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Information Sources Used by Farmers of Bundelkhand Region

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ABSTRACT

India still breathes in villages with the help of information sources. These sources play very important role in agricultural technology transfer among farming community. In Bundelkhand region of Uttar Pradesh the scenario of information use is differ as compare to other parts of India due to socio-economic and physico-geographical reasons. With this background a purposive study was conducted in all seven districts of this region. The study was based on 700 randomly selected farming respondents' views. The results showed that respondents education, caste category. Farm size and occupation were significant to mass media exposure while age and family type having non-significant relation. Around 84 percent farmers were practicing only agriculture, 45.46 per cent comes under small holding and 56 per cent belong to backward class. Results also indicated that about 58 per cent farmers were unknown about agricultural innovation related source of information while only 43.10 per cent farmers were well known in which only 26.51 per cent farmers utilized source of information. In this region activity of public extension system was found poor in terms of input delivery, advisory & diagnostic services but first line technology transfer system maintained faith among farmers with poor reach ability and utilization of information. Farmers were consulting more to fellow farmers, relatives, neighbors, input dealers and co-operative societies regarding technology transfer services. Results also showed poor information utilization performance of Krishi Vigyan Kendra print media, mobile, internet, Kisan Call Centre and form Farmers organizations.

Key words: Information sources, farmers,socio-economic status, contact, satisfaction, utilization.

INTRODUCTION

Timely access of technological interventions as and when required by farmers is crucial for sustainable agriculture development. Information and communication revolution has brought about remarkable changes in farming sector. It has been well acknowledged that information is a critical input just like credit, seed, nutrients and water in agricultural development, which could be efficiently converted into economically rewarding opportunities (Swaminathan, 1996). Rai and Choubey (1985) have rightly stated that communication of farm information is sine qua non for bringing about change in rural social system but there exist a wide gap between knowledge generation and its utilization. The gap in more pronounced in farm sector and especially in backward regions like Bundelkhand region of Uttar Pradesh.

Bundelkhand region of Uttar Pradesh is the backward area in terms of several socio-economic features consisting seven districts namely Banda, Chitrakoot, Hamirpur, Jalaun, Jhansi, Mahoba and Lalitpur. This geographical region characterized as rainfed area having difficult terrain, undulating topography, scarce natural resources, residual and low depth of soil with poor irrigation facility. The economy of this region based on traditional farming in which mono-cropping is prevalent. Poor profitability, adverse climatic conditions for crop growth and socio-economic problems leads to migration of farming youth to non farm sectors, unemployment, poverty, environmental degredation are the important issue of this region (Singh, B. *et al,* 2010). Migration of rural youth from Bundelkhand region is also a major battleneck in adopting agricultural innovation (Singh, A.K. and Narain, S. 2012).

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Thought, mass media play a very important role in bringing changes in the behaviour of farming community. Various Mass Media sources are now utilized for transferring usefull information including radio, television, news papers, books & magazines, mobile, *etc.* Except these, various other information sources are also used by farming community including State Agricultural University, various institutes, Krishi Vigyan Kendras, State Agricultural departments, Private input dealers, Kisan Call Centre, Farm school, farmers organization, agricultural graduates, farmers friends cooperative societies, etc. But availability and reachability of information sources when require by farmers are not satisfactory. Even large population of farming community not known about some information sources or not utilized, if utilized then not fully satisfied due to several factors. Having these facts in view an attempt has been made to find out the following objectives to study the socio-economic profile of farmers with their significance to mass media, to study the utilization pattern of agricultural information sources and their extent of adoption. and to find out the purpose of contact to information sources and extent of satisfaction level.

