RESEARCH ARTICLE :

Information processing behaviour of the pea growers in Kota region of Rajasthan

■ **N.R. MEENA , F.L. SHARMA, R.A. KAUSHIK AND PREVESH CHOUHAN**

SUMMARY : Findings revealed that out of 200 respondents, 45.50 per cent respondents had low information processing behaviour and 31.50 per cent farmers having medium level of information processing behaviour. Whereas, only 23.00 per cent respondents were observed in high information processing behaviour group. Results further revealed that 51.00 and 40.00 per cent marginal and small farmers, respectively were in the low information processing behaviour group. Likewise, 28.00 and 35.00 per cent marginal and small farmers had medium information processing behaviour about improved pea cultivation practices, respectively. Whereas, 21.00 per cent marginal farmers and 25.00 per cent small farmers were found in high information processing behaviour group about pea production technology. It was noted that among the selected information processing modes, information evaluation methods were used upto greatest extent by the pea growers with MPS 60.15. These were followed by information transfer methods with MPS 44.60. However, information storage methods with 40.11 MPS were least used information processing methods by the pea growers. (iii) Findings indicated that there was significant difference in information processing behaviour between marginal and small farmers about pea cultivation technology. The mean value further indicates that small farmers had higher information processing behaviour than marginal farmers about pea cultivation technology.

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BACKGROUND AND OBJECTIVES

Pea is the major vegetable crop of *Rabi* season in Rajasthan. It occupies on area of 3729 hectares with the production of 5807 tonnes in Rajasthan (Vital Statistics, 2009-10). It is mainly cultivated in Jaipur, Nagaur, Kota, Tonk, Bundi, Alwar, and Chittor districts in the state. The Kota region of Rajasthan is leading in area and production of pea. It occupies on an area of 1176 hectares with the production

of 1493 tonnes in Kota region (Vital Statistics, 2009-10). Kota region consists of Kota, Baran, Bundi, Jhalawar and Tonk districts. The soil and climatic condition of this region is most suitable for pea cultivation, while the productivity is far below as compared to recommended by the scientists. The low productivity of pea in Kota region of Rajasthan may be due to the poor information processing behaviour of the farmers. Looking to the above facts the present study was

conducted with the following objectives:

– To find out the information processing behaviours of the pea growers.

– To see the significance difference about information processing behaviour of the pea growers.

RESOURCES AND METHODS

The present study was conducted in Kota region of Rajasthan. Kota region consist of five districts, out of which three districts namely Bundi, Kota and Tonk were selected purposively on the basis of maximum area under pea cultivation. Two tehsils from each identified districts were selected on the basis of maximum area under pea cultivation. Thus, in all six tehsils were taken for the present study. Total twenty villages were identified on the basis of proportionate sampling from the selected tehsils. To select the respondents, a comprehensive list of all pea growers was prepared for all villages Thereafter, the farmers were categorized into two groups *i.e.* small and marginal on the basis of pea cultivation. The respondents were selected randomly from each category of the farmers. It was planned to select 10 respondents *i.e.* five in each category from the each

selected village. Thus, the total sample size of the study was 200 respondents. Data were collected through prestructured interview schedule. Thereafter, data were analysed, tabulated and interpreted the results.

OBSERVATIONS AND ANALYSIS

To get an overview of the pea growing farmers regarding processing behaviour for the received information, they were grouped into three strata as, low, medium and high on the basis of calculated mean and standard deviation of information processing score obtained by the respondents.

