

## ATTITUDE OF COTTON GROWERS TOWARDS DRIP IRRIGATION SYSTEM OF SAURASHTRA REGION

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### ABSTRACT

*Drip-irrigation is introduced primarily to save the water and increase the water use efficiency in agriculture. Due to drip method of irrigation, reduction in water consumption is very good over the surface method of irrigation for different crops. The study was conducted in four districts viz. Rajkot, Junagadh, Amreli and Bhavnagar have been selected purposively because these districts having considerable cropping area of cotton with drip irrigation system. One taluka from each selected district i.e. Dhoraji, Junagadh, Amreli and Bhavnagar talukas was selected purposively. Three villages from each selected taluka were selected randomly. Fifteen framers from each selected village having drip irrigation system in cotton crops. Thus, total 180 cotton growers have been selected to know the attitude of farmers towards drip irrigation system with the help of reliable and valid developed attitude scale. The result of finding revealed that more than two fifth (41.11 per cent) of the cotton growers had medium attitude towards drip irrigation system followed by more than one fourth (30.00 per cent) cotton growers had highly favourable attitude towards DIS and 21.11 per cent cotton growers had very high level of attitude towards DIS. Majority of the farmers (92 per cent) had moderately favorable to highly favorable attitude towards drip irrigation system. The level of attitude of the respondents towards drip irrigation system was observed positively significant with their education, social participation, socio economic status, annual income, occupation, size of land holding, cropping intensity, economic motivation, risk preference, scientific orientation, adoption of DIS, contact with extension agencies and utilization of information sources.*

**Keywords:** attitude, drip irrigation system

### INTRODUCTION

Gujarat has a limited source of irrigation facilities. The main objective of the Drip Irrigation System is to benefit the farmers by increasing agricultural production through the adoption of scientific water management techniques, and thereby to enter in the Second Green Revolution in Gujarat. The Scheme is being implemented with a uniform subsidy pattern of 50 per cent of the Micro Irrigation System (MIS) cost or Rs 60,000/- per hectare, whichever is less. The Schedule Tribal (ST) and Schedule Caste (SC) farmers are entitled to an additional subsidy of 25 per cent of the MIS cost or Rs. 90,000/- per hectare, whichever is less. In the Dark Zone area, 10 per cent additional subsidy is provided to beneficiary farmers under the Scheme, which entitles them to avail subsidy at 60 per cent of the MIS cost or Rs 60,000 per hectare, whichever is less (Anonymous, 2015). Micro Irrigation System (MIS) consists two methods of irrigation viz., Drip Irrigation System (DIS) and Sprinkler Irrigation System. Drip-irrigation is introduced primarily to save water and increase the water use efficiency in agriculture. However,

it also delivers many other economic and social benefits to the society. Reduction in water consumption due to drip method of irrigation over the surface method of irrigation varies from 30 to 70 per cent for different crops (Narayanamoorthy, 2006). The present study is also focusing some of the points which are useful to Gujarat Green Revolution Company (GGRC) to implement the drip irrigation system and solving irrigation management problems for farmers. Moreover, it is also expected that, such knowledge will also be helpful to training institution like GGRC for imparting training in drip irrigation to their authorized suppliers.

### OBJECTIVE

To know the attitude of cotton growers towards drip irrigation system of Saurashtra region

### METHODOLOGY

The present study was carried out on a random sample of total 180 cotton growers having drip irrigation

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system at least last five years from 12 villages. Three villages from each of taluka i.e. Dhoraji from Rajkot, Junagadh from Junagadh, Amreli from Amreli and Bhavnagar talukas of Bhavnagar districts of Saurashtra region. The data were collected through the personal interview. The reliable and valid attitude scale with 24 statements was administered on the selected sample farmers and the responses were collected in five continuums *viz.* strongly agree, agree, undecided, disagree and strongly disagree with weight of 5, 4, 3, 2 and 1, respectively for positive statements and reverse scoring for negative statements. The scale was developed and used for the study. The total attitude score for each respondent was obtained by adding all the scores of their responses of all the statements and on the basis of mean and S.D., the respondents were grouped into three categories *viz.* less favourable attitude (below mean – S.D.), moderately favourable attitude (between mean + S.D.) and highly favourable attitude (above mean + S.D.).