METHODOLOGY

The study was purposively conducted in Bundelkhand region of Uttar Pradesh. The region consists of seven districts and all seven districts were selected for the study. From each districts two block and two villages from each block were randomly selected to better representation of each area's farmers. From each village twenty five farmers as respondents were also randomly selected. It means hundred respondents from each district other were selected. Thus, block Baberu & Barokhar from Banda district; block Mau & Manikpur from Chitrakoot district; block Rath & Sarila from Hamirpur district; block Dakore & Kadaura from Jalaun district, block Mauranipur & Mounth from Jhansi district; block Belatal & Panwari from Mahoba district and block Jakhaura & Talbehat form Lalitpur district and their 700 respondents were selected for present study. The selection behind large group of respondents was better representation of each and every pocket farming community. The data were collected with the help of agricultural graduates and undergraduates students of the BNPG College, Rath (Hamirpur) belong to all seven districts. For this purpose a well structured pre tested schedule was used and necessary instructions provided to all students regarding data collection. The level of mass media exposer was studied on a 3 point continuum for low, medium and high. Adoption level and extent of satisfaction were also studied on a 3 point continuum group like fully, partially and not adopted / satisfied. The collected data were coaded tabulated and analysed by using appropriate statistical tools like frequency, percentage mean, X2 and rank order. The study was undertaken during May – June, 2015.

RESULTS AND DISCUSSION

Socio–economic profile of farmers with their significance to mass media in Bundelkhand region of Uttar Pradesh:

Study from table 1 revealed that most of the respondents belonged to age group of 30-60 year (65.57 percent), followed by 20.71 per cent and 13.72 per cent below 30 years and above 60 years, respectively. On the basis of this data it can be said that the respondents mostly were from middle age group and they were active and enthusiastic for agricultural activities. It is further evident from the data 40.0 per cent respondents were observed to be educated as functional & up to middle class. The educational standard of literate respondent was found as illiterate (27.14 %), up to intermediate (18.71%) and college education (14.14 %). Hence, it is concluded that most of the respondent are functional & up to middle class literate. This might be non-availability or not accessibility of educational facilities in those times in the villages during their education period. Education was significantly associated with the mass media sources used by the respondents. It means education of the respondents, directly related to use of mass media and increases in education, increases the use of mass media. The respondents who had college level education use more mass media sources (29.30%) than middle and intermediate class educated respondents. The present findings are in the line with the reports of Rajmane *et al.* (2009) and Singh, M and Bishnoi, I (2010).

Table 1: Socio-economic profile of farmers with their significance to mass media in Bundelkhand region of Uttar Pradesh

n = 700

Category	No. of respondents	Percentage	Level of mass media exposer		
			Low	Medium	High
Age					
Youthage group (upto 30 years)	145	20.71	39 (26.90)	81 (55.86)	25 (17.20)
Middle age group (30 – 60 years)	459	65.57	113 (24.61)	287 (62.53)	59 (12.86)
Old age group (above 60 years)	96	13.72	36 (37.50)	49 (51.04)	11 (11.46)
Total	700	100.00	$X^2 = 9.00505$ d.f. = 4		NS
Education					
Illiterate	190	27.14	97 (51.05)	69 (36.31)	24 (12.64)
Functional & up to middle class	280	40.0	117 (41.78)	136 (48.51)	27 (9.65)

Up to intermediate			39 (29.77)	69	23
				(52.67)	(17.55)
College education	099	14.14	27 (27.27)	43	29
				(43.43)	(29.30)
	700	100.00	$X^2 = 39.61$ df. = 6		
			significant at 0.05 level of significance		
Caste category					
Schedule caste	210	30.00	46 (21.90)	113	51
				(53.81)	(24.29)
Backward	392	56	144	192	56
			(36.73)	(48.98)	(14.20)
Forward	98	14.00	17 (17.35)	57	24
				(58.16)	(24.49)
	700	100.00	$X^2 = 151.79$ df. = 4		
			significant at 0.05 level of significance		
Family type					
Nuclear	301	43.00	81 (26.91)	157	63
				(52.16)	(20.93)
Semi joint	249	35.57	73 (29.31)	106	70
				(42.57)	(28.11)
Joint	150	21.43	47 (31.33)	64	39
				(42.67)	(26.00)
	700	100.0	$X^2 = 7.06$ df. = 4		N.S.
Farm size					
Marginal (0.1 – 1.0 ha)	157	22.43	44 (28.02)	82	31
				(52.23)	(19.75)
Small (1.1 – 2.0 ha)	321	45.86	64 (19.94)	185	72
				(57.62)	(22.43)
Large (2.1 ha & above)	222	31.71	37 (16.67)	120	65
				(54.05)	(29.28)
	700	100.00	$X^2 = 10.60$ df. = 4		
			significant at 0.05 level of significance		
Occupation					
Agriculture	587	83.85	268	214	105
			(45.65)	(36.46)	(17.89)
Business + Agriculture	70	10.00	14 (20.00)	39	17
				(55.71)	(24.29)
Service + Agri. + Buss.	43	06.15	05 (11.63)	15	23
				(34.89)	(53.49)
	700	100.00	$X^2 = 50.86$		df. = 4
			significant at 0.05 level of significance		

