

ADOPTION OF IMPROVED GROUNDNUT PRODUCTION TECHNOLOGY BY GROUNDNUT GROWERS

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ABSTRACT

Groundnut cultivation in Gujarat predominantly concentrated in Saurashtra region. To assess the farmers' adoption of groundnut production technology, this study was undertaken in Jamnagar and Rajkot districts of North Saurashtra agro climatic zone. It was found that in the sampled population, majority of the groundnut growers (64.44 per cent) were medium adopters of the groundnut cultivation practices. Whereas, 18.89 per cent were low and 16.67 per cent were high adopters of the groundnut production technology. The cent percent of the farmers adopted the groundnut cultivation practices like threshing after proper drying with thresher while the least adopted practice was use of NPV 250 LE for prodenia and heliothis or spray BT powder @ 1 kg/ha by the groundnut growers. Innovativeness, risk orientation, extension participation, education and annual income were found to be the major contributing factors in adoption.

Keywords : groundnut, adoption, production technology

INTRODUCTION

The groundnut (*Arachis hypogea L.*) is an important oilseed crop of India, Gujarat and Saurashtra region. Gujarat stands first in terms of both areas with 1.8 million hectares and production 1.91 million tonnes respectively. Groundnut cultivation in Gujarat is predominantly concentrated to Saurashtra region (Khodifad, 2010). Saurashtra is an oil pouch of the India. Groundnut is cultivated across the region on 1.63 million hectares of land with output of 1.7 million tones nut in shell. All India base, share of Saurashtra is 25 per cent by area and 27 per cent by production.

North Saurashtra region of Gujarat state consists of Amreli, Jamnagar, Bhavnagar, Rajkot and Surendranagar districts having 1.16 million hectares under groundnut and produces 1.48 million tons' groundnuts with an average yield of 1415 kg/ha. The productivity of groundnut of North Saurashtra region is lower than South Saurashtra region i.e. 1754 kg/ha. Groundnut cultivation in the region is mainly constrained by inadequate, uncertain and erratic rainfall, infestation of pests and diseases and farmers' perception of recommended production technology.

There is a wide gap between the improved practices adopted by the farmers and technologies generated by the scientists of agricultural universities. Hence, it will be crucial to assess the farmers' adoption about groundnut production technology. Therefore, the present investigation on "Adoption of Improved Groundnut Production Technology

by Groundnut Growers" is thought to be undertaken with the following objectives.

OBJECTIVES

- (1) To assess the farmers' adoption of groundnut production technology.
- (2) To ascertain the relationship between adoption of groundnut growers and their profile

METHODOLOGY

The present investigation was carried out in Jamnagar and Rajkot districts of North Saurashtra Agro climatic Zone of Gujarat state. After selection of the districts, purposively three talukas from each district were selected and out of these six selected taluka, total 15 villages were selected having large area under groundnut cultivation. From each village 12 respondents were selected for this study. The information was collected by personal interview with the help of structured interview schedule.

For measuring the extent of adoption, the respondent's responses were recorded as adopted/ not adopted against each practice. A unit score was given to adoption and zero to non-adoption. Partial adoption and over adoption were treated as non-adoption. The score obtained by individual respondent for all the statements was summed up. This gave the individual adoption score. Then, with the help of mean and S.D., the respondents were categorized as low adopters, medium adopters and high adopters.

RESULTS AND DISCUSSION

Table 1 : Distribution of respondents based on adoption of groundnut production technology n=180

Sr. No.	Adoption Category	Frequency	Percent
1	Low (below 53.87)	34	18.89
2	Medium (53.87 to 74.46)	116	64.44
3	High (above 74.46)	30	16.67
Mean = 64.17 S.D. = 9.56 C.V.= 16.04			

The data reported in table 1 showed that 64.44 per cent of the groundnut growers were medium adopters. Whereas, 18.89 per cent were low and 16.67 per cent were high adopters of the groundnut production technology.

CORRELATES OF ADOPTION

In order to ascertain the association between the extent of adoption of farmers' and their selected characteristics the correlation coefficient 'r' was calculated (Chandel, 1975).

Table 2 : Zero order correlation coefficient of independent variables with adoption of groundnut growers

Sr. No.	Profile Characteristics		'r' Value
I	Personal		
1	X1	Age	-0.11588 ^{NS}
2	X2	Education	0.38629**
II	Socio-economical		
3	X3	Farm Size	0.24253**
4	X4	Herd Size	0.12643 ^{NS}
5	X5	Annual income	0.35721**
6	X6	Groundnut crop intensity	0.20826**
7	X7	Groundnut yield Index	0.29268**
8	X8	Irrigation Potentiality	0.26133**
9	X9	Farm Mechanization Index	0.31133**
10	X10	Social Participation	0.13187 ^{NS}
III	Psychological		
11	X11	Innovativeness	0.51704**
12	X12	Risk orientation	0.40892**
13	X13	Achievement Motivation	0.32775**
14	X14	Attitude towards modern agriculture	0.34590**
IV	Extension – Communication		
15	X15	Mass Media Exposure	0.30043**
16	X16	Extension participation	0.40266**
17	X17	Participation in training	0.17252*

* Significant at 0.05 level (table value=0.14)

** Significant at 0.01 level (table value=0.19),

NS=Non-significant

The data in table 2 reveal that there was positive and significant association between adoption and education, annual income, groundnut crop intensity, groundnut yield index, farm mechanization, innovativeness, risk orientation, achievement motivation, attitude towards modern agriculture, mass media exposure and extension participation in training. Whereas, positive and non-significant association was found with herd size and social participation and age of the respondents was negatively and non-significantly associated with the extent of adoption. The findings are similar with the Kumbhani et al. (2017), Vinaya et al. (2017) and Sipai (2017).

CONCLUSION

From the above findings it can be concluded that majority of the groundnut growers possessed medium level of adoption about groundnut production technology. It could also be concluded from the results that the extent of adoption of groundnut production technology was positively and significantly correlated with education, annual income, groundnut crop intensity, groundnut yield index, farm mechanization, innovativeness, risk orientation, achievement motivation, attitude towards modern agriculture, mass media exposure, extension participation in training and perception, whereas, positive and non-significant association was observed with herd size and social participation and age of the respondents was negatively and non-significantly associated with the extent of adoption.

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