



Association between selected attributes of drip owners with socio economic impact

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ABSTRACT

The study was conducted to explore the association between selected attributes of the drip owners and their socio economic impact of drip irrigation system. Data were collected through personal interview during the year 2017 from purposively selected of Aravalli districts of Gujarat with the sample size of 150 respondents. The results of correlation analysis clearly indicated that the independent variables namely education, irrigation potentiality, cropping intensity, economic motivation, attitude towards drip irrigation system and extension contact had positive and significant association with socio economic impact of drip owners more.

Keywords: Association, drip irrigation system (DIS), socio economic impact.

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INTRODUCTION

Agriculture forms the main base for Indian socio economic development. Its development towards modernization has been observed since couple of decades. However, the agricultural production and productivity are yet to be boosted to meet the need in respect to the crop commodities viz., oilseeds, pulses, fibers, fruits and vegetables. For increasing the agricultural production, the importance of irrigation is fully realized, but the proper use of water is seldom practiced in our country. Rainfall is irregular and uneven in many parts of the country. Gujarat is also facing this situation. Shortage of water has become one of the main problems in Gujarat for farmers. Therefore, efficient use of available water has become extremely important, which can be done through drip irrigation system. So, the regularized and controlled irrigation increases crop production, reduce water cost, conserves soil, covers more area under irrigation and brings prosperity at home. The regularized and controlled irrigation increases crop production, reduce water cost, conserves soil, covers more area under irrigation and brings prosperity at home. Generally, farmers look for a method of irrigation, which is most efficient with less water, labour, fertilizer and power requirements. Among the irrigation methods the drip irrigation system, is the advanced method of irrigation to overcome the various problems of water losses and other problems such as labour, money and water management. Several results of the research established that about 35 to 65 per cent of the available water could be saved by adopting drip irrigation. Thus, the present study entitled "association between selected attributes of drip owners with socio economic impact" was conducted with the following objectives.

1. To study the impact of drip irrigation system on socio economic status of the drip owners
2. To ascertain the association between selected attributes of drip owners and their socio economic impact of drip irrigation system

MATERIALS AND METHODS

The study was conducted in purposively selected Aravalli district of Gujarat state in 2017. The district has six talukas, out of these, Bhiloda, Dhansura, and Bayad districts were selected randomly. From the selected talukas, five villages were selected on the basis of more number of drip owners. Thus, total 15 villages having more number of drip owners were selected. A list of farmers who installed drip irrigation system on their farm was prepared from each selected village. Ten respondents from each village were selected by using random sampling techniques making a sample of 150 drip owners. The data were collected personally by interviewing, the selected drip owners with the help of carefully constructed structured and pre-tested interview schedule. For measurement of the socio economic impact of the drip owners regarding drip irrigation practices, 11 aspects were considered. In order to obtain overall socio economic impact, the score obtained by each aspect by an individual was summed up. The score of each aspect was added to get the socio economic impact. The correlation coefficient was calculated to know the association between selected attributes of drip owners and their socio economic impact.

RESULTS AND DISCUSSION

Socio economic impact of drip owners

The information regarding socio economic impact was collected from drip owners and is presented in Table 1.

n = 150			
Sr. No.	Impact of DIS	Frequency	Per cent
1	Low (Up to 20.99 score)	30	20.00
2	Medium (Between 20.99-25.30 score)	86	57.33
3	High (Above 25.30 score)	34	22.67
Total		150	100.00
\bar{X}=20.63			S.D. =3.20

Table 1 clearly indicates that majority of the drip owners (57.33 per cent) were having medium level of socio economic impact, followed by 22.67 per cent and 20.00 per cent of them had high and low level of socio economic impact, respectively.

Thus, it can be concluded that majority of the drip owners had medium level of socio economic impact. The probable reason may be due to the fact that drip owners had covered only some parts of the area under drip irrigation system rather than cover entire area.

Association between selected attributes of drip owners and socio economic impact

The information regarding the association between independent variable and dependent variable is presented in Table 2

Table 2: Association between selected attributes of drip owners and socio economic impact (**n = 150**)

Sr.No.	Independent variables		Correlation coefficient ('r')
I	Personal variables		
	1	Age	-0.4176**
	2	Education	0.5761**
	3	Social participation	0.0903 ^{NS}
II	Agro economic variables		
	1	Area under DIS	0.1049 ^{NS}
	2	Irrigation potentiality	0.2849**
	3	Cropping intensity	0.2249**
	4	Annual income	0.1400 ^{NS}
III	Psychological variables		
	1	Economic motivation	0.4088**
	2	Attitude towards DIS	0.4699**
IV	Communication variable		
	1	Extension contact	0.4739**

**=Significant at 1% level

NS= Not significant

Personal variables

The data in Table 2 revealed that age of drip owners had negative and significant association with the socio economic impact. The probable reason may be that experienced farmers were dynamic to know and adopt new ideas/innovations in farming. Whereas, level of education of drip owners had positive and highly significant association with the socio economic impact. The reason may be that the educated owners would generally have the broader outlook and adoption behaviour. Therefore, the variable

education of drip owners and socio economic impact was found to be dependent. While social participation was positive and not significant association with socio economic impact. The present findings is in conformity with the findings of Madhava and Surendran, [2] and Suthar [3].

Agro economic variables

It is observed from the Table 2 that the area under drip irrigation system of drip owners had positive and not significant association with socio economic impact. While, irrigation potentiality of the drip owners had positive and highly significant association with socio economic impact. The irrigation potentiality had been increased which brought a change in the standard of living and social well being of drip owners. Whereas cropping intensity of the drip owners had positive and highly significant association with socio economic impact. The probable reason might be that more intensity of land use and increase in area under different crops could be possible after adoption of drip irrigation system by the drip owners followed by annual income of drip owners had positive and not significant association with socio economic impact. The present findings are in conformity with the findings of Akshaya *et al.* [1], Suthar [3] and Sonwalkar [4].

Psychological variables

The results from Table 2 indicated that economic motivation of the drip owners was positively and significantly associated with socio economic impact. The probable reason may be that the economically viable farmers are oriented towards maximization of the profit from their farming. Whereas, attitude of the drip owners towards drip irrigation had positive and highly significant association with their socio economic impact. The probable reason may be that the farmers reaped the benefits of saving in water, higher yield, higher price of the produce, higher net profit and less cost of production. The present findings are in conformity with the findings of Akshaya *et al.* [1] and Suthar [3].

Communication variable

The data from the Table 2 indicated that extension contact of the drip owners had positive and highly significant association with socio economic impact. The probable reason might be that to accelerate the socio economic impact of the drip owners, extension staff had sufficient scientific and technical knowledge about drip irrigation management practices which was necessary in this field in order to make the farmers well acquainted with drip irrigation and its management techniques. So this extension contact made significant association with socio economic impact. The present findings are in conformity with the finding of Suthar [3].

CONCLUSION

Majority of the drip owners were having medium level of socio economic impact. It was observed that among 10 variables 6 variables were positively and significantly associated with socio economic impact namely education, irrigation potentiality, cropping intensity, economic motivation, attitude towards DIS and extension contact. These variables are essential in changing the drip owners socio economic status. While Age was negatively associated with socio economic impact because the farmers were old age farmers are not interested in socio economic changes. Whereas, social participation, area under DIS and annual income were found to be not significant with socio economic impact. Therefore, need to be taken to increase in social participation, area under DIS and annual income, in order to achieve higher socio economic status by providing special training programs, demonstrations, seminar, workshop and visit should be organized by the extension agency and state.

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