Result of indicated that most of the respondents belong to backward class (56 %). It means most of the farming community of this region is backward followed by schedule caste and forward, but mass media exposure was high among schedule caste and forward respondents (about 24 % in both categories) followed by 14.20 per cent in backward category. Caste category was significantly associated with the mass media exposure. It indicates that socio-political scenario developed more awareness among schedule caste and forward category as compared to backward category regarding mass media explore in the region. In case of family type, respondents were not associated with mass media exposure (Table 1). It means this variable did not exert its influence on mass media sources used by the respondents.

Farm size was significantly associated with mass media exposure (table 1). It means large holding respondents were having high level of exposure (29.28 %) with mass media as compare to small (22.43%) and marginal (19.75 %) holding respondents. On the basis of farm size small holding respondents were more in numbers (45.86 %) followed by large (31.71%) and marginal (22.43 %) land holders. This region has greater size of land holding as compare to eastern Uttar Pradesh and other part of India. In case of occupation table 1 depicted that majority of respondents *i.e.* 83.85 per cent practicing agriculture as occupation followed by Business + agriculture (10.0%) and service + agriculture + business (6.15 %). Occupation was significantly associated with mass media exposure. It indicates that 'service + agriculture + business' combination adopted respondents were having high (53.49 %) mass media exposure than 'business + agriculture' combination and agriculture practicing respondents.

Utilization pattern of agricultural information sources and their extent of adoption:

Utilization pattern of agricultural information sources and their extent of adoption were studied into two heads.

(a) Utilization pattern of agricultural information sources among respondents:

Study regarding utilization pattern of information (Table -2 a) depicted that 56.90 per cent (an average basis) respondents were unknown about agricultural knowledge related source of information except friends, relatives, neighbores and input dealers. In present time where reality of 'global village' is well known but in this region the picture of farming community was found grim. Less percentage of farmers of these areas were well known about different sources of agricultural information either they were utilized (26.51%) or not utilized (16.59 %).

It indicates that only 43.10 percent respondents were well known about source of information related to agricultural innovations. Among different source of information respondents more frequently (>11 times in year) consulted to friends, relatives, neighbours followed by radio programme, TV programme, input dealers and co-operative societies with negligible share of other source of information. On the basis of pooled percentage it can be concluded that 91.28 per cent respondents consulted to their friends, relatives and neighbours

(Chaudhary, R.P. *et al* 2004 also supported those facts). Followed by input dealers (68.14 %) co-operative societies (64.86 %), radio programme (23%), state agriculture department (22.86%), T.V. programmes (22.43%) with very negligible share of other source of information. On the basis of table 2 (a) data an alarming fact was found that about 84.14 per cent respondents were unknown to Krishi Vigyan Kendra (KVK) and only 5.71 per cent respondents were utilized their information for adoption purpose.

