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Inspiration Sources for Introducing Sprinkler Irrigation System in Banaskantha District of Gujarat State

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Abstract: The purpose of this study was to determine management ability of potato growers regarding sprinkler irrigation system in the villages of Dantiwada and Deesa talukas located in middle part of Banaskantha district. It was evident that more than half of the potato growers had medium level of management ability of sprinkler irrigation system. In case of potato growers of sprinkler irrigation system, independent variables like education, land holding, area under potato with sprinkler irrigation system, annual income, irrigation potentiality, economic motivation, risk orientation and source of information were significantly related while, age and size of family were not found significant.

INTRODUCTION

Land and water are important natural resources which play an important role in agricultural production. However, due to the scarce conditions of water for irrigation, many parts of the land were unutilized or underutilized. This is mainly due to the fact that the rainfall is irregular and uneven in many parts of country. Gujarat is also facing this situation, shortage of water has become one of the main problems in Gujarat agriculture. Therefore, efficient use of available water has become extremely important which can be done through sprinkler irrigation.

Sprinkler irrigation is still in its infant stage in India and there is a need to make it popular among the farmers. Even though there is a phenomenal growth in the area under sprinkler irrigation, a lot of work is still to be done to explain and convince the farmers, especially those in the dry land area, about the high potentialities of this new system. The main purpose of this study is to get a clear-cut picture of the present situation of the adoption of sprinkler irrigation system in north Gujarat especially in Banaskantha district.

Potato (*solanum tuberosum* L.), is one of the major vegetables crop of the world. In India, potato is one of the most important and vegetables, available through the year in all parts of India because it can be stored for a long time. This is also an important vegetable crop of Gujarat state. Potato production in India during 2010-11 was 42339000 Metric Tones from 1863000 hectares with an average yield of 22.7 mt/ha (Indian Horticulture Database 2011). Uttar Pradesh, west Bengal, bihar, assam, Punjab, Gujarat and himachal Pradesh are the major potato growing states in the country.

Potato crop has got immense potentiality for the cultivation in Gujarat. The crop is mainly grown in rabi season both under field and riverbed area. The state is very famous for its unique and model cultivation of potato under riverbed condition. In Gujarat, potato will be grown in 528 hectares with production of 11473 metric tons with average yield of 7076 kg/ha (Gujarat State Wide Area Network-2010-11).

North Gujarat particularly Banaskantha district is having good soil as well as climatic condition for potato cultivation, Deesa is the main market for potato produce. The main research station of potato under S.D. Agriculture University is also located at Deesa.

The main idea behind this investigation is

1. To study the inspiration sources for introducing sprinkler irrigation system.

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METHODOLOGY

The Banaskantha districts of the Gujarat state was selected for the study due to having a having remarkable areas under sprinkler irrigation system in potato crop. Among Banaskantha district, Dantiwada and Deesa and from each talukas, six villages were purposively selected. After selecting villages a list of farmers, who had adopters of sprinkler system, was obtained from concerned GSFC/Banks/Irrigation Department of District and Talukas. Form each selected village, 10 farmers were selected randomly making a sample of 120 respondents. An interview schedule was prepared in vernacular language and data were collected by personal interviews.

For measuring the inspiration sources of potato growers about sprinkler irrigation system, the structured schedule was developed. The potato growers were distributed according to their inspiration sources of sprinkler irrigation system with the help of percentage and ranks.

RESULT AND DISCUSSION

Table 1: Distribution of potato growers according to their inspiration sources for introducing sprinkler irrigation system

Sr. No.	*Inspiration sources*	*Number*	*Per cent*	***Rank***
1	Gramsewak	70	58.33	III
2	Scientist of Agricultural university	50	41.66	VI
3	Farmer training center	42	35.00	IX
4	Dealers of sprinkler irrigation system	65	54.16	IV
5	Progressive farmer adopting sprinkler irrigation system	80	66.66	II
6	Officers of agricultural department those give subsidy	35	29.16	XI
7	Neighbors, Friends and Relatives	95	79.16	I
8	Radio programme	40	33.33	X
9	Doordarshan programme	47	39.16	VII
10	News paper	45	37.50	VIII
11	Literature of sprinkler irrigation system	52	43.33	V
12	Internet	5	04.16	XII
13	Others	2	01.66	XIII

It can be seen from the table 17 that major inspirational source of potato growers for introducing sprinkler irrigation system were Neighbors, friends and relatives (79.16 per cent) followed by progressive farmer adopting sprinkler irrigation system (66.66 per cent), gramsewak (58.33 per cent), dealers of sprinkler irrigation system (54.16 per cent),literature of sprinkler irrigation system (43.33 per cent), scientist of Agricultural University (41.66 per cent), doordarshan programme (39.16 per cent), news paper (37.50 per cent), farmer training center (35.00 per cent),radio programme (33.33 per cent), officers of agricultural department those give subsidy (29.16 per cent), internet (4.16 per cent), and others (1.66 per cent).

The finding is in line with the finding of Sonawane (2010).

CONCLUSION

Major inspirational source of potato growers for introducing sprinkler irrigation system were neighbors, friends and relatives (79.16 per cent) followed by progressive farmer adopting sprinkler irrigation system (66.66 per cent), gramsewak (58.33 per cent), dealers of sprinkler irrigation system (54.16 per cent),literature of sprinkler irrigation system (43.33 per cent), scientist of Agricultural University (41.66 per cent), doordarshan programme (39.16 per cent), news paper (37.50 per cent), farmer training center (35.00 per cent),radio programme (33.33 per cent), officers of agricultural department those give subsidy (29.16 per cent), internet (4.16 per cent), and others (1.66 per cent).

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