



## Research Article

# CONSTRAINTS FACED BY COTTON GROWERS IN CRISIS MANAGEMENT OF COTTON CULTIVATION IN GUJARAT

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Received: April 10, 2016; Revised: April 21, 2016; Accepted: April 22, 2016; Published: July 21, 2016

**Abstract-** The study was carried out in Amreli and Bhavnagar District of South Saurashtra Agro-Climatic Zone of Gujarat State to identify the various constraints faced by cotton growers in cotton cultivation. A random sample of 200 cotton growers was selected from Amreli and Bhavnagar District and the constraints faced by cotton growers in cotton cultivation were to non-remunerative price, high price of soil reclamation materials, non-availability of information about future aberrant weather conditions including cyclone, high price of insecticides/ pesticides & fungicides, insufficient demonstration of improved technologies on farmers' field, high price of chemical fertilizers, high price of organic manures, irregular supply of electricity and lack of knowledge to diagnose the pests and diseases in the crop. The important suggestions offered by the respondents were: quality seed supply should be ensured, effective insect-pest control methods should be developed, input should be supplied at subsidized rate, village level workers should frequently contact the farmers to make them aware about new technologies, crop insurance should be made available for all the farmers at cheaper rate, provision of sufficient and timely credit facilities, remunerative price of farm produce and sufficient electricity should be provided.

**Keywords-** Crisis management of cotton cultivation, Cotton grower, Constraints suggestion

**Citation:** Gohil G.R., et al., (2016) Constraints Faced by Cotton Growers in Crisis Management of Cotton Cultivation in Gujarat. International Journal of Agriculture Sciences, ISSN: 0975-3710 & E-ISSN: 0975-9107, Volume 8, Issue 25, pp.-1500-1502.

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**Academic Editor / Reviewer:** Basa Swaminath

## Introduction

Cotton is one of the most important commercial fiber crops of India. The seed of cotton is a potential source of edible oil, cake and hull meal. It is also known as "King of Apparel Fiber" and "white gold". Besides food and housing, clothing is one of the primary needs of human being Cotton is cultivated in about 60 countries of the world. India is having the largest area under cotton; its average productivity is only 520 kg per hectare as against the world average productivity of 650 kg per hectare. In India, cotton contributes about 85.00 per cent of the total fiber consumed in the textile industries. Gujarat is one of the major cotton producing states in the country. Gujarat state has second largest area under cotton after Maharashtra in India. Cotton is widely grown, particularly in all districts of Gujarat state. Gujarat has been the key contributor in cotton research in the country.

Bhavnagar and Amreli are the predominant cotton growing districts of South Saurashtra Agro-Climatic Zone of Gujarat State with 3044 ha. and 2356 ha with the average yield of 821 Kg/ha. and 643 Kg/ha, during 2007-08, respectively. The two districts are more concentrated with respect to area, production and average yield in South Saurashtra Agro-climatic Zone of Gujarat state.

On one hand, cotton crop gives high economic return to the farmers, while on the other hand, there are many risks involved in it. The cultivation of cotton also needs costly inputs in terms of seeds, fertilizers and pesticides. If proper care is not taken, it proves as monetary uncertain business. It is also sensitive crop to many disease and pest. It is known as risky crop considering natural hazards, as well as the everyday fluctuating of wholesale price index. Crisis management is the systematic attempt to avoid personal or organization crisis or to manage those

crisis events that do occur. The practice of crisis management involves attempts to eliminate technological failure to avoid or to manage crisis situations. Crisis management consists of skills and techniques required to assess, understand and cope with any serious situations, especially from the moment it first occurs to the point that recovery producer start.

Systematic knowledge, planning and adoption of some of the important crises management practice can help farmers to find out suitable ways to survive during situations of crisis.

Keeping in mind these realities the present study on crisis management is considered as kind of activities carried out by the cotton growers to survive against various crisis as and when faced by them while undertaking cotton cultivation.

## Objectives

The present study was designed to measure the adoption of crisis management practices by the cotton growers. With a view to understanding the existing circumstances, the study was carried out with following specific objectives:

1. To study constraint faced by cotton growers in adoption of crisis management practices.
2. To seek the suggestions from the cotton growers to overcome the constraints faced by them.