Table 2 (a). Utilization pattern of agricultural information sources among respondents.

n = 700

Source of Information	Unknown about source of information		Respondents known about source of info.						
			Not utilized source of ino.		Utilized source of info.				
					Extant of contact per year				
								Pooled	
	f	%	*f*	%	ocassionally (1-5 times	(6-10 times frequently)	more frequ - ently (>11 times)	*f*	%
SAUs / ICAR nstitutes	641	91.57	25	3.57	32	02	-	34	4.86
KVK	589	84.14	71	10.14	36	04	-	40	5.71
State agril. departments	423	60.43	117	16.71	127	33	-	160	22.86
TV programme related to Agriculture.	451	64.43	92	13.14	14	62	81	157	22.43
Radio programme related to Agri.	387	55.28	152	21.71	22	47	92	161	23.00
News paper agril. news & agril. Magazines	431	61.57	243	34.71	10	8	8	26	3.71
Input dealers services	00	00	223	31.86	258	160	59	477	68.14
Mobile and Internet	639	91.28	49	7.00	8	3	1	12	1.72
Kisan call center (toll free # 18001801551)	592	84.57	83	11.86	15	8	2	25	3.57
Farmers school/ farmers org. /etc	547	78.14	112	16.00	29	9	3	41	5.86
Friends / relatives / neighbours, etc.	0	0	61	8.72	291	203	145	639	91.28
Co-operative societies	82	11.71	164	23.43	264	134	56	454	64.86
Average (%)	-	56.98	-	16.59	-	-	-	-	26.51

Another scheme of central government – Kisan Call Centre (KCC) and their toll free number (18001801551) was not known by 84.57 per cent respondents. Only 15.43 per cent respondents were known about KCC and their toll free number among which only 3.57 per cent respondents were utilized these sources of information. An alarming data indicate that less than 2 per cent respondents utilized mobile and internet facility while on an average basis each Indian has at least one mobile.

Data of table 2 (a) also shows that 38.42 per cent respondents were consulted to news papers, agricultural news & agricultural magazine as a source of information but only 3.71 per cent respondents were utilized these information as compare to 34.71 per cent respondents not utilized. Input dealers were known by every respondents (100 %) but 31.86 per cent respondents not utilized this source. It means trueness and reliability of information received from input dealers were less.

(b) Utilized source of information wise adoption scenario of farmers:

Data of table-2(b) depicted that adoption level among respondents were more in case of State Agriculture Universities (SAUs), Indian Council of Agricultural Research (ICAR) institutions with mean score value of 2.50 (ranked first) followed by friends, relatives, neighbours ; agricultural news papers & agricultural magazines ; Input dealer ; and Kisan call centres with mean score value of 2.42, 2.35, 2.29 and 2.24 having ranked IInd, IIIrd, IVth and Vth, respectively Other sources of information were found less mean score value with more than Vth rank order shows poor adoption scenario. It means mobile & internet, farmers' organizations / school, state agricultural department, etc. performance was poor in terms of adoption level by farmers.

Table 2(b): Utilized source of information wise adoption scenario of farmers

n = 454

Source of information	Utilized by respondents		Adoption level			Mean value	Rank order
	No.	%	Fully	Partially	Not adopted		
SAUs/ICAR institutes	34	4.86	19	13	02	2.50	I
KVK	40	5.71	12	18	10	2.05	IX
State agril. department	160	22.86	37	54	69	1.80	XII
TV programme related to agriculture	157	22.43	46	79	32	2.09	VIII
Radio programme related to agriculture	161	23.0	33	87	41	1.95	XI

News paper agricultural news & agril. magazine	26	3.71	10	15	1	2.35	III
Input dealers	477	68.14	187	243	47	2.29	IV
Mobile & internet	12	1.72	3	8	1	2.17	VI
Kisan Call Centre (toll free #1800 – 180 – 1551)	25	3.57	9	13	3	2.24	V
Farmers school/ organizations	41	5.86	12	22	7	2.12	VII
Friends, relative, neighbours	639	91.28	290	330	19	2.42	II
Co-operative societies	454	64.86	148	167	139	2.02	X

Distribution of respondents in terms of service received and extent of satisfaction level:

Data of table 3 depicted that maximum 91.28 per cent respondents utilized informal source of information from friends, relatives, neighbours followed by 68.14 per cent from private input dealers, 64.86 per cent form co-operative societies, with approximate equal respondents preference to state agricultural department and TV & radio progarmme related to agriculture (each has average 22.76%). Other sources of information utilized by respondents were very limited and ranging from 1.72 to 5.86 per cent.

