

ADOPTION OF RISK MANAGEMENT PRACTICES IN DRIP IRRIGATED BANANA CULTIVATION

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ABSTRACT

Recognizing the fast decline of irrigation water potential, drip irrigation method is relatively one of the most acceptable method in Indian agriculture. Through nodal agency like GGRCL, Govt. of Gujarat took lots of efforts for initiating drip irrigation system in different horticultural crops and banana is one of them. But, drip irrigated banana cultivation involves different risks. Different aspects pointed out that drip irrigated banana growers should have perfect awareness and knowledge regarding risk management in drip irrigated banana cultivation. Systematic knowledge, planning, and adoption of some of the important risk management practices can help drip irrigated banana growers to find out suitable ways to survive during situations of emergency. To understand existing pattern adopted by banana growers to manage the high risk involved in drip irrigated banana cultivation, the study was conducted to measure the existing level of adoption of risk management practices in drip irrigated banana cultivation. The present study was carried out in Anand district of Gujarat state on a random sample of 220 drip irrigated banana growers, those who had installed and used drip irrigation system in their banana crop for successively three years. The data were collected by personal contacts. The data were classified, tabulated and analyzed in order to make the findings meaningful. The statistical measures, such as percentage, correlation coefficient were used to analysis of data. It was observed from the study that majority (65.91 per cent) of the banana growers had a high level of adoption of risk management practices as and when occur during drip irrigated banana cultivation. The level of adoption of risk management practices was observed positively and significantly correlated with their age, occupation, mass media exposure, scientific orientation, economic motivation, risk orientation, market orientation, achievement motivation, innovation proneness and attitude towards drip irrigated banana cultivation.

Keywords: adoption, risk management, drip irrigated banana cultivation

INTRODUCTION

Banana is one of the oldest fruit known to mankind. In a tropical region, it is known as the most important commercial fruit crop as well as highly nutritional staple fruit. Gujarat state is one of the major banana growing state in the country and This gives employment and income to millions of people engaged in its growing and trade. The area under banana production was 64.7 (000'HA) with a production of 3978 (000'MT) and productivity of 61.5 (HA/MT). This was higher than the national average (42.7 tonnes/ha) (NHB Database 2010-11). The drip irrigated banana growers face many risks while adopting drip irrigation technology in banana cultivation. All these risks are manageable by the farmers through adopting different risk management practices. The risk management is the ability of the farmers to adopt certain practices to overcome the adverse situations or risks. In social science point of view, Systematic knowledge, planning, and adoption of some of the important risk management practices can help drip irrigated banana growers to find out suitable

ways to survive during situations of emergency. There was a need to make a systematic study of risk management practices adopted by the farmers. With this background in mind, the present study was undertaken to understand existing position about risk management practices adopted by the farmers with the following objectives.

OBJECTIVES

- (1) Adoption of risk management practices in drip irrigated banana cultivation
- (2) Relationship between characteristics of drip irrigated banana growers and their adoption of risk management practices in drip irrigated banana cultivation

METHODOLOGY

The present study was carried out in the Anand district of Gujarat state. The banana growers those who had installed and used the drip irrigation system in their banana crop for successively three years were considered to include

in the study. Out of eight Talukas, 188 drip irrigated banana growers from Anand, 21 from Umreth and 11 from Petlad were selected to serve in the study. Thus, a random sample of total 220 drip irrigated banana growers were selected for the present study. The data were collected by personal contacts. The data thus, collected were classified, tabulated and analyzed in order to make the finding meaningful. The statistical measures, such as percentage and correlation coefficient were used to analysis of the data.

RESULTS AND DISCUSSION

Overall adoption of risk management practices in drip irrigated banana cultivation

The risk management is the identification, analysis, assessment, control and avoidance, minimization or elimination of unacceptable risks. The data regarding the adoption of risk management practices in drip irrigated banana cultivation is disclosed in Table 1.

Table 1: The drip irrigated banana growers as per overall adoption of risk management practices in drip irrigated banana cultivation n = 220

Sr. No	Category	Number	Per cent
1	Very low (Up to 47)	00	00.00
2	Low (48 to 94)	00	00.00
3	Medium (95 to 141)	00	00.00
4	High (142 to 188)	145	65.91
5	Very high (above 188)	75	34.09

The presentation of the data in Table 1 it is clear that nearly two third (65.91 per cent) of the respondents were observed with the high level of the overall adoption of risk management practices in drip irrigated banana cultivation, followed by 34.09 per cent were in very high level of the adoption category and nobody was found in very low, low and medium level of adoption category, respectively.

Above result indicates that banana growers were very active in the adoption of risk management practices in drip irrigated banana cultivation. Understanding uncertainty and the possibility of high risk involve in drip irrigated banana cultivation, almost all the banana growers have taken much interest in the adoption of risk management practices in drip irrigated banana cultivation to earn more from a small piece of land and avoid loss. The above finding is distinct with the findings of Vaidya (2011), Durga (2009), Trivedi (2009), Parmar (2008), Patel et al. (2017) and Vinaya and Shivamurthy (2018).

