

# Inspiration sources for adopting a drip irrigation system by the farmers

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Received : 23.07.2016; Accepted : 20.09.2016

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■ **ABSTRACT** : The benefits of a technology are actually derived only when it is efficiently used by the farmers at their local situation. The drip irrigation systems are the advanced methods of irrigation for over coming the various problems of water losses and other problems such as labour, money and water management. The present study was purposively undertaken in the two districts of Gujarat state. The present study was confined to ex post facto research design. Dealers/agents of drip irrigation and progressive farmers were the major inspiration sources for adoption of drip irrigation system and majority of respondents having medium level of adoption of DIS.

■ **KEY WORDS** : Inspiration sources, Adoption, Drip irrigation system (DIS)

■ **HOW TO CITE THIS PAPER** : Parmar, S.D., Thorat, G.N., Shakya, H.B. and Patel, V.B. (2016). Inspiration sources for adopting a drip irrigation system by the farmers. *Internat. J. Agric. Engg.*, 9(2) : 225-228, DOI: 10.15740/HAS/IJAE/9.2/225-228.

The productivity in rainfed and irrigated areas will be 1.5 tonnes/hectare and 4.0 tonnes per hectare, respectively. This scenario can be changed by adopting water management practices in surface irrigation methods and introducing drip and sprinkler irrigation as recommended by the Task Force on micro irrigation (2004). According to the report of the task force, the potential for coverage under drip and sprinkler irrigation is estimated to be about 27 million hectares and 42.5 million hectare, respectively (Anonymous, 2005).

Generally, farmers look for a method of irrigation which is most efficient with less water, labour, fertilizers and power requirements. Drip irrigation system is such an efficient method which has the potential for substantial water savings, conveyance losses are negligible, uniformity in water application is high as compared to other irrigation methods.

For any action or behaviour an individual get inspiration first. Similarly a farmer is required to have inspiration for adopting new system/new agricultural

technology. Inspiration work as forced for initiating a conscious and purposeful action. It also influences a person to do a thing in a certain way. In order to inspire the farmers maximize agriculture production at minimum cost to increase their income by adopting scientific water management technology to bring in revolutionary transformation of the agriculture scenario. At present various schemes of central and state government on drip irrigation were executed through agriculture and horticulture department and Asian Development Bank aided scheme through GEB. There are different sources of inspiration. These sources can be extrinsic *i.e.* lying outside an individual. Surbhi *et al.* (2014) conducted a study on motivational sources and knowledge in adoption of drip irrigation system found that friends, self-experience, neighbors and village level workers were the most important sources of motivation in adopting drip irrigation system.

Therefore, it was thought essential to know the different types and number of sources from which

farmers got inspiration for introducing drip irrigation system in middle Gujarat.

## ■ METHODOLOGY

The present study was conducted in Anand and Vadodara districts of Gujarat State. Out of 598 drip owners, 150 drip owners were selected proportionate randomly. All the respondents were personally interviewed and asked them which sources were influenced them for adopting drip irrigation. The collected information was analyzed and tabulated.

## ■ RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

### Type of inspiration sources :

Respondents, according to their inspiration sources of drip irrigation system were number and rank as shown in Table 1.

### Formal sources of adoption of drip irrigation system (DIS) :

From the data (Table 1) it was found that dealers/

agents of drip irrigation system were indicated as major formal source for inspiration by majority of the drip owners (60.00%) followed by village level worker (28.00%), extension officer (16.00%), Scientist of agriculture college and agricultural training centre (8.00%), Officers of Department of agriculture (7.33%), respectively.

### Informal sources of adoption of drip irrigation system (DIS) :

In case of informal sources, data pertaining regarding the adoption of DIS reveal that majority of the respondents having a major informal inspiration source as the progressive farmers (52.00%) who had already adopted drip irrigation system, while neighbors' and friends (36.00%) and relatives (16.00%) were having a source for adopting of DIS, respectively.

