

# PATTERN OF COMMUNICATION AND CONSTRAINTS IN DISSEMINATING MODERN AGRICULTURAL TECHNOLOGIES IN ARID VILLAGES

D.K. SAHA, S.P. MALHOTRA, Y.N. MATHUR AND UGAM SINGH

Central Arid Zone Research Institute, Jodhpur

## ABSTRACT

A study was conducted in two arid villages of Jodhpur district in western Rajasthan to investigate the communication pattern, constraints in communication and credibility of various information sources. However, no major difference was observed between and within the villages with respect to utilization of various media. Situational and input constraints were predominantly higher in village Doli than socio-psychological and communication constraints. The literate farmers reported more communication constraints than illiterate farmers. Technical persons (e, g. Agricultural scientists in village Doli and village level worker in village Ransigaon) had highest relative credibility.

## INTRODUCTION

Various technologies have been evolved to increase the agricultural production in the country. There is a wide gap between information generation and its utilization by the farmers. About 35 per cent loss in farm information in transit between the block level extension personnel and the farmers has been reported (Babu and Sinha 1979). The arid areas of western Rajasthan are characterised by sparse population, scattered settlement, illiteracy and poor accessibility to mass media. Interpersonal channel of communication predominates and information sources do not vary significantly in this region.

With this background information, the communication pattern, constraints in communication and credibility of various information sources in transfer of modern agricultural technologies were studied in two villages.

## MATERIAL AND METHOD

The study was conducted in two arid villages, Doli and Ransigaon. Doli, 25 km south-west of Jodhpur, has an urban impact and it has been adopted by the Central Arid Zone Research Institute, Jodhpur for development. Ransigaon, 90 km east of Jodhpur, does not have urban impact or Operational Research Project (ORP) programme. Both the villages are inhabited by 400 - 600 households with heterogeneous caste/communities and are well connected with roads. Some irrigation through wells and credit facilities are available through nationalised banks in both the villages.

Data were collected from 124 farmers (63 from Doli, 61 from Ransigaon) selected randomly through interview schedules during the year 1985-86.

Of the identified information sources fellow farmer, village level worker, radio, local leader, and progressive farmer were common in the villages. In addition agricultural scientists and co-operative credit society in village Doli only and sales people/shopkeeper in village Ransigaon only, were also there.

Relative credibility index of various information sources was worked out following Sangha and Gupta (1985) :

$$\text{Relative credibility index} = \frac{X \ 100}{YN}$$

X = Number of persons who believed a source most credible.

Y = Number of persons who believed a source least credible, and

N = Total number of persons in the sample.

## RESULTS AND DISCUSSION

Per cent distribution of the various information sources, categorised as mass media (television, radio and printed matter), interpersonal localite (fellow/progressive farmers, friends/relatives, shopkeeper and panchayat members), and interpersonal cosmopolite (V.L.W., A.E.O. and B.D.O.) for the two villages is given in Table 1.

Table 1. Sources (%) of information in two villages

Information Source	Doli	Ransigaon
Mass Media	11.50	13.56
Interpersonal localite	55.16	67.03
Interpersonal cosmopolite	33.34	19.41

By and large, the villages did not vary much with regard to various information sources. Interpersonal channel of communication predominated in both the villages. Role of interpersonal cosmopolite sources was strong in village Doli due to wider contact with extension functionaries. On the contrary, the role of interpersonal localite sources, especially the fellow farmers was significantly higher in village Ransigaon.

Persons able to read and write were considered literates. Nearly 51 and 34 per cent of the sample respondents were literates in Doli and Ransigaon, respectively. The literate farmers in both the villages received the ideas of improved farm practices

through mass media (printed matter and other audio-visual aids). Illiterate farmers of village Ransigaon considerably used interpersonal localite sources due to less contact with extension functionaries. The illiterate as well as literate farmers in village Doli utilised interpersonal cosmopolite sources more than those in Ransigaon (Table 2). This was true also for the scattered 'dhani' dwellers than the residents in either of the two villages.

Co-operative credit society and 'Gram Panchayat' were the only organizations existent in the two villages; 61 and 41 per cent of the sample respondents were members of co-operative credit society in Doli and Ransigaon, respectively. Farmers having social participation used mass media sources slightly more than the farmers having no participation especially so in Ransigaon.

Farmers having irrigated lands used mass media sources more as compared to farmers without irrigated lands. Such farmers in village Doli utilized interpersonal cosmopolite sources more than the farmers in village Ransigaon.