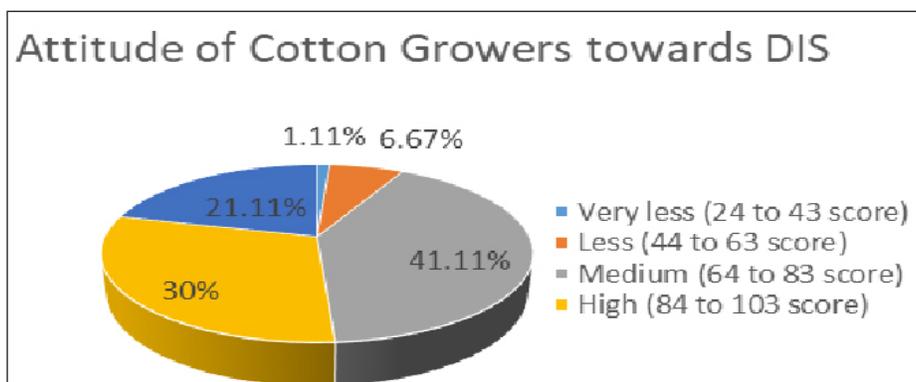
### RESULTS AND DISCUSSION

The data are presented in Table 1 and graphically depicted in Figure 1 showed that 41.11 per cent of the

cotton growers had medium attitude towards drip irrigation system followed by more than one fourth (30.00 per cent) cotton growers had highly favourable attitude towards DIS and 21.11 per cent of the cotton growers had very high level of attitude towards DIS. Only 6.67 per cent of respondents had less favourable and 1.11 per cent respondents had very less favourable attitude towards DIS. This clearly indicates that a great majority (92.22 per cent) of the cotton growers had moderately favourable to very highly favourable attitude toward DIS. This might be due to the fact that respondents have realized the advantages of the DIS. This finding is supported with the findings of Patel *et al.* (1995) and Desai (1997)

**Table 1: Attitude of Cotton growers towards Drip Irrigation System n=180**

Sr. No.	Level of attitude	Frequency	Percent
1	Very less (24 to 43 score)	02	01.11
2	Less (44 to 63 score)	12	06.67
3	Medium (64 to 83 score)	74	41.11
4	High (84 to 103 score)	54	30.00
5	Very high (104 to 120 score)	38	21.11



**Fig. 1: Farmers according to their attitude towards Drip Irrigation System**

The correlation coefficient between attitude and their variables are presented in Table 2 revealed that the level of attitude of the cotton growers towards DIS was observed positive and highly significant with their education, socio economic status, annual income, credit orientation, size of land holdings, cropping intensity, economic motivation, risk preference, scientific orientation, adoption of DIS, contact with extension agencies and utilization of information sources. While social participation and occupation had positive and significant relationship with attitude of respondents towards DIS. Age had negative and significant relationship with attitude of the respondents towards DIS.

The variable caste was found to be non-significantly correlated with the level of attitude of the respondents towards DIS. The farmers, who were educated, experienced in their farming, with high level of annual income, size of land holdings, cropping intensity, risk bearing capacity, scientific orientation, adoption of DIS, contact with extension agencies and utilization of information positivism towards the drip irrigation system. These finding are confirming with the findings of Patel *et al.* (1995), Desai (1997) and, Patel and Chauhan (2004) observed that education was positively and significantly related with attitude towards IPM strategy.

Table 2: Relationship of independent variables of the cotton growers with attitude towards DIS

n=180

Sr. No.	Independent variables		Correlation Coefficient ('r')
[I]	<b>Personal</b>		
	1	Age	- 0.1922*
	2	Education	0.3467**
	3	Caste	0.1358 NS
[II]	<b>Socio - Economic</b>		
	4	Social participation	0.1819*
	5	Socio-economic status	0.6406**
	6	Annual income	0.4851**
	7	Credit orientation	0.3538**
[III]	<b>Situational</b>		
	8	Occupation	0.1829*
	9	Size of land holding	0.2443**
	10	Cropping intensity	0.4145**
[IV]	<b>Psychological</b>		
	11.	Economic motivation	0.4962**
	12	Risk-preference	0.5646**
	13	Scientific orientation	0.5136**
	14	Adoption of DIS	0.5819**
[V]	<b>Communicational</b>		
	15	Contact with extension agency	0.5627**
	16	Utilization of information sources	0.4561**

NS = Non-Significant;

\* = Significance at 0.05 level (0.146)

\*\* = Significance at 0.01 level (0.243)

## CONCLUSION

It can be concluded that the great majority (92.22 per cent) of the cotton growers had medium to high level of favourable attitude toward DIS. State Agriculture Department, GGRC and extension functionaries should conduct vocational trainings at grass root level in order to create awareness about DIS. Efforts should be made to manipulate the attitude in desirable direction by providing trainings as per their felt needs. In case of correlation coefficient, the level of attitude of the cotton growers towards DIS was observed positive and highly significant with their education, socio economic status, annual income, credit orientation, size of land holdings, cropping intensity, economic motivation, risk preference, scientific orientation, adoption of DIS, contact with extension agencies and utilization of information sources.

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