### Mass media as sources for adoption of drip irrigation system (DIS) :

It is evident from Table 1 that more than one third of the respondents (32.00%) assigned major mass media source as literature related to drip irrigation system followed by pressnote (16.00%), doordarshan programme (10.00%), radio programme (6.00%) and agriculture

Table 1: Distribution of respondents according to their inspiration for adopting DIS (n=150)				
Sr. No.	Type of inspiration sources	Number	Percentage	Rank
<b>Formal sources</b>				
1.	Village level workers	42	28.00	IV
2.	Extension officer	24	16.00	VI
3.	Scientist of agriculture college	12	08.00	VIII
4.	Officers of department of agriculture	11	07.33	IX
5.	Agricultural training centre	12	08.00	VIII
6.	Dealers/agents of drip irrigation system	90	60.00	I
7.	Department of agriculture providing subsidy for drip irrigation system	11	07.33	IX
8.	Pesticide agent	03	02.00	XII
<b>Informal sources</b>				
9.	Progressive farmers already adopting drip irrigation system	78	52.00	II
10.	Relatives	24	16.00	VI
11.	Neighbors and friends	54	36.00	III
12.	Self-inspiration (Farmer himself)	12	08.00	VIII
<b>Mass media</b>				
13.	Radio programme	09	06.00	X
14.	Doordarshan programme	15	10.00	VII
15.	Pressnote (News paper)	24	16.00	VI
16.	Literature related to drip irrigation system	48	32.00	IV
17.	Agriculture literature (i.e. Krushi-Go-Vidhya, Krushi Jivan etc.)	06	04.00	XI

literature (4.00%), respectively.

According to item wise inspiration sources related to adopting drip irrigation system hierarchy, Dealers/ agents of drip irrigation system ranked first followed by progressive farmers already adopting drip irrigation system, neighbors and friends, literature related to drip irrigation system, village level extension worker and extension officer ranked II, III, IV, V and VI, respectively. This finding partially supported by Waghdare *et al.* (1998); Panda (2014) and Patel and Patel (2000).

**Number of sources needed to strengthen inspiration for the farmers to adopt drip irrigation system (DIS):**

In case of number of inspiration sources for introducing drip irrigation system, majority of the drip owners (78.66%) had reported two sources which inspired them to introduce drip irrigation system. More than three sources of inspiration were reported by 65.33 per cent while slightly less than half (49.33%) of the drip owners were inspired by three sources. Only two-fifth (40.67%) of the drip owners were inspired by one source (Table 2).

In case of number of inspiration sources for adopting of drip irrigation system, majority of the drip owners (78.66%) had reported two sources which inspired them to introduce drip irrigation system. More than three sources of inspiration were reported by 65.33 per cent while slightly less than half (49.33%) of the drip owners were inspired by three sources. Only two-fifth (40.67%) of the drip owners were inspired by one

source. This finding is partially supported by Patel and Patel (2000).

**Extent of adoption of drip irrigation system (DIS) :**

Some farmers are aware of new agricultural technology and realize its importance. Hence, they adopt the technology to achieve higher yield for their betterment of life. Past studies have shown that farmers adopt the technology to its maximum limit and some of them adopt to its lower limit while some of the farmers adopt the technology at medium level.

Keeping this in view, extent of adoption of drip irrigation system by the farmers was studied as dependent variable. In present study it is considered as “Extent of adoption of drip irrigation system was a mental process through which respondents of drip irrigation programme, passed from hearing about recommended drip irrigation system to final adoption to a full extent”. Respondents, according to their extent of adoption of drip irrigation system were categorized into three groups as shown in Table 3.

A perusal of Table 3, reveals that majority (62.00 %) of the respondents had medium level of adoption followed by high and low level of adoption with 23.33 and 14.67 per cent of the respondents, respectively.

It can be concluded that vast majority (85.33%) of the respondents had medium to high level of adoption. The probable reason might be their middle age and moderate education level having ability to read, understand and concretize the ideas which would have led to medium adoption level. This finding derives support from the findings of Christian (2001) and Joshi

**Table 2: Number of sources needed to strengthen inspiration for the farmers to adopt DIS**

Sr. No.	Number of inspiration source	Number	Percentage	Rank
1.	One source	61	40.67	IV
2.	Two sources	118	78.66	I
3.	Three sources	98	65.33	II
4.	More than three sources	74	49.33	III

**Table 3: Distribution of respondents according to their level of Adoption of DIS**

Sr. No.	level of adoption	Number	Percentage
1.	Low level of adoption (Below 37.01 score)	22	14.67
2.	Medium level of adoption (In between 37.01 to 80.11 score)	93	62.00
3.	High level of adoption (Above 80.11 score)	35	23.33
	Total	150	100.00

Mean= 58.56

S.D.= 21.54

(2004).

### Conclusion :

From the above findings it is concluded that the dealers/agents of drip irrigation system and progressive farmers who had already adopted drip irrigation system were the important inspiration sources which play an important role in inspiring the farmers to introduce drip irrigation system for the first time. Two sources were found to be adequate to inspire majority of the farmers to introduce drip irrigation system. Majority of the respondents had medium to high level of adoption.

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