Table 2. Some characters of the sample respondents in the villages and the percentage of their information sources

Respondent Characters	Information sources (%)					
	Doli			Ransigaon		
	Mass media	Inter-personal localite	Inter-personal cosmopolite	Mass Media	Inter-personal localite	Inter-personal cosmopolite
<i>Education</i>						
Illiterate	3.7	60.0	36.3	—	82.0	18.0
Literate	17.0	52.0	31.0	22.6	57.1	20.3
<i>Social participation</i>						
Participation	13.8	51.6	34.6	20.6	57.1	22.3
Non-participation	7.5	61.3	31.2	6.4	76.9	16.7
<i>Land owned</i>						
Irrigated	16.8	49.1	34.1	20.8	61.1	18.1
Unirrigated	—	72.0	28.0	3.8	76.4	19.8
<i>Settlement pattern</i>						
Compact	8.8	58.1	33.1	15.4	65.2	19.4
Scattered	22.0	46.0	32.0	10.0	72.5	17.5

### Constraints in dissemination of technologies

The constraints in effective dissemination of agricultural technologies were categorised as situational, socio-psychological, communication and input constraints (Table 3). In situational constraints settlement pattern was taken into consideration. The socio-psychological constraints included lack of interest, illiteracy and lack of knowledge which come in the way of disseminating the ideas of modern technologies. The communication constraints included lack of extension facilities, lack of media exposure and lack of demonstration and these were among of the major hinderances in disseminating the various technologies.

There was not much difference between the two villages with regard to various constraints. Situational and input constraints were, however, more in village Doli as compared to village Ransigaon. Most of the sample respondents in village Doli lived in scattered settlement or 'dhani', away from village nucleus, resulting in poor dissemination of new ideas. Significantly low socio-psychological constraints in village Doli indicated the progressive attitude of farmers in this village on account of frequent urban contacts and high literacy. Negligible communication constraints in village Doli also clearly indicated frequent contact with extension personnel.

Table 3. Constraints (%) in communication in the two villages

Constraints	Doli	Ransigaon
Situational	22.57	10.46
Input	35.41	17.58
Socio-psychological	38.13	56.07
Communication	3.89	15.89

The constraints in communication were further examined with respect to socio-economic and situational factors and the results are presented in Table 4.

There was not much difference between various constraints with illiterates and literates except in communication constraints in receiving new ideas. The literate farmers had greater expectations from extension services due to their exposure to outside world.

Farmers having social participation (in co-operative credit society) reported communication constraints in receiving ideas of new technologies. Farmers with irrigated lands reported more input and socio-psychological constraints than the farmers without irrigated lands in Doli. However, farmers having no irrigation facilities in Ransigaon reported more communication constraints than their counterparts in village Doli.

Table 4. Distribution (%) of constraints in dissemination of technologies

Factors	Village Doli				Village Ransigaon			
	Situa- tional	Input	Socio- psycho- logical	Communi- cation	Situa- tional	Input	Socio- psycho- logical	Communi- cation
<i>Education</i>								
Illiterate	24.4	37.0	37.8	0.8	9.5	18.3	61.6	9.6
Literate	20.8	33.6	38.5	7.1	11.3	16.9	50.0	21.8
<i>Social Participation</i>								
Participation	20.0	37.1	38.6	4.3	9.4	18.9	53.8	17.9
Non-participation	25.6	33.3	37.6	3.5	11.2	16.4	59.0	13.4
<i>Land</i>								
Irrigated	16.3	36.9	39.7	7.1	9.6	15.9	58.6	15.9
Unirrigated	27.8	38.9	33.3	—	11.7	20.2	51.1	17.0
<i>Settlement Pattern</i>								
Compact	25.2	37.1	35.8	1.9	6.2	19.4	59.4	15.0
Scattered	21.1	19.3	49.1	10.5	19.3	14.1	47.4	19.2

Table 5. Relative credibility index of different information sources in two villages

Credibility position	Doli		Ransigaon	
	Source	Credibility Index	Source	Credibility Index
I	Agricultural scientists	5.03	Village level worker	15.6
II	Fellow farmers	4.23	Sales peoples shopkeeper	8.1
III	Village level worker	3.17	Progressive farmers	5.6
IV	Radio	2.64	Radio	4.4
V	Local leaders	1.23	Local leaders	3.3
VI	Progressive farmers	0.53	Fellow farmers	2.4
VII	Co-operative Society	0.32	—	—

The pattern of relative credibility index for the various information sources was slightly different in the two villages (Table 5). The agricultural scientists got the highest relative credibility index in village Doli by virtue of their long association with the

farmers. On the contrary, in Ransigaon, the easily accessible village level worker got first position in the relative credibility, there being also little interaction of the farmers with urban centres. In village Doli, farmers also grow vegetable crops. For problems like marketing, plant protection etc. frequent mutual interactions and reliance upon each other gave fellow farmers a second position in relative credibility. The farmers in village Ransigaon seldom grow vegetable crops. Hence there is no frequent interdependence or interaction and thus the credibility position of fellow farmers did not figure prominently. As for other information sources, the credibility index did not vary much.

The study clearly established that patterns and constraints in communication differed in the two villages. Higher rate of literacy and urban impact resulted in less communication and socio-psychological constraints and more utilisation of cosmopolite sources in village Doli than in the village Ransigaon.

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