

**CONSTRAINTS FACED BY COTTON GROWERS IN CRISIS
MANAGEMENT OF COTTON CULTIVATION IN SOUTH SAURASHTRA
AGRO-CLIMATIC ZONE OF GUJARAT STATE**

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ABSTRACT

A 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 crisis management of cotton cultivation. A random sample of 200 cotton growers was selected from Amreli and Bhavnagar District. The top 10 constraints faced by cotton growers in adoption of crisis management practices were non-remunerative price, certified seeds are not available, high price of improved seeds, high price of insecticides/ pesticides & fungicides, lack of knowledge to diagnose the pests and diseases in the crop, irregular supply of electricity, high price of chemical fertilizers, high price of organic manures, non-availability of information about future aberrant weather conditions including cyclone and non availability of implements for sowing proper seed rate and depth. The important suggestions offered by the respondents were quality seed supply should be ensured, remunerative price of farm produce, input should be supplied at subsidized rate, effective insect-pest control methods should be developed, sufficient electricity should be provided, crop insurance should be made available for all the farmers at cheaper rate, village level workers should frequently contact the farmers to make them aware about new technologies and provision of sufficient and timely credit facilities.

KEY WORDS: Constraints, cotton, crisis management, grower, suggestions.

INTRODUCTION

Cotton is one of 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”. In India, during 2014-15, cotton is grown in area of 128.19 lakh hectares with a production of 380 lakh bales 170 kg and productivity of 504 kg/ha (Anonymous, 2016). 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. In Gujarat, during 2014-15, cotton is grown in area of 27.73 lakh hectares with a production of 108 lakh bales 170 kg and productivity of 662 kg/ha (Anonymous, 2016). Bhavnagar and Amreli are the predominant cotton growing districts of South Saurashtra Agro-Climatic Zone of Gujarat State.

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 insecticides/pesticides. If proper care is not taken, it proves as monetary uncertain business. It is also sensitive crop to many diseases and pests. 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 crises as and when faced by them while undertaking cotton cultivation. The study was carried out with specific objectives like to study constraint faced by cotton growers in adoption of crisis management practices, and to seek the suggestions from the cotton growers to overcome the constraints faced by them.

METHODOLOGY

The study was carried out in Amreli and Bhavnagar district of South Saurashtra Agro-Climatic Zone of Gujarat State by adopting an *ex post facto* research design suggested by (Kerlinger, 1964). 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.

RESULTS AND DISCUSSION

Constraints faced by the cotton growers in crisis management of cotton cultivation

The major constraints faced by the majority of respondents were, non-remunerative price (89.36 %), unavailability of certified seed (88.55 %), high price of improved seeds (83.24 %), high price of insecticides/pesticides & fungicides (81.44 %), lack of knowledge to diagnose the pests and diseases in the crop (80.40 %), irregular supply of electricity (79.39 %), high price of chemical fertilizers (78.12 %), high price of organic manure (74.42 %), non-availability of information about future aberrant weather conditions including cyclone (69.31 %), non-

availability of implements for sowing proper seed rate and depth (68.33 %) and insufficient demonstration of improved technologies on farmers' field (65.56 %). 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 %), high rate of labour charges (63.69 %), no timely availability of chemical fertilizers (62.24 %), lack of knowledge about the recommended methods to control diseases and pests (60.64 %), scarcity of labour at plucking stage (59.33 %), fear of reduction in the yield of cotton due to inter cropping system as compared to sole cotton crop (55.58 %), non-availability of sufficient quantity of FYM (54.64 %) and non-availability of finance in time (48.90 %). 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 %), no facilities like farm ponds, check dam etc. for storage the rain water (21.59 %) and high price of soil reclamation materials (13.75 %).

Thus, it can be concluded that major constraints experienced by the cotton growers were, non-remunerative price, certified seeds are not available, high price of improved seeds, high price of insecticides/ pesticides & fungicides, lack of knowledge to diagnose the pests and diseases in the crop, irregular supply of electricity, high price of chemical fertilizers, high price of organic manures, non-availability of information about future aberrant weather conditions including cyclone and non availability of implements for sowing proper seed rate and depth. These results are in conformity with the findings of Meena (2003), Ganguly and Singh (1999), Kalsariya (1993) and Zala (2008).

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 base 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 %), remunerative price of farm produce (89 %), input should be supplied at subsidized rate (83 %), effective insect-pest control methods should be developed (78, 00 %), sufficient electricity should be provided (77.00 %) and crop insurance should be made available for all the farmers at cheaper rate (69.00 %). 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 %), provision of sufficient and timely credit facilities (63.00 %), more numbers of demonstrations on new technologies should be arranged on farmers' fields (52.00 %), disease and pest resistance varieties should be developed (45.00 %), more financial support should be made available for soil and water conservation (41.00 %) and 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 %). The suggestions offered by less than one third of the respondents were, effective control measures should be developed for wilt (27.00 %), improved implements should be developed for the field operation like sowing and

plucking (22.00 %) and farmers should be aware well in advance with information about different insect-pest infestation (13.00 %).

Thus, the major suggestions to overcome the constraints, the respondents opined that quality seed supply should be ensured, remunerative price of farm produce, input should be supplied at subsidized rate, effective insect-pest control methods should be developed, sufficient electricity should be provided, crop insurance should be made available for all the farmers at cheaper rate, village level workers should frequently contact the farmers to make them aware about new technologies and provision of sufficient and timely credit facilities should be taken to reduce the constraints in days to come. These results are in conformity with the findings of Meena (2003), Ganguly and Singh (1999), Kalsariya (1993) and Zala (2008).

CONCLUSION

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, non-remunerative price, certified seeds are not available, high price of improved seeds, high price of insecticides/pesticides & fungicides, lack of knowledge to diagnose the pests and diseases in the crop, irregular supply of electricity, high price of chemical fertilizers, high price of organic manures, non-availability of information about future aberrant weather conditions including cyclone and non availability of implements for sowing proper seed rate and depth acted as catalyst in low production. Regarding the measures to overcome these constraints, the respondents opined that quality seed supply should

be ensured, remunerative price of farm produce, input should be supplied at subsidized rate, effective insect-pest control methods should be developed, sufficient electricity should be provided, crop insurance should be made available for all the farmers at cheaper rate, village level workers should frequently contact the farmers to make them aware about new technologies and provision of sufficient and timely credit facilities should be taken to reduce the constraints in days to come.

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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

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 framers 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

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