## Materials and Methods

The present study was carried out in Amreli and Bhavnagar district of South Saurashtra Agro-Climatic Zone of Gujarat State. This study was conducted by

adopting an *ex post facto* research design. Suggested by (Kerlinger, 1969) [5]. A multistage random sampling technique was used for the study. Two districts of South Saurashtra Agro-Climatic Zone viz., Bhavnagar and Amreli were purposively selected as these districts have ideal conditions for cotton cultivation. The present study was carried out in Mahuva Taluka (Bhavnagar) and Rajula Taluka (Amreli) in which there is maximum area under cotton cultivation. The list of villages was sought from the Taluka Panchayats of the selected Talukas and five villages of each selected Taluka were purposively selected based on more area under cotton cultivation. Thus, total 10 villages were covered in this study. The list of cotton growers was obtained from the Village Panchayats of the

selected villages. A random sampling procedure was followed for the selection of the respondents and accordingly 20 cotton growers from each of the selected villages were selected as respondents. Ultimately, 200 cotton growers were selected for the study. The head of the family i.e. major decision maker was considered as respondent for the study.

### Result and Discussion

The data collected from the respondents were compiled and arranged in light of the stated objectives. The findings are as follows:

**Table-1** Constraints experienced by the respondents in adoption of crisis management practices  
N=200

Sr. No.	Constraints	Percentage	Rank
1.	Non- remunerative price	89.36	I
2.	Certified seeds are not available	88.55	II
3.	High price of improved seeds	83.24	III
4.	High price of insecticides/ pesticides & fungicides	81.44	IV
5.	Lack of knowledge to diagnose the pests and diseases in the crop.	80.40	V
6.	Irregular supply of electricity.	79.39	VI
7.	High price of chemical fertilizers	78.12	VII
8.	High price of organic manures.	74.42	VIII
9.	Non availability of information about future aberrant weather conditions including cyclone.	69.31	IX
10.	Non availability of implements for sowing proper seed rate and depth.	68.33	X
11.	Insufficient demonstration of improved technologies on farmers' field	65.56	XI
12.	Lack of knowledge about the recommended doses of insecticides/pesticides	64.77	XII
13.	High rate of labour charges.	63.69	XIII
14.	No timely availability of chemical fertilizers.	62.24	XIV
15.	Lack of knowledge about the recommended methods to control diseases and pests	60.64	XV
16.	Scarcity of labour at plucking stage.	59.33	XVI
17.	Fear of reduction in the yield of cotton due to inter cropping system as compared to sole cotton crop	55.58	XVII
18.	Non-availability of sufficient quantity of FYM	54.64	XVIII
19.	Non-availability of finance in time	48.90	XIX
20.	Lack of knowledge about reclamation of problematic soil.	31.87	XX
21.	No facilities like farm ponds check dam etc. for storage of the rainwater.	21.59	XXI
22.	High price of soil reclamation materials.	13.75	XXII

The major constraints faced by the majority of respondents were: non- remunerative price (89.36 per cent), unavailability of certified seed (88.55 per cent), high price of improved seeds (83.24 per cent), high price of insecticides/pesticides & fungicides (81.44 per cent), lack of knowledge to diagnose the pests and diseases in the crop (80.40 per cent), irregular supply of electricity (79.39 per cent), high price of chemical fertilizers (78.12 per cent), high price of organic manure (74.42 per cent), non-availability of information about future aberrant weather conditions including cyclone (69.31 per cent), non-availability of implements for sowing proper seed rate and depth (68.33 per cent) and insufficient demonstration of improved technologies on farmers' field (65.56 per cent).

The constraints faced the two-third to one-third per cent of the respondents were: lack of knowledge about the recommended doses of insecticides/pesticides (64.77 per cent), high rate of labour charges (63.69 per cent), no timely availability of chemical fertilizers (62.24 per cent), lack of knowledge about the recommended methods to control diseases and pests (60.64 per cent), scarcity of labour at plucking stage (59.33 per cent), fear of reduction in the yield of cotton due to inter cropping system as compared to sole cotton crop (55.58 per cent), non-availability of sufficient quantity of FYM (54.64 per cent) and non-availability of finance in time (48.90 per cent).