Relationship between characteristics of drip irrigated banana growers and their adoption of risk management practices in drip irrigated banana cultivation

Table 2: Relationship between characteristics of drip irrigated banana growers and their adoption of risk management practices in drip irrigated banana cultivation

Sr. No	Independent Variables	Correlation Coefficient
A	Personal variables	
X ₁	Age	0.150 *
X ₂	Education	0.022 NS
X ₃	Experience in drip irrigated banana cultivation	- 0.217 **
B	Social variables	
X ₄	Type of family	0.007 NS
X ₅	Social participation	0.031 NS
C	Economic variables	
X ₆	Land holding	- 0.189 **
X ₇	Occupation	0.146 *
X ₈	Area under drip irrigated banana cultivation	- 0.149 *
X ₉	Annual income	- 0.009 NS
D	Communicational variables	
X ₁₀	Extension contact	0.002 NS
X ₁₁	Mass media exposure	0.284 **
E	Psychological variables	
X ₁₂	Scientific orientation	0.243 **
X ₁₃	Economic motivation	0.165 *
X ₁₄	Risk orientation	0.218 **
X ₁₅	Market orientation	0.361 **
X ₁₆	Achievement motivation	0.149 *
X ₁₇	Innovation proneness	0.565 **
X ₁₈	Attitude	0.179 **

The result illustrated in Table 2 revealed that the characteristics *viz.*, age, occupation, mass media exposure, scientific orientation, economic motivation, risk orientation, market orientation, achievement motivation, innovation proneness and attitude towards drip irrigated banana cultivation of banana growers were observed positively and significantly correlated with their adoption of risk management practices in drip irrigated banana cultivation. Whereas variables like experience in banana cultivation, land holding, and area under banana cultivation had a negative and significant relationship with the adoption of risk management practices in drip irrigated banana cultivation. The variables like education, type of family, social participation and extension contact show a positive and non-significant relationship with risk management practices in drip irrigated banana cultivation and annual income had a negative and non-significant relationship with the adoption of risk management practices in drip irrigated banana cultivation.

The result indicates that old aged farmers had more anxiety in managing risk than young aged farmers. The old aged farmers due to their high experience of life might have learned a lesson and understood the significance of managing risk in highly technical and expensive activity like drip

irrigated banana cultivation. It was seen that adoption of risk management practices in drip irrigated banana cultivation was observed better among those banana growers, who were new in the drip irrigated banana cultivation. Considering the results of the relationship of adoption with experience and age, it can be said that old aged farmers with low experience of drip irrigated banana cultivators were very sharp and active in managing the risk involved in drip irrigated banana cultivation.

In case of land holding results indicates that drip irrigated banana growers with small size of land holding considering their limited resource of undersized land to manage their own and lives of all their family members had shown more concern and worry in managing risk involved in drip irrigated banana cultivation to get high profit and return than those drip irrigated banana growers who had large size of land holding. The involvement of an individual with more than one occupation means he or she is more active, enthusiastic and lively in doing all those activities through which he/she can earn more profit in life. Considering their undersized land under drip irrigated banana cultivation might have got a better opportunity, prospects and favourable situation to manage the risk involved in drip irrigated banana cultivation to get high profit and return. It was experienced that good level of mass media exposure contributed significantly in developing necessary prerequisites to encourage adoption behaviours of drip irrigated banana growers, viz. latest knowledge, information about recent advancements about technology and necessary understanding. There was superior adoption among those banana growers, who had a high level of scientific orientation. The high degree of economic motivation was proved one of the most important expressions in forming mental capability of excellent economic development and progressiveness.

The banana grower with a high level of risk orientation shows readiness in exploiting the potentialities of drip irrigated banana cultivation by taking the well planned risk. The result indicates that level of market orientation, achievement motivation and innovation proneness of the drip irrigated banana growers play an important role in improving their level of adoption regarding risk management in drip irrigated banana cultivation. It can be said that the level of market orientation, achievement motivation, and innovation proneness was observed better in high levels of adopters of risk management practices in drip irrigated banana cultivation. In addition to this banana growers with positive feelings towards drip irrigated banana cultivation will always try to get involved more and collect information to get the guidance about drip irrigated banana cultivation from the scientific

sources like GGRC personnel or university scientists. Thus, such constructive qualities among those banana growers with a positive attitude towards drip irrigated banana cultivation might have played a role to make them better adopter of the risk management practices in drip irrigated banana cultivation.

CONCLUSION

The study concluded that two third (65.91 per cent) of the respondents were observed with the high level of the overall adoption of risk management practices in drip irrigated banana cultivation. The level of adoption of risk management practices in drip irrigated banana cultivation by the banana growers was observed positively and significantly correlated with age, occupation, mass media exposure, scientific orientation, economic motivation, risk orientation, market orientation, achievement motivation, innovation proneness and attitude towards drip irrigated banana cultivation.

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