

RESEARCH NOTE

Farmers' Knowledge and their Adoption of Improved Irrigation Water Management Practices

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INTRODUCTION

Water is the major important natural input. Improved irrigation management practices are the product of modern science and technology. Development of new technology is generally not the major problem now-a-days in most of the developing countries. The main problem as it exists today is that of diffusion and acceptance of those modern technologies by the farmers.

Knowledge is the one of the important components of behaviour and as such it plays a major role in the covert and overt behaviour of human beings. Once knowledge is acquired, it produces changes in the thinking process of an individual which would lead to further changes in the mental aptitudes. If later on it would found significant in prevailing condition than, an individual will try to adopt newly invented technology for his around development.

It is, therefore, felt necessary to find out the existing knowledge and adoption level of farmers regarding improved irrigation water management practices. Following are the specific objectives of the present study.

OBJECTIVES

1. To study the relationship between level of knowledge of improved irriga-

tion management practices and extent of utilization of canal irrigation water.

2. To study the relationship between the level of adoption of new farm practices after irrigation and extent of utilization of canal irrigation water.

METHODOLOGY

The list of summer paddy and sugarcane growers were considered from first ten villages who may having highest area under Ukai-Kakrapar Left Bank Command Area (UKLB) of Navsari taluka of Valsad district. Five farmers from each village were selected by random sampling method. In all 150 respondents were the sample for study. The data regarding extent of canal irrigation utilization, knowledge level, adoption level were collected through interview schedule. The data were statistically analysed in terms of percentage, mean, standard deviation and chi-square.

RESULTS AND DISCUSSION

Relationship between the level of knowledge of improved irrigation management practices and extent of utilization of canal irrigation water :

The data were collected, analysed and presented in Table 1.

It is evident from the Table 1 that, out

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Table 1. Relationship between the level of knowledge of improved irrigation management practices and extent of utilization of canal irrigation water.

N = 150

Extent of utilization of canal irrigation water	Level of knowledge								χ^2 Value
	High No's	%	Medium No's	%	Low No's	%	Total No's	%	
Low (below 6.56)	01	0.67	07	4.67	07	4.66	15	10.00	
Medium (6.56 to 10.16)	12	8.00	87	58.00	13	8.67	112	74.67	
High (above 10.16)	09	6.00	12	8.00	02	1.33	23	15.33	
Total	22	14.67	106	70.67	22	14.66	150	100.00	

of 150 respondents, majority of them i.e., 112 (74.67 per cent) were medium utilizers of canal irrigation water while 23 and 15 (15.33 and 10.00 per cent) were high and low utilizers, respectively. It is also seen that out of 112 (74.67 per cent) medium utilizers, 87 (58.00 per cent) were from medium level of knowledge group, while 13 and 12 (8.67 and 8.00 per cent) were from low and high level of knowledge groups, respectively. The chi-square value (26.06**) was highly significant, which indicates that the extent of utilization of canal irrigation water was found to be depend upon the level of knowledge of the respondents.

Relationship between the level of adoption of new farm practices after irrigation and extent of utilization of canal irrigation water :

The data were collected and analysed with a view to study the relationship between the extent of utilization of canal irrigation water and technological change after irrigation. The data in this regards are

presented in Table 2.

The perusal of the data presented in Table 2 reveals that out of 150 respondents, majority of them i.e. (65.33 per cent) were in medium level of adoption of new practices after irrigation while 24 and 28 (16.00 and 18.67 per cent) were found in low and high level of adoption of new farm practices after irrigation, respectively. It could be seen that out of 150, 98 (65.33 per cent) respondents were in medium level of adoption of new farm practices, 79 (52.66 per cent) were medium utilizers, while, 10 and 9 (6.67 and 6.00 per cent) were high and low utilizers irrigation group, respectively.

Highly significant value (14.87**) of chi-square shows that the level of adoption of new farm practices after irrigation was depend upon the extent of utilization of canal irrigation wa ter by respondents.

CONCLUSION

- It can be concluded that the medium level of knowledge group respon-

Table 2. Relationship between the level of adoption of new farm practices after irrigation and extent of utilization of canal irrigation water.

N = 150

Level of adoption of new farm practices after	Extent of utilization of canal irrigation water								X ² Value
	High No's	%	Medium No's	%	Low No's	%	Total No's	%	
Low (below 9.27)	10	6.67	11	7.33	3	2.00	24	16.00	
Medium (9.27 to 17.67)	10	6.67	79	52.66	9	6.00	98	65.33	14.87**
High (above 17.67)	3	2.00	22	14.67	3	2.00	28	18.67	
Total	23	15.34	112	74.66	15	10.00	150	100.00	

- dents as well as the medium level of adoption of new farm practices group respondents had utilized canal water upto the medium level.
- ii. Highly significant values of chi-square indicate that the extent of utilization of canal irrigation water was found to depend upon the level of knowledge of the respondents, while, the level of adoption of new farm practices after irrigation was depend upon the extent of utilization of canal irrigation water by respondents.
 - iii. Medium level of knowledge regarding improved irrigation management practices indicated that the farmers were found to be less aware about the scientific irrigation technology.
 - iv. Medium level of adoption of new farm practices shows that the farmers of this area might be more conservative to take a risk of investing more capital.