Growers' Adoption Rationale for Production Technology of Rainfed Wheat[1]

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ABSTRACT

To study the adoption rationale for production technology of rainfed wheat, this research was undertaken during Rabi 1997. One dependent variable i.e. extent of adoption and eleven independent variables were studied. The ex-post facto research design was used. The findings of the study depict that nearly two third of the respondent growers had medium level of adoption of rainfed wheat production technology. It was also found that age, farming experience and landholding were positively and significantly correlated with the adoption of rainfed wheat production technology.

Introduction

Wheat is one of the most important Rabi crop in Gujarat, which is grown under irrigated as well as rainfed conditions. Bhal is the predominantly rainfed wheat cultivating area of Gujarat. This area is well known for production of best quality rainfed wheat.

In Gujarat, rainfed wheat research work was conducted at Arnej. The limited research activities resulted in identifying two varieties viz. A-206 and A-624 from local collections. A-206 is popular among the farming community in specific pockets. As a result of vigorous breeding programme, A-28 variety was released in the year 1977. In 1980, G.W.1 variety was released. The variety has got its own popularity among the growers as besides being early in maturity it fetches higher price. All these research efforts are useless, unless the technology is being adopted by the growers. To know the rationale of the growers for adoption of the rainfed wheat production technology, the present study was conducted with following specific objectives:

1. To study the extent of adoption of rainfed wheat production technology by the rainfed wheat growers.
2. To study the relationship, if any, between some selected characteristics of the rainfed wheat growers and extent of adoption of rainfed wheat production technology.
3. To ascertain the suggestions of the rainfed wheat growers to overcome constraints in adoption of rainfed wheat production technology by them.

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Methodology

The present research was carried out in Bhal area of Gujarat State during the Rabi season of the year 1997. Keeping in view the area under rainfed wheat cultivation, the Bhal area, was selected purposively. Using multistage random sampling method, talukas, villages and growers were selected. From the two selected talukas (one each from a district), 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 60 rainfed wheat growers.

Keeping in view the objectives of the study, relevant variables of the study were selected in consultation with scientists. The selected independent variables were age, education, family occupation, farming experience, size of family, extension contact, social participation, information sources, landholding, income from animal husbandry and heard size. The extent of adoption of rainfed wheat production technology was considered as dependent variable.

The data from growers were collected with the help of interview schedule. In view of the objectives of the study, various statistical measures including coefficient of correlation were used for analysis of data.

Results and Discussion

The collected data were classified, tabulated and analyzed in view of the objectives of the study. The fact and findings desire at after announcing the information is discussed hereafter.

1. Extent of adoption of rainfed wheat production technology

In the present investigation, an effort has been made to study the adoption of recommended rainfed wheat production technology. The analysis of data is presented in Table 1.

Table 1: Distribution of growers according to their extent of adoption of rainfed wheat production technology

Extent of Adoption	Score	Respondents	
		Number	Per cent
Low	Below 24.45	12	20.00
Medium	25.46 - 38.05	38	63.33
High	Above 38.06	10	16.67
	Total	**60**	**100.00**

Mean = 31.75 SD = 6.30 C.V. % = 19.84

The data in table 1 clearly revealed that nearly two-third of the respondents (63.33 per cent) had medium level of adoption. The remaining 16.63 percent and 20 percent of respondents had high and low level of adoption respectively.

Rainfed wheat growers had adopted wheat production technologies at medium level. One possible reason for this may be

high cost of inputs and farmers inability to take risk on account of their poor economic conditions. The other reasons might be the lack of knowledge and technical guidance.

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

2. Relationship between growers' level of adoption of rainfed wheat production technology with independent variables

To study the association between selected 11 independent variables of the rainfed wheat growers with that of the extent of adoption of rainfed wheat production technology, coefficient of correlation was applied. The correlation coefficient was 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.

It is clear from table 2 that, level of adoption of rainfed wheat production technology has significant relationship with age, farming experience, and landholding of the rainfed wheat growers.

The above discussion leads to conclude that age, farming experience and landholding of the rainfed wheat growers had an influence on the adoption of rainfed wheat production technology.

3. Suggestions for solution of adoption constraints of rainfed wheat production technology.

The respondents were approached to give suggestions to overcome the constraints in adoption of rainfed wheat production technology. The suggestions given by the growers are presented in table 3.

As evident from table 3, important suggestions to overcome constraints in adoption of rainfed wheat production technology are:

Table 2: Relationship of growers' extent of adoption of improved production technology of rainfed wheat cultivation with their selected characteristics

N = 60

Sr. No.	Characteristics	'r' value
1	Age	0.2923 *
2	Education	- 0.0409
3	Occupation	- 0.0725
4	Experience	0.3258 *
5	Land Holding	0.3326 *
6	Annual Income	0.1435
7	Heard Size	0.0772
8	Size of Family	0.0112
9	Extension Contact	0.1582
10	Social Participation	0.0544
11	Access to Information Sources	0.0530

* = Significant at 0.05 level of probability

Table 3 : Suggestions to overcome constraints in adoption of rainfed wheat production technology by the growers

N=60

Sr. No.	Suggestions	Frequency	Percent	Rank
1	Improved seed should be made available in time	50	83.33	II
2	Improved seed should be made available at a cheaper rate	46	76.67	IV
3	Improved seed should be made available directly from research station or some Government agencies in required quantity	48	80.00	III
4	Providing latest information about rainfed wheat farming through frequent visit of VEWs	46	76.67	IV
5	Require more research work on value added products	41	68.33	VII
6	Need to evolve disease and pest resistant variety	37	61.67	VIII
7	Need to evolve short duration variety of rainfed wheat	43	71.67	VI
8	Need to evolve heat tolerant variety of rainfed wheat	34	56.67	IX
9	Need to evolve high yielding variety of rainfed wheat	54	90.00	I
10	Need to evolve dwarf variety of rainfed wheat	34	56.67	IX

1. To evolve high yielding variety of rainfed wheat,
2. Improved seeds should be made available in time from the research station or from some government agencies in required quantity, and
3. Providing the latest information about rainfed wheat farming through frequent visits of VEWs.

Conclusion

Without having strong research base, it is not possible to increase agricultural production. Developments of high yielding varieties and hybrids as well as recommended package of improved practices in different crops have helped to register a higher rate of productivity increase.

The major findings of the study showed that nearly two-third (63.33 per cent) of the growers had medium level of adoption of rainfed wheat production technology. Out of eleven characteristics of the respondent farmers; age, farming experience and landholding were positively and significantly correlated with extent of adoption of rainfed wheat production technology. The respondents viewed need to evolve high yielding variety and also that improved seeds should be made available, so as to increase adoption of the technology. Further, need of frequent visits of VEWs is visualized by the farmers to provide latest information about wheat production technology.

REFERENCES

Prasad D. N. 1980. The constraints in adoption of paddy technology in Saran district of Bihar State, thesis (M.Sc.) GAU, Anand.

Rabari B. M. 1983. Constraints experienced by the maize growers in adoption of hybrid maize technology, thesis (M.Sc.) GAU, Anand.

Mundhwa A. B. 1984. A study of constraints in adoption of improved technology in cultivation of high yielding rainfed wheat in Bhal area of Gujarat State, thesis (M.Sc.) GAU, Anand.