Distribution of respondents in terms of service purpose majority of respondents received input and advisory services. Among different agencies friends, relatives, neighbours provide more input delivery services to farmers as compare to co-operative societies, private input dealers and state agricultural department. Others agencies played negligible amount of services. Advisory services were received by respondents from friends, relatives, neighbours, private input dealers and from television and radio's agricultural programmes.

The share of state department of agriculture and Krishi Vigyan Kendra (KVK) related to advisory services were poor i.e. 87 and 40 percent farmers taking advice while the setup of these department are for farmers. It indicates poor performance of both agencies. Under diagnostic services farmers friend, relatives neighbours and private input dealers were playing major share followed by state department of agriculture and other agencies.

Distribution of respondents in terms of extent of satisfaction (table 3) depicted that respondents were highly satisfied from state Agricultural Universities / Indian Council of Agriculture Research (ICAR) Institutes receiving high mean score value 2.59 with ranked Ist while farmers friends, relatives, neighbours received mean score value 2.44 with IInd rank

Table 3: Distribution of respondents in terms of services received and extent of satisfaction level.

Source of information	Information utilized by respondents		Distribution of respondents in terms of						Mean	Rank order
			Purpose of service			Extent of satisfaction				
	No.	%	Input 1 delivery	Advisory 2	Diagnostic 3	Fully	Partially	Not satisfied		
SAUs / ICAR institutions	34	4.86	34	25	29	23	8	3	2.59	I
KVK	40	5.71	17	40	7	13	16	11	2.05	IX
State agril. dept.	160	22.86	160	87	79	54	47	59	1.97	X
TV programme related to Agriculture	157	22.43	7	157	19	42	97	18	2.15	VI
Radio programme related to Agriculture	161	23.0	10	162	17	39	109	13	2.16	V
News papers & agril. Magazine	26	3.71	3	26	22	13	10	3	2.38	III
Private input dealers	477	68.14	407	455	453	179	227	71	2.22	IV
Mobile / & internet	12	1.72	-	12	12	3	7	2	2.08	VIII
Kisan call centre (toll free # 1800-180-1551)	25	3.57	2	18	13	6	9	10	1.84	XI
Farmers school/ farmers orgs, etc.	41	5.86	-	471	36	13	21	7	2.14	VII
Friends /relatives/ neighbours	639	91.28	613	639	397	299	273	117	2.44	II
Cooperative societies	454	64.86	454	72	-	178	168	108	2.15	VI

Input delivery services:For purchasing of new seeds, Bio-fertilizers, bio pesticides, etc.
Advisory services:For different aspects of agricultural information as advice.
Diagnostic services :For testing of soil, seed, fertilizers etc. & knowing the damage causes insect pest & diseases.

followed by news papers & agricultural magazines, private input dealers, radio programme related to agriculture, TV programmes related to agriculture and co-operative society (both having equal mean value) having mean score value of 2.38, 2.22, 2.16, 2.15 and 2.14 with rank order IIIrd, IVth, Vth, VIth and VIIth, respectively. It indicates that first line technology transfer system is really providing reliable, realistic and valid services followed by farmers friends, relatives and neighbours.

CONCLUSION

It could be concluded from present finding that socio-economic variables like education, caste category, farm size, and occupation were found significant to mass media. In this region 83.85 per cent farmers were practicing only agriculture in which majority of farmers belong to backward class with functionally literate. It is alarming facts that 56.90 per cent respondents were unknown about agricultural knowledge related source of information while only 26.51 per cent utilized these sources for knowledge gaining. Farmers consulted more to relatives, friends, neighbours, input dealers and co-operative society as compare to other sources. But Krishi Vigyan Kendras and Kisan Call Centres performance were poor in terms of extent of contact by farmers. Adoption level of innovations and satisfaction level among farmers were more in case of SAUs & ICAR institutes as compare to all other sources of technology transfers.

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