The data incorporated in Table 1 depict that out of 200 respondents, 45.50 per cent respondents had low information processing behaviour. This was followed by 31.50 per cent farmers having medium level of information processing behaviour. Whereas, only 23.00 per cent respondents were observed in high information processing behaviour group. Perusal of table further reveals that 51.00 and 40.00 per cent marginal and small farmers, respectively were in the low information processing behaviour group. Likewise, 28.00 and 35.00 per cent marginal and small farmers had medium

Table 1 : Distribution of respondents according to their information processing behaviour about pea production technology (n = 200)

Sr. No.	Degree of information processing behaviour	Marginal farmers		Small farmers		Total	
		f	%	f	%	f	%
1.	Low (< 21)	51	51.00	40	40.00	91	45.50
2.	Medium (21-32.5)	28	28.00	35	35.00	63	31.50
3.	High (> 32.5)	21	21.00	25	25.00	46	23.00
	Total	100	100.00	100	100.00	200	100.00

f = Frequency, % = Per cent

Table 2 : Information evaluation methods used by the pea growers

Sr. No.	Information evaluation method	Marginal farmers		Small farmers		Total	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Discussion with officials of State Department of Agriculture/ Agriculture University	25.87	8	27.17	8	26.52	8
2.	Acceptance of received information with modification	53.23	5	59.15	5	56.19	5
3.	Judgment on the basis of economic feasibility	92.73	2	96.23	2	94.48	2
4.	Acceptance of received information as such	43.21	6	48.67	6	45.94	6
5.	Discuss with family members, friends, fellow farmers, progressive farmers and neighbours	91.67	3	95.90	3	93.78	3
6.	Judgment in the light of climatic conditions	73.52	4	79.27	4	76.39	4
7.	Judgment based on technical feasibility	39.13	7	44.37	7	41.75	7
8.	Weigh the merit of an innovation in the light of past experience	93.67	1	97.73	1	95.70	1

MPS = Mean per cent score

information processing behaviour about improved pea cultivation practices, respectively. Whereas, 21.00 per cent marginal farmers and 25.00 per cent small farmers were found in high information processing behaviour group about pea production technology. Majority of farmers were found in low information processing behaviour group. It may be due to reason that majority of the farmers are illiterate and have small size of land holding and they are poor adopters of the innovation.

The findings are in agreement with those of Pramilla (1992) who reported that majority of the respondents possessed medium level of information processing behaviour.

The extent of information processing behaviour of farmers was studied under three major modes *i.e.* information evaluation methods, information storage methods and information transfer methods. The results of the same are presented in subsequent tables.

Information evaluation methods used by the pea growers :

The data incorporated in Table 2 indicate that the received information was weigh the merit of an innovation in the light of past experience by the marginal and small farmers to the extent of 93.67 and 97.73 MPS,

respectively and ranked first by both the categories of farmers. Likewise, the information received by the marginal and small pea growers were found to have judged on the basis of its economic feasibility which was accorded second rank to the extent of 92.73 and 96.23 MPS, respectively. Further analysis of table shows that the received information was accepted after discussion with family members, friends, fellow farmers, progressive farmers and neighbours by marginal and small farmers to the extent of 91.67 and 95.90 MPS, respectively and ranked third position by the pea growers. It was also found that judgment in the light of climatic conditions and acceptance of received information with modifications was accorded fourth and fifth rank, respectively by both the categories of pea farmers.

Analysis of table further shows that acceptance of information as such was placed on the sixth rank by marginal farmers and small farmers with 43.21 and 48.67 MPS, respectively. The judgment based on technical feasibility was accorded seventh rank by both the categories of respondents in the order of information evaluation methods used by the respondents. A very small number of farmers discussed with officials of state Department of Agriculture/Agriculture University and was ranked eighth by marginal and small farmers to the

Table 3: Information storage methods used by the pea growers						(n = 200)
Sr. No.	Information storage methods	Marginal farmers		Small farmers		Total	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Conveying to family members and asking them to remember	72.60	2	76.97	2	74.78	2
2.	By maintaining classified notebooks/ diary	16.37	3	23.40	3	19.88	3
3.	Preservation in the form of printed literature	9.45	4	19.85	4	14.65	4
4.	By maintaining subject matter file	8.14	5	17.03	5	12.58	5
5.	Memorizing the information	85.93	1	92.21	1	89.07	1

