

Impact of Drip Irrigation Technology among Farmers in Jaipur Region of Rajasthan

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ABSTRACT

Water resources are progressively getting exhausted and competition for available water between agriculture, domestic and industrial sectors is increasing day by day. Drip irrigation technology is method promoted in the agricultural front, to ensure proper use of water in irrigation. About 2.87 lakh hectares have been covered under drip irrigation technology in the country and India is now world's seventh largest owner of drip irrigation technology. Various institutions and agencies have made their efforts to popularize the drip irrigation technology for solving the problems of water scarcity. In spite of these efforts, the farmers either did not adopt drip sets on their farms or the installed drip sets were out of order on account of several difficulties experienced by them. Rajasthan is such a state where water is limiting resource, rains are uneven, drought is a recurring factor, and topography is undulating. Under such situation, it is the need of the hour to adopt drip irrigation technology

Key words : Water resources; Drip irrigation; Water scarcity

In the changing agricultural scenario world over and shift towards precision farming, drip irrigation happens to be the technology capable of providing more efficient utilization of water. "Drip irrigation is basically precise and slow application of water in the form of discrete continuous drops, sprayed through mechanical devices caused emitters in to the root zone of the plants" Singh (1995) reported that by the drip system of irrigation water reaches the root drop by drop and hence is economic method of irrigation. It is relatively a new concept, which has developed over the last decade throughout the world. In 1964, Symcha Blass an Israeli engineer developed the first potential drip irrigation system (DIS). Today India ranks 7th in terms of coverage of area under drip irrigation with an irrigated area of 2,87,500 hectares after USA, Spain, Australia, South Africa, Israel and Italy. In this method water is supplied directly near the roots of plants, drop by drop, with the help of drippers. Drippers are linked with side pipelets which are linked with main pipeline connected with water supplying source. Drip irrigation system is very profitable as it saves 40-70% water as compared to surface irrigation method and reduces labour cost, protects the plants from diseases by minimizing humidity in atmosphere. Soluble fertilizers can also be applied with irrigation water. Thus, drip irrigation has become a means of hi-tech agriculture/Horticulture and precision farming. Hence, a research study was undertaken with the following objectives.

1. To measure the knowledge level of farmers about drip irrigation technology.

2. To find out the adoption level of farmers about drip irrigation technology.

METHODOLOGY

The study was conducted in Jaipur region of Rajasthan, during the year 2006-07. Jaipur region consists of five districts. Out of five districts, Jaipur and Sikar district were selected purposively for the present study. Four panchayat samities out of thirteen were selected from Jaipur district and two panchayat samities out of six were selected from Sikar district and two gram panchayats from each of the selected panchayat samities were selected purposively. From the selected 12 gram panchayat 240 respondents were selected on the basis of proportionate random sampling technique.

RESULTS AND DISCUSSION

Knowledge level of farmers about drip irrigation technology: The data in Table 1 revealed that 26.25 percent, 52.92 percent and 20.83 percent respondent farmers fell under the categories of low, medium and high knowledge level, respectively with respect to the drip irrigation technology. It may be deduced from the above narration that majority of the respondents were having medium knowledge level regarding drip irrigation technology. The medium knowledge level might be attributed to their less exposure to information sources, less contact with extension personnel, proper adequate technical guidance might have not been provided by the agencies working for transfer of technology in the study area.

Adoption level of farmers about drip irrigation technology: A close look at Table 2 explain that on the whole about 48.33 percent of the respondent farmers were found to be medium adopters, while 26.67 percent

Table 1. Knowledge level of farmers about drip irrigation technology N=240

S.No.	Knowledge level	f	%
1.	Low knowledge level (score up to 16.05)	63	26.25
2.	Medium knowledge level (score from 16.06 to 39.69)	127	52.92
3.	High knowledge level (score above 39.69)	50	20.83

Mean value-27.87

Standard deviation 11.82

respondents were low adopters and only 25.00 percent of the farmers were high adopters. It may be concluded that majority of the respondents were medium adopters of drip irrigation technology as per recommendation. Only a small percentage of respondents was found to be either low or high adopters. It seems that still there gap between

what was recommended and adopted by the respondents. While interviewing the respondents it was reported that half of them were facing the problem of non availability of technical guidance.

Table 2. Adoption level of farmers about drip irrigation technology N=240

S.No.	Adopter categories	f	%
1.	Low adopters (score up to 13.89)	64	26.67
2.	Medium adopters (score from 13.90 to 27.33)	116	48.33
3.	High adopters (score above 27.33)	60	25.00

Mean value-27.87

Standard deviation 11.82

CONCLUSION

Majority of the farmers had medium level of knowledge about the drip irrigation technology. On the whole 48.33 per cent farmers were found to be medium adopters of drip irrigation technology.

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