about farm implements indicates that as the sources of information increased there was increase in knowledge and utilization index of the respondents about farm implements. This exhibits the important role of change agents in transfer of technology to the farmers.

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