**Table-2** Suggestions of the cotton growers to overcome the constraints in adoption of crisis management practices  
N=200

Sr. No.	Suggestions	Per cent	Rank
1.	Quality seed supply should be ensured	91.00	I
2.	Remunerative price of farm produce.	89.00	II
3.	Input should be supplied at subsidized rate.	83.00	III
4.	Effective insect-pest control methods should be developed	78.00	IV
5.	Sufficient electricity should be provided.	77.00	V
6.	Crop insurance should be made available for all the farmers at cheaper rate.	69.00	VI
7.	Village level workers should frequently contact the farmers to make them aware about new technologies.	66.00	VII
8.	Provision of sufficient and timely credit facilities.	63.00	VIII
9.	More numbers of demonstrations on new technologies should be arranged on farmers' fields.	52.00	IX
10.	Disease and pest resistance varieties should be developed.	45.00	X
11.	More financial support should be made available for soil and water conservation.	41.00	XI
12.	Long, medium and short term forecasting system for weather situations should be developed and the information should be availed to farmers at right time.	35.00	XII
13.	Effective control measures should be developed for wilt.	27.00	XIII
14.	Improved implements should be developed for the field operation like sowing and plucking.	22.00	XIV
15.	Farmers should be aware well in advance with information about different insect-pest infestation.	13.00	XV

Apart from this the constraints faced by less than 33.00 per cent of the respondents were: lack of knowledge about reclamation of problematic soil (31.87 per cent), no facilities like farm ponds, check dam etc. for storage the rain water (21.59 per cent) and high price of soil reclamation materials (13.75 per cent). Thus, it can be concluded that major constraints experienced by the cotton growers were: non-remunerative price, unavailability of certified seeds, high price of input like improved seeds, insecticides/pesticides & fungicides and lack of knowledge to diagnose the pests and diseases in the crop.

### Suggestions from the Cotton Growers to Overcome the Constraints

In order to seek the suggestions from respondents to overcome the constraints in adoption of crisis management practices, the open ended question was used. The frequency was calculated for each suggestion and converted into percentage. The ranks were given on the basis of percentage. The suggestions along with their rank are presented in [Table-2].

The suggestions offered by more than 66.00 per cent of respondents were: quality seed supply should be ensured (91.00 per cent), remunerative price of farm produce (89 per cent), input should be supplied at subsidized rate (83 per cent), effective insect-pest control methods should be developed (78, 00 per cent), sufficient electricity should be provided (77.00 per cent) and crop insurance should be made available for all the farmers at cheaper rate (69.00 per cent).

The suggestions expressed by two-third to one-third of the respondents were: village level workers should frequently contact the farmers to make them aware about new technologies (66.00 per cent), provision of sufficient and timely credit facilities (63.00 per cent), more numbers of demonstrations on new technologies should be arranged on farmers' fields (52.00 per cent), disease and pest resistance varieties should be developed (45.00 per cent), more financial support should be made available for soil and water conservation (41.00 per cent) and long, medium and short term forecasting system for weather situations should be developed and the information should be available to farmers at right time (35.00 per cent).

The suggestions offered by less than one third of the respondents were: effective control measures should be developed for wilt (27.00 per cent), improved implements should be developed for the field operation like sowing and plucking (22.00 per cent) and farmers should be aware well in advance with information about different insect-pest infestation (13.00 per cent).

### Conclusion

Though cotton is one of the most important crop being cultivated in the study area, the respondents faced manifold problems. The major constraints faced by them were related to the price of inputs for cultivation, insufficient knowledge on pest control measures and other related issues. Unfortunately, the respondents also did not have access to need based information sources and inadequate electric supply acted as catalyst in low production. Regarding the measures to overcome these constraints, the respondents opined that price of cotton cultivation inputs should be decreased and steps should be taken to ensure electric supply and other physical resources for better cotton cultivation. As cotton, cultivation is widely practiced in the study area measures should be taken to reduce the constraints in days to come and attention should be given by all concerned in this regards.

**Conflict of Interest: None declared**

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