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Growers' Adoption Behaviour of Production Technologies of Irrigated Wheat

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INTRODUCTION

The success of any agricultural technology development programme lies on the extent to which its ultimate users accept the technologies so generated. Adoption of wheat production technologies by the farmers is influenced by many factors. It is felt necessary to know such technological, social and economic factors influencing the use of recommended production technologies so as to further streamline the research programmes. The adoption behavior of the users and their difficulties and liking for the technology was to be taken into consideration in the present study.

OBJECTIVES

1. To study the extent of adoption of irrigated wheat production technology by the wheat growers.
2. To study the relationship, if any, between some selected characteristics of the growers and their extent of adoption of irrigated wheat production technology.
3. To ascertain the suggestions of the wheat growers for adoption of whear production technology.

METHODOLOGY

The present research was carried out in Gujarat State during the *Rabi* season of the year 1997. Of the eight agro-climatic zones of the state, only six were selected for the study. The 14 talukas of 11 districts of the six zones were selected purposively on the basis of area under irrigated wheat cultivation. The multistage sampling method was adopted to select talukas, villages and respondents. From the 14 selected talukas, three villages in each taluka were selected. From each of the selected villages, 10 farmers were selected. Thus the sample size of the study consisted of 420 growers of irrigated wheat.

Keeping in view the objectives of the study, relevant variables for the study were selected after consultation with the scientists. The selected independent variables were age, education, familyoccupation, farming experience, size of family, extension contact, social participlation, information sources, land holding, annual income and herd size. The extent of adoption of wheat production technology was considered as dependent varible.

Method used for collection of data from farmers was interview schedule. In view of

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the objectives of the study, various statistical measures including coefficient of correlation were used for analysis of data.

RESULTS AND DISCUSSION

The data were collected, classified, tabulated and analysed in view of the objectives of the study. The fact and findings derived after analyzing the information are discussed hereafter.

Moreover, the farmers having irrigation facilities are economically better off due to adoption of multiple croping systems. This might have raised their aspirations leading to higher adoption of irrigated wheat production technology.

These findings are in confirmation with the findings of Prasad (1980), Rabari (1983) and Mundhwa (1984).

Table 1 : Distribution of respondents according to their extent of adoption of wheat production technology (N=420)

Extent of adoption	Score	Respondents	
		Number	Per cent
Low	Below 35.80	35	8.34
Medium	35.81 to 59.50	287	68.33
High	Above 59.50	98	23.33
	Total	**420**	**100.00**

Mean = 47.65 SD = 11.85 C.V.% = 24.87

EXTENT OF ADOPTION OF WHEAT PRODUCTION TECHNOLOGY

In the present investigation, an effort has been made to study the adoption of recommended wheat production technology. The analysis of data are presented below:

The data in Table 1 clearly indicate that nearly three fourth (68.33 per cent) of the respondent farmers had medium level of adoption. Remaining 8.34 per cent and 23.33 per cent of respondent farmers had respectively low and high level of adoption. Possible reasons for medium to high level of adoption may be that there is less risk in adoption of new technologies in irrigated crops in the areas with good irrigation facilities.

Relationship between farmers' level of adoption of irrigated wheat production technology and the independent variables

Coefficient of correlation was applied to study the association between selected 11 independent varibles of the irrigated wheat growers with that of the dependent, namely extent of adoption of irrigated wheat production technology. The correlation coefficients were computed for each independent variable. The value of correlation coefficient (r) was then tested for the statistical significance. The results are presented in Table 2.

Table 2 : Relationship of respondent farmers' extent of adoption of wheat production technologies with independent varibles. (N=420)

Sr. No.	Independent Variable	'r' value
1.	Age	0.0481
2.	Education	0.0857
3.	Occuption	-0.2161*
4.	Experience	0.0266
5.	Land holding	-0.1947*
6.	Annual income	-0.2140*
7.	Herd size	0.2296*
8.	Size of family	0.0184
9.	Extension contact	0.0783
10.	Social participation	0.2739*
11.	Information sources	0.0651

* = Significant at 0.05 per cent level.

It is clear from Table 2 that level of adoption of wheat production technology was positively & significantly correlated with size of herd and social participation. However, it had negative sigative significant association with occupation, land holding and annual income.

From the above results, it can be concluded that out of 11 characteristics, two characteristics namely herdsize and social participation were positively & significantly correlated with level of adoption of irrigated wheat production technology.

Dairy industry is well developed in the State. There is a regular flow of cash in the hands of milk producers. Money received from the sale of milk would have helped in purchase of production inputs as well as timely payments for farm operations. It is a common experience that the cash flow is more to the farmers keeping more number of dairy animals. These in turn have facilitated farmer for better adoption of irrigated wheat production technology.

More social participation provides an opportunity to an individual for more interaction as well as access to informations. This would have helped the farmers for better knowledge and understanding of newer production technologies. This would be a possible explanation for positive and significant association between social participation and

Table 3 : Suggestions of wheat growers for adoption of wheat production technologies (N=420)

Sr. No.	Suggestions	Frequency	Per cent	Rank
1.	Need to evolve high yielding variety of irrigated wheat	384	91.43	I
2.	Availability of improved seed in time	373	89.29	II
3.	Frequent visit of VEW's to provide the latest information about improved production technology of cultivation of irrigated wheat	316	75.24	III
4.	Require more research work for irrigated wheat	316	75.24	III
5.	Availability of improved seed at cheaper rate	313	74.52	IV
6.	Availability of improved seed directly from the research station or some Government agencies in required quantity	272	64.76	V

level of adoption of irrigated wheat production technology.

Suggestions of wheat growers for adoption of irrigated wheat production technology

The suggestions of the farmers to overcome their problems in adoption of wheat production technology were also ascertained and they are presented in Table 3.

As evident from Table 3, important suggestions to overcome constraints in adoption of irrigated wheat production technology were :

- to evolve high yielding variety,
- Seeds should be made available in time from the research station or some Government agencies in required quantity and at a cheaper rate.
- Providing latest information about irrigated wheat farming through frequent visit of VEWs.

CONCLUSION

Without having strong research base, it would be very difficult to increase agricultural production. Development of high yielding varieties and hybrids as well as packages of improved parctices in different crops have helped to register a higher rate of productivity increase. It is, therefore, crucial that the researches on the research stations may be conducted with farmers' point of view in mind.

The major findings of the study are as under;

Nearly three-fourth (68.33 per cent) of the respondent farmers had medium level of adoption of irrigated wheat production technology.

Out of eleven characteristics of the respondent farmers, two characteristics namely herdsize and social participation were positively and significantly correlated. Occupation, land holding and annual income were negatively and significantly correlated with extent of adoption of irrigated wheat production technology.

There is a need to evolve highyielding variety and also that improved seed should be made available. Frequent visit of VEWs is necessary to provide latest information about wheat production technology to the farmers. These were the important suggestions given by the irrigated wheat growers.

IMPLICATIONS

Wheat growers had medium level of adoption of wheat production technology. Hence, media mix approach such as frequent visit of VEWs, motivating the farmers to attend programmes, organization of front line demonstrations, & more use of print and electronic media is necessary to provide latest information about irrigated wheat production technology to the growers.

Research efforts may be concentrated on evloving high yielding, early maturing, disease and pest resistance variety of irrigated wheat for the farming community.

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❖ If we spend our lives in loving, we have no leisure to complain, or to feel unhappiness.

- JOSEPH JOUBERT