Review of Factors affecting the Adoption of Drip Irrigation Technology
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ABSTRACT
The study was conducted on 240 respondents of four panchayat samities of Jaipur and two of Sikar districts of Rajasthan. Two gram panchayat samities from each panchayat samities were selected to know the factors which hinders the adoption of drip irrigation technology. It was concluded that economic motivation, size of land holding, mass media exposure and socio-economic status were found positively and significantly associated with the extent of adoption of drip irrigation by the farmers while irrigation potentiality found negatively associated with the adoption of drip irrigation technology. Experience in farming was non-significantly associated with the adoption of drip irrigation technology.

Key words: Drip irrigation, Adoption, Factors

INTRODUCTION
Rajasthan is such a state where water is a limiting resource, rains are uneven, drought is a recurring factor and topography is undulating. Under such situation the need of the hour is to conserve water and its efficient utilization but the farmers are clanged to old methods of irrigation whose irrigation efficiency is less. Drip irrigation happens to be the technology capable of providing more efficient use of water. Drip irrigation is basically precise and slow application of water in the form of discrete continuous drops, sprayed through mechanical devices called emitters in to the root zone of the plants (Singh, 1995). This is a more efficient method of irrigation but still the farmers have not adopted this system at a large scale. Keeping all this in view, the present study was undertaken with the objective to study the factors responsible for non adoption of drip irrigation technology in a big way.

MATERIALS AND METHODS
The present study was conducted in Jaipur and Sikar districts of Rajasthan. Those districts were selected where maximum drip irrigation technology was in operation. Out of thirteen, four panchayat samities 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. From the selected 12 gram panchayat, 240 respondents were selected on the basis of proportionate random sampling technique and data were recorded in specific format.

RESULTS AND DISCUSSION
The association between adoption of drip irrigation technology and the selected six independent variables viz., economic motivation, experience in farming, irrigation potentiality, size of land holding, mass media exposure and socio economic status of farmers was tested with the help of correlation coefficient.

Table 1. Association between selected independent variables and extent of adoption of drip irrigation technology by the farmers (N=240)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Independent variable</th>
<th>Correlation coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Economic motivation</td>
<td>0.885**</td>
</tr>
<tr>
<td>2</td>
<td>Experience in farming</td>
<td>0.105 NS</td>
</tr>
<tr>
<td>3</td>
<td>Irrigation potentiality</td>
<td>-0.817**</td>
</tr>
<tr>
<td>4</td>
<td>Size of land holding</td>
<td>0.739**</td>
</tr>
<tr>
<td>5</td>
<td>Mass media exposure</td>
<td>0.752**</td>
</tr>
<tr>
<td>6</td>
<td>Socio economic status</td>
<td>0.838**</td>
</tr>
</tbody>
</table>

** Significant at 1% level of significance
NS = Non significant

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Economic Motivation and Extent of Adoption

It is evident from the data that economic motivation was positively and significantly (P< 0.01) associated with the extent of adoption of drip irrigation technology (Table 1). This is due to the fact that every farmer wants to maximize his profit. It is worth to mention that the economic motivation is a factor responsible for the adoption of an innovation. Therefore, this single variable might be responsible for the adoption of drip irrigation technology in order to get higher economic returns. The present finding were supported with the findings of Raigar (1998) and Motamed and Singh (2003), who reported that economic motivation was positively and significantly associated with the level of adoption.

Experience in Farming and Extent of Adoption

The experience in farming was found to be non-significantly (P< 0.01) associated with adoption of drip irrigation technology (Table 1). It means experience in farming did not make significant difference in adoption of drip irrigation technology by the farmers. The results seemed to be quite logical due to the fact that the drip irrigation is of recent origin so both experienced and un-experienced farmers adopt this technology. Hence, non-significant influence of experience in farming was observed over the adoption of drip irrigation technology. Similar finding was also reported by Subashini and Thyagarajan (2002).

Irrigation Potentiality and Extent of Adoption

The data reported in Table 1 revealed that the irrigation potential was negatively and significantly associated with adoption of drip irrigation technology (P< 0.01). It could be inferred that irrigation potentiality exerts its negative and significant impact on extent of adoption of drip irrigation technology. It means that more the irrigation potentiality less will be the adoption of drip irrigation technology. Hence, these systems are more useful in water scarcity conditions.

Size of Land Holding and Extent of Adoption

The size of land holding was positively and significantly(P< 0.01) associated with the extent of adoption of drip irrigation (Table 1). Thus, it is stated that size of land holding of farmers exerted highly significant influence on the adoption of drip irrigation technology. Farmers having large size of land holding were capable of taking risk of using latest technology. Subashini and Thyagarajan (2002) also reported that size of land holding showed positive and significant relation with adoption level of wheat production technology.

Mass Media Exposure and Extent of Adoption

The data showed that the positive and significant (P< 0.01) association was found between mass media exposure and the extent of adoption of drip irrigation technology (Table 1). It was concluded that the extent of adoption of drip irrigation technology by the farmers increased with the increase in mass media exposure. The mass media provide the relevant and timely information about drip irrigation technology and enhancing their level of awareness and knowledge about the technology. The mass media exposure had a significant and positive relationship with adoption of cultivation practices of *kharif* maize and tapioca technologies (Subashini and Thyagarajan, 2002).

Socio –Economic Status and Extent of Adoption

It was observed that there was positive and significant (P< 0.01) association between socio-economic status and extent of adoption of drip irrigation technology. It was inferred that adoption of drip irrigation technology increased with the increase in socio-economic status. The farmers who had higher socio-economic status i.e. literate and having surplus monetary resources were capable of purchasing drip irrigation technology easily. This was in conformity with the findings of Subashini and Thyagarajan (2002) who reported that socio economic status was positively and significantly associated with adoption of tapioca and wheat production technology.

CONCLUSION

It was concluded that positive and highly significant association was found between economic motivation, size of land holding, mass media exposure and socio-economic status of the farmers with the extent of adoption of drip irrigation technology by the farmers. Irrigation potentiality was found negatively and
significantly associated and experience in farming was found non-significantly associated with the adoption of drip irrigation technology by the farmers.

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