

## ADOPTION BEHAVIOUR OF FARMERS ABOUT KHARIF GROUNDNUT PRODUCTION TECHNOLOGY

V .M. Patel<sup>1</sup>, J. J. Mistry<sup>2</sup> and K. A. Thakkar<sup>3</sup>

### ABSTRACT

*Groundnut is an important crop grown in Gujarat. There is however a wide gap between average and potential yield of Groundnut per hectare for which non-adoption of recommended technology can be one major reason. With this in view, the present study was conducted in Sabarkantha district of Gujarat state to know the adoption behaviour of farmers about kharif groundnut production technology. The sample of the study was 120 Groundnut growers. The findings reveals that majority of farmers had medium level of adoption of kharif groundnut production technology. The variables viz; education, social participation, size of land holding, occupation, annual income, scientific orientation, risk taking ability and knowledge were positively and significantly related with extent of adoption of recommended kharif groundnut production technology by the farmers.*

### INTRODUCTION

Gujarat is one of the leading oilseed producing states. The groundnut is an important crop among all oilseed crops (Castor, Sesamum, Rapeseed, Mustard, Sunflower, Safflower etc.) grown in the state. It alone contributed as high as 76 per cent of total oilseed area and 72 per cent of the total oilseed production of the state.

Sabarkantha is a major groundnut growing district. The area under *kharif* groundnut in the district was 34900 ha in the year of 2006-07 with the productivity of about 772 kg/ha. Thus, the average yield of groundnut production is low in the district. Despite considerable efforts, the production of groundnut has not increased much as compared to cereals and fibre crops. Unless the improved practices are properly adopted by the farmers, the desired target cannot be achieved.

### METHODOLOGY

The present study was conducted in purposively

selected Sabarkantha district of North Gujarat which has the highest area under *kharif* groundnut cultivation. Out of thirteen talukas, two talukas viz; Talod and Prantij having highest area under *kharif* groundnut cultivation were selected purposively. Five villages with higher area under *kharif* groundnut cultivation from each of two talukas were selected. Using proportionate random sampling technique, 10 per cent groundnut growers were selected making a sample of 120 respondents. The data were collected through personal contact method with the help of structured interview schedule from groundnut growers. Adoption quotient was worked out to know the level of extent of adoption of *kharif* groundnut production technology. To know the association between independent variables with adoption, coefficient of correlation was worked out. Similarly to know the combined effect of the independent variables in explaining the variation in the adoption of groundnut production technology, the multiple regression analysis was

---

1 Assistant Extension Educationist, Polytechnic in Agriculture, S. D. Agricultural University, Khedbrahma, Dist. : Sabarkantha.

2 Subject Matter Specialist (Extn. Edu.), Krishi Vigyan Kendra, S. D. Agricultural University, Khedbrahma, Dist. : Sabarkantha.

3 Professor and Head, Department of Extension Education, C.P.College of Agriculture, S.D. Agricultural University, Sardarkrushinagar,

done.

## FINDINGS

### 1 Adoption of improved *kharif* groundnut production technology

The data in Table 1 indicate that out of 120 respondents, great majority (93.33 %) of the

respondents were found in the category of medium level of adoption of *kharif* groundnut production technology. Remaining 6.67 per cent respondents fell under the category of low level of adoption. None of the respondents was found in the category of high level of adoption.

**Table 1. Distribution of the groundnut growers according to their adoption quotient** n=120

Sr. No.	Extent of adoption	Number	Per cent
1	Low (0 to 33.33 per cent)	08	06.67
2	Medium (33.34 to 66.66 per cent)	112	93.33
3	High (66.67 to 100.00 per cent)	00	00.00

**Table 2. Association between the characteristics of Groundnut growers and their extent of adoption of recommended *kharif* groundnut production technology**

n = 120

Sr. No.	Variables	Co-efficient of correlation ('r' value)
1	Age	-0.217*
2	Education	0.152*
3	Family type	-0.145
4	Family size	-0.142
5	Social participation	0.201 *
6	Size of land holding	0.200 *
7	Irrigation facility	0.096
8	Occupation	0.261 **
9	Annual Income	0.268 **
10	Scientific orientation	0.387 **
11	Risk taking ability	0.243 *
12	Knowledge	0.463 **

\* : significant at 0.05 level of significance

\*\* : significant at 0.01 level of significance

The independent variables viz., education, social participation, size of land holding, occupation,

annual income, scientific orientation, knowledge and risk taking ability were positively and significantly related with extent of adoption of recommended *kharif* groundnut production technology by the farmers, while age had negative but significant correlation with extent of adoption of recommended *kharif* groundnut production technology. Remaining variables viz., family type, family size and irrigation facility could not establish any significant relationship with extent of adoption of recommended *kharif* groundnut production technology by the farmers.

### 2 Variables Predicting Adoption of *kharif* groundnut production technology

In regression analysis, all the 11 independent variables were fitted to explain the extent of adoption of recommended *kharif* groundnut production technology. The results are presented in Table 3.

All the independent variables mentioned in Table 3 explained as much as 51.43 per cent total variation in the extent of adoption of recommended *kharif* groundnut production technology. The unexplained variation of 48.57 per cent might be due to the factors not included in the study.

**Table 3. Multiple regression analysis of independent variables with extent of adoption.**

Sr. No.	Variables	Regression coefficient (bi)	Std. error of $b_i$	't'
1	Age	-0.0423	0.0656	-0.645 <sup>NS</sup>
2	Education	-0.7462	0.6059	-1.231 <sup>NS</sup>
3	Family type	-0.9002	1.2849	-0.700
4	Family size	0.0892	0.3575	0.2495 <sup>NS</sup>
5	Social participation	0.6469	0.6776	0.9547 <sup>NS</sup>
6	Size of land holding	0.3781	0.2770	1.367 <sup>NS</sup>
7	Irrigation facility	1.0903	1.220	0.893 <sup>NS</sup>
8	Occupation	0.9066	0.5606	1.617 <sup>NS</sup>
9	Annual income	0.0031	0.0099	0.3086 <sup>NS</sup>
10	Scientific orientation	0.3563	0.1029	3.4599**
11	Risk taking ability	0.1753	0.1202	1.458 <sup>NS</sup>

Multiple regression ( $R^2$ ) = 0.5143    \*\* = Significant at 0.01 level of significance    NS = Non significant

As revealed from the Table:3, only one variable i.e. scientific orientation was significant at 0.01 level of significance, indicating significant contribution of this variable in explaining extent of adoption of recommended *kharif* groundnut production technology. Remaining ten variables failed to contribute significantly in extent of adoption of scientific *kharif* groundnut production technology.

It can thus be concluded that 51.43 per cent total variation in extent of adoption of recommended *kharif* groundnut production technology was explained by a set of 11 independent variables together. Further, out of 11 variables, only scientific orientation had significant contribution in extent of adoption of recommended *kharif* groundnut production technology. This study provided evidence about the overwhelmingly important role played by scientific orientation in extent of adoption of groundnut production technology.

## CONCLUSIONS

It can be concluded from above results that majority of the Groundnut growers had medium level of adoption about *kharif* groundnut production technology. The independent variables viz., education, social participation, size of land holding, occupation, annual income, scientific orientation, knowledge and risk taking ability had positive and significant relationship with extent of adoption of recommended *kharif* groundnut production technology by the farmers, while age was negatively and significantly related with extent of adoption of recommended *kharif* groundnut production technology. Remaining variables failed to establish any significant relationship with extent of adoption. Multiple Regression Analysis indicated that only scientific orientation of farmers contributed significantly to the adoption of *kharif* groundnut production technology.