MPS = Mean per cent score

Table 4: Information transfer methods used by the pea growers						(n=200)
Sr. No.	Information transfer methods	Marginal farmers		Small farmers		Total	
		MPS	Rank	MPS	Rank	MPS	Rank
1.	Those who come to seek	57.47	3	65.16	3	61.31	3
2.	To friends, fellow farmers, progressive farmers and neighbours	61.19	2	69.13	2	65.16	2
3.	To relatives	65.09	1	73.50	1	69.29	1
4.	To those who cultivate their land on lease	53.40	4	61.96	4	57.68	4
5.	Speaking in local meetings	21.83	5	27.57	5	24.70	5
6.	By conducting demonstrations to show the practical aspect of received information	9.93	6	14.43	7	12.18	6
7.	Lending printed literature to others	8.12	7	15.01	6	11.56	7

MPS = Mean per cent score

extent of 25.87 and 27.17 per cent respondents in the study area.

Thus, from the above discussion, it could be concluded that extent of information evaluation methods used by the marginal farmers was from 25.87 to 93.67 per cent, while small farmers was from 27.17 to 97.73 per cent with regard to pea cultivation technology.

Information storage methods used by the pea growers :

The data incorporated in Table 3 reveal that marginal and small pea growers stored the information received by them by way of memorizing the information with the extent of 85.93 and 92.21 MPS, respectively and was ranked first by both the categories of farmers.

This was followed by way of conveying to family members and asking them to remember which was placed at second position in the rank hierarchy of information storage methods. The extent of information storage by this method was 72.60 and 76.97 MPS among marginal and small farmers, respectively.

Further analysis of table also shows that received information was stored through maintaining classified note books/diary by the marginal farmers and small farmers with the extent of 16.37 and 23.40 per cent, respectively and it was accorded third rank by marginal and small farmers. The storage of information by preserving in the form of printed literature was assigned fourth rank by marginal and small farmers with the extent of 9.45 and 19.85 MPS, respectively. The storage of information by maintaining subject matter file was very less used and accorded last rank by the respondents with the extent of 8.14 and 17.03 per cent among marginal and small farmers, respectively. It was observed during the period of data collection that majority of the farmers did not find time after the farm activities and their house hold work. This might be the reason that majority of the respondents stored the received information by memorizing and conveying to family members.

The findings are in accordance with those of Pramilla (1992) who reported that majority of the respondents stored the received information by conveying to family members and by memorizing.

Information transfer methods used by the pea growers :

The data presented in Table 4 reveal that marginal

and small pea growers transferred the information to relative with the extent of 65.09 and 73.50 per cent MPS, respectively and ranked first by marginal and small farmers. Similarly, the marginal and small farmers transferred the information to their friends, fellow farmers, progressive farmers and neighboures with extent of 61.19 and 69.13 MPS, respectively and ranked second by both the categories of farmers. It was observed during the period of data collection that majority of the pea growers had regular and face to face contact with their friends, fellow farmers and neighboures in their locality. This might be the reason that majority of them transferred the received information to their friends, fellow farmers and neighbours.

Further, analysis of Table 4 also reveals that marginal and small farmers provided the received information to those who come to seek with the extent of 57.47 and 61.96 per cent, respectively. Likewise, the method of giving information to those who cultivated their land on lease was assigned fourth rank by the marginal farmers and small farmers with the extent of 53.40 and 61.69 per cent, respectively. The extent of information transferred through speaking in local meeting was 21.83 and 27.57 per cent by the marginal and small farmers, respectively.

It was also found that method of conducting demonstrations to show the practical aspect of received information was accorded sixth rank by marginal farmers and seventh by small farmers. Whereas, the small proportion of marginal and small farmers had the habit of lending printed material to others. This may be due to the reason that majority of the farmers were not educated highly in the study area so that they were not read the information of pea cultivation technology through printed literature. From the above discussion, it could be concluded that the extent of information transfer methods used by the marginal farmers was from 8.12 to 65.09 per cent and among small farmers it was noted from 14.43 to 73.50 per cent.

