

FACTORS AFFECTING ADOPTION OF KAGZILIME PRODUCTION TECHNOLOGY BY THE FARMERS

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ABSTRACT

The present study was conducted in Mehsana district of Gujarat State. Total 120 respondents were selected randomly. The extent of adoption of Kagzilime production technology was found medium among majority (80.83%) farmers. The correlation of co-efficient between adoption and the selected characteristics of the respondents viz. education, caste, farming experience, social participation, material possession, occupation, annual income, and scientific orientation was positive and significant. On the other hand, the variables, viz. age, family type, family size, land holding, risk taking ability and economic motivation failed to establish any significant relationship with extent of adoption. All the selected 14 variables jointly contributed 74.99 per cent variation in explaining adoption of Kagzilime production technology by the farmers.

INTRODUCTION

There is no use of an innovation, unless it is practiced at the farmer's field. The man behind the plough is the real user of technology and therefore adoption of technology by the farmers is important. Kagzilime is one of the important fruit crops of North Gujarat zone, however, the results achieved in terms of its yield per unit area do not seem to be satisfactory due to variation in adoption of its production technology by the farmers. The extent of adoption might be the result of the influence of the personal, social and economic characteristics of the farmers.

METHODOLOGY

The present study was conducted in Mehsana district of North Gujarat purposively as the district has the highest area under kagzilime cultivation. Using purposive sampling, two talukas viz., Mehsana and Kadi were selected considering their higher area under kagzilime cultivation.

Again from each selected taluka, five villages with higher area under kagzilime cultivation were selected purposively. Using proportionate random sampling technique, 20 per cent Kagzilime growers were selected randomly from each village making a sample of 120 respondents.

RESULTS AND DISCUSSION

1 Extent of Adoption

With a view to finding out extent of adoption of recommended kagzilime production technology, the growers were asked to give the information about the package of practices adopted by them. On the basis of score obtained by the respondent, the 'Adoption Quotient' was calculated for each respondent. Based on Adoption Quotient, the respondents were classified into three categories. The data pertaining to adoption of recommended kagzilime production technology are presented in Table 1

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Table 1 : Distribution of the kagzilime growers according to their Adoption Quotient .

Adoption Quotient	Number	Per cent
Low (0 to 33.33 per cent)	00	00.00
Medium (33.34 to 66.66 per cent)	97	80.83
High (Above 66.66 per cent)	23	19.17

The data in Table 1 indicate that out of 120 respondents, 80.83 per cent of the respondents were found in the category of medium level of adoption of kagzilime production technology. Remaining 19.17 per cent were observed to have high level of adoption. It is worth to mention that none of the farmers was found in the category of low adoption.

2 Zero order correlation

In order to find out the relationship between selected characteristics of the respondents and their extent of adoption, correlation of co-efficient was calculated. The results in this regard are depicted in Table 2.

Table 2 shows that the independent variables viz. caste, farming experience, material possession, occupation, and scientific orientation had positive and highly significant relationship with extent of adoption of kagzilime production technology by the farmers , while the variables viz., education, social participation, and annual income showed positive association with extent of adoption at 0.05 level of significance. The variables viz. age, family type, family size, land holding, risk taking ability and economic motivation failed to establish any significant relationship with extent of adoption. Thus, it can be inferred that eight variables viz., education, caste, farming experience, social participation, material possession, occupation, annual income and scientific orientation were found to have having positively significant relationship with adoption.

3 Multiple Regression

The multiple regression using linear models was carried out to know the combined effect

Table 2: Relationship between selected characteristics of kagzilime growers and their extent of adoption of recommended kagzilime production technology.
n=120

Sr. No.	Independent variables	Coefficient of Correlation ('r' value)
1	Age	0.0685
2	Education	0.2190*
3	Caste	0.3996**
4	Farming experience	0.2674**
5	Family type	- 0.0659
6	Family size	0.1031
7	Social participation	0.2509*
8	Material possession	0.3576**
9	Occupation	0.5511**
10	Land holding	0.0744
11	Annual income	0.2456*
12	Risk taking ability	0.0423
13	Scientific orientation	0.3699**
14	Economic motivation	0.1036

*, ** =Significant at 0.05 and 0.01 per cent levels, respectively.

of the independent variables in explaining the total variation in the adoption. The findings are presented in Table 3.

Table 3 : Multiple regression analysis of independent variables with extent of adoption

n = 120

Sr. NO.	Variables	Regression coefficient (b _j)	Standard error of (b _j)	't' value
1	Age	-0.0147	0.0227	0.646
2	Education	-0.1095	0.2032	0.539
3	Caste	1.0876	0.4205	2.586**
4	Farming experience	0.1042	0.0335	3.113**
1	Family type	-0.3001	0.5023	0.598
2	Family size	0.0910	0.0808	0.236
3	Social participation	0.1373	0.1258	1.092
1	Material possession	0.6350	0.2844	2.233*
2	Occupation	1.8382	0.2944	6.244**
3	Land holding	6.2678	0.0815	7.6950**
4	Annual income	3.2362	1.0352	0.313
1	Risk taking ability	-0.4411	0.1254	3.517**
2	Scientific orientation	0.3699	0.1020	3.627**
3	Economic motivation	-0.0791	0.1388	0.570

Multiple Regression = 0.7499

*, ** = Significant at 0.05 and 0.01 per cent levels, respectively.

All the independent variables mentioned in Table 3 explained as much as 74.99 per cent total variation in the extent of adoption of recommended kagzilime production technology. Further the 't' values of seven variables viz., caste, farming experience, material possession, occupation, land holding, risk taking ability and scientific orientation were significant at 0.01 level of significance, indicating significant contribution of these seven variables in extent of adoption of recommended kagzilime production technology.

CONCLUSIONS

It can be concluded from the foregoing discussion that majority of the respondents had medium level of adoption of recommended kagzilime production technology. The independent variables viz., caste, farming experience, occupation, land holding, risk taking ability and scientific orientation had positive and significant relationship with extent of adoption of recommended kagzilime production technology by the farmers. All the independent variables explained as much as 74.99 per cent total variation in the extent of adoption of recommended kagzilime production technology.

Every man I meet is in some way my superior and in that I can learn of him