These findings are in agreement with those of Pramilla (1992) and Ramasubramanian and Manoharan (2003) who reported that majority of the respondents transferred the received information to their friends, fellow farmers and neighbourers.

Comparison of information processing behaviour of the pea growers :

The comparison of information processing behaviour

Table 5 : Significance of difference about information processing behaviour of pea growers

Sr. No.	Category of respondents	Mean	S.D.	'Z' value
1.	Marginal farmers	18.58	5.2	2.07*
2.	Small farmers	20.21	5.9	

* indicates significance of value at P=0.05

Table 6 : Comparison of information processing behaviour between the pea growers of selected districts (n=200)

Sr. No.	Source of variation	d.f.	S.S.	M.S.S.	'F' cal
1.	Between the districts	2	2784.22	1392.11	3.41*
2.	Error	197	80418.78	408.22	
	Total	199	83203.00		

* indicates significance of value at P=0.05

Mean value table

Sr. No.	Name of districts	Mean value	C.D. value
1.	Bundi	20.25	1.116
2.	Kota	19.42	
3.	Tonk	16.70	

of the pea growers was made under following heads:

Comparison of information processing behaviour between marginal and small farmers :

To study the difference of information processing behaviour between marginal and small respondents about pea cultivation technology, 'Z' test was applied. The results are presented in Table 5.

NH_{01}: There is no significant difference between marginal and small farmers about information processing behaviour of pea cultivation technology.

RH_1: There is significant difference between marginal and small farmers about information processing behaviour of pea cultivation technology.

Table 5 shows that the calculated 'Z' value was found to be greater than its tabulated value at 5 per cent level of significance. Thus, the Null hypothesis (NH_1) was rejected and alternate hypothesis (RH_1) was accepted. It reveals that there was significant difference in information processing behaviour between marginal and small farmers about pea cultivation technology. The mean value further indicates that small farmers had higher information processing behaviour than marginal farmers about pea cultivation technology. This difference in the level of information processing behaviour of pea growers might be due to the reason that small respondents had more socio-economic status, more extension contact, high participation in training programmes and more mass media exposure as compared to marginal pea growers.

These findings are in line with those of Kaidan and

Kumar (2002) and Vashishtha (2007) who reported that there was a significant difference between different categories of respondents with respect to their information processing behaviour.

Comparison of information processing behaviour between selected districts :

In relation to information processing behaviour of pea cultivation, it was also felt necessary to study the difference between farmers of selected districts. To find out the variation in information processing behaviour of the farmers of selected districts analysis of variance test ('F' test) was applied. The results are presented in Table 6.

Hypotheses:

NH_2: There is no significant difference in information processing behaviour between the pea growers of selected districts.

RH_2: There is significant difference in information processing behaviour between the pea growers of selected districts.

Table 6 reveals that the calculated 'F' value 3.41 which is higher than the tabulated value at 5 per cent level of significance and 2 degree of freedom. Thus, the Null hypothesis (NH_{02}) entitled "there is no significant difference in the pea growers of selected districts about information processing behaviour was rejected and alternative hypothesis (RH_2) was accepted. Thus, it is concluded that there was significant difference in

information processing behaviour of the pea growers of selected districts towards pea production technology.

By comparing the mean value with C.D. value, there is significant difference between Tonk and Kota districts and also between Bundi and Tonk districts but non-significant difference was observed between Kota and Tonk districts with regard to information processing behaviour. The respondents of Bundi district possessed more information processing behaviour than respondents of Kota and Tonk districts.

Conclusion :

From the above results it can be concluded that 45.50 per cent respondents had low information processing behaviour and 31.50 per cent farmers having medium level of information processing behaviour. Whereas, only 23.00 per cent respondents were observed in high information processing behaviour group. There was significant difference in information processing behaviour between marginal and small farmers about pea cultivation technology.

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