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## Perception of contingency crop plan by rainfed cotton growers

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### Abstract

Perception is a combination of knowledge and ideas has gained as a result of having an experience in relation to a topic. A contingency crop planning refers to implementing a plan for making alternate crop or cultivar choices in tune with the actual rainfall situation and soil in a given location. The present study was conducted in Nanded district of Maharashtra and it is confined to 10 villages in two tehsils Kinwat and Bhokar which was selected purposively on the basis of drought prone area. Ex-post facto research design was used for the study. The primary data was collected from 120 respondents by following personal interview method. The results of the Nanded district study on "Perception of contingency crop plan by rainfed cotton growers" show that, more than half (55.00%) of cotton growers had a medium level of perception toward contingency crop plans of improved cotton cultivation practices, while 25.83 percent had a low level of perception. Only 22.50 percent of cotton growers had a high perception about a contingency crop strategy.

**Keywords:** Perception, contingency crop plan, rainfed cotton growers

### Introduction

In India, over two thirds of the population relies on agriculture for their livelihood. Approximately 80 out of 142 million ha of net arable land are rainfed. This is likely to remain the situation for the foreseeable future. It has been extremely clear in recent years how the country's agricultural production is affected by climate change and fluctuation. In the largest portion of the country, extreme weather events like frost, hailstorms, heat waves, cold waves and droughts and floods occur frequently during the growth seasons for crops. Indian agriculture predominantly faces difficulties caused by changing weather. These factors are translating into numerous macro and micro-level vulnerabilities. The main factors influencing rainfed farming in India include irregular rainfall patterns, severe drought at different periods of crop growth and then natural disasters like hailstorms. To better handle drought and rainfall variations at the farmer level, comprehensive crop planning and adjustments to agronomic methods are required. India has created adaptable systems to deal with livestock and crop failures using a variety of techniques. Contingency crop planning will require a larger focus in these places because kharif cropping is a key activity in the rainfed areas of arid lands, where monsoon unpredictability plays a crucial role in production.

Concerns about the changing climate are particularly important for food security and agricultural production in general (Brahmanand *et al.*, 2013). Additionally, this has increased the frequency of natural disasters like drought. Therefore, we need to be well prepared to maintain agricultural productivity, which makes the idea of contingency crop planning crucial. A contingency plan is a strategy, which intended to achieve a different result than what is typically or predictably anticipated. To put it another way, it is usually applied to risk management when a particularly high risk is present. Generally speaking, the major characteristic of contingency seems to be the change in the sowing or planting time of crops, the change in seed rate, the change in the schedule of fertilizer use, the use of short-duration variety and better crop genotypes.

### Materials and Methods

The present investigation was conducted to study the 'Perception of contingency crop plan by rainfed cotton growers.' Ex-post facto research design was used. The structured questionnaire was a means for data gathering. To gather information from the cotton growers, a schedule of interviews was created based on objectives of the study.

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Care was taken to prevent questions with dual meanings and contradictory statements when creating the interview schedule. The question was written in straightforward language to make it easier to understand.

The information was gathered using a personal interview schedule and direct interaction with the selected farmers. When approaching the farmers in such an attempt to establish a relationship with them in order to obtain more trustworthy information, the assistance of local leaders, Gramsevakas, Talathies and Agricultural Assistants from the State Department of Agriculture and Revenue was taken into consideration.

The present study was conducted in Nanded district of Maharashtra and it is confined to 12 villages in two tehsils Kinwat and Bhokar which was selected purposively on the basis of drought prone area. From each village 10 respondents were selected to comprise sample of 120 for final data. Ex-post facto research design was used for the study.

**Objective:** To study the 'Perception of contingency crop plan by rainfed cotton growers.

## Results

### Perception of contingency crop plan of improved cotton cultivation practices

Table 1 showed that the positive response for statement (7), (11), (12) and (21) were having 100 percent perception of the cotton growers towards contingency crop plan of improved cotton cultivation practices and they all were agreeing with statements. However, statement (3), (13), (19) and (24) were having greater than 95 percent perception of the cotton growers and they all were agreeing with statements, while negative response for statement (22) 94.16 percent, statement (8) 85.83 percent, statement (8) 84.16 percent and statement (20) 84.16 percent of perception towards contingency crop plan of improved cotton cultivation practices and they all were disagreeing with statements.

**Table 1:** Statement wise distribution of cotton growers by their perception towards contingency crop plan of improved cotton cultivation practices

Sl. No	Statements	A	UD	DA
1.	Contingency plans are really helpful to overcome unfavorable situations.	113 (94.16)	7 (5.83)	0 (00.00)
2.	Early season drought can be overcome by planting short duration varieties.	97 (80.83)	23 (19.16)	0 (00.00)
3.	These plans minimize the loss in crop production.	115 (95.83)	5 (4.16)	0 (00.00)
4.	Compared to past, we have more contingency plans now to overcome drought conditions.	91 (75.83)	27 (22.50)	2 (1.66)
5.	I personally feel that; contingency plans are very essential to be planned well before the cropping season.	102 (85.00)	12 (10.00)	6 (5.00)
6.	These plans are suitable for all kinds of farmers' such as marginal, small and large farmers'	90 (75.00)	26 (21.66)	4 (3.33)
7.	Contingency plans prevent panic and promote action	120 (100.00)	0 (00.00)	0 (00.00)
8.	Bt cotton is not suitable for rainfed condition	1 (00.83)	17 (14.16)	103 (85.83)
9.	It is difficult to get seeds in time	1 (00.83)	19 (15.83)	101 (84.16)
10.	Out crossing of Bt cotton pollen may lead to development of gigantic plants and weeds	99 (82.50)	21 (17.50)	0 (00.00)
11.	Bt cotton cultivars requires more irrigation and fertilizers application	120 (100.00)	0 (00.00)	0 (00.00)
12.	Bt cotton is susceptible to many diseases	120 (100.00)	0 (00.00)	0 (00.00)
13.	Do you know that field bunding and trenching are suitable to conserve available water?	119 (99.16)	1 (00.83)	0 (00.00)
14.	Do you know that intercropping or mixed cropping is recommended under contingency plan?	97 (80.83)	23 (19.16)	0 (00.00)
15.	Do you know that one should grow Rabi crops such as chickpea or safflower after harvest of sole pearl millet?	91 (75.83)	22 (18.33)	7 (5.83)
16.	Premature drying of bolls is more	97 (80.83)	23 (19.16)	0 (00.00)
17.	Bt cotton is susceptible to moisture stress and drought	57 (47.50)	56 (46.66)	7 (5.83)
18.	Bt cotton plants are brittle and the branches gets broken easily	83 (69.16)	21 (17.50)	16 (13.33)
19.	Bt cotton is more susceptible to sucking pests	116 (96.66)	4 (3.33)	0 (00.00)
20.	Bt cotton staple length is less than conventional cotton	1 (84.16)	19 (15.83)	101 (84.16)
21.	Kappa's picking in Bt cotton is more labour consuming	120 (100.00)	0 (00.00)	0 (00.00)
22.	Bt cotton price is less than non- Bt cotton	1 (00.83)	7 (5.83)	113 (94.16)
23.	Bt cotton average weight of bolls is less than non-Bt cotton	7 (5.83)	13 (10.83)	100 (83.33)
24.	Bt cotton seed cost is very high compared to non-Bt cotton seeds	115 (95.83)	5 (4.16)	0 (00.00)

### Overall Perception of contingency crop plan by rainfed cotton growers

**Table 2:** Distribution of cotton growers according to their perception of contingency crop plan

Sl. No.	Category	Respondents (n=120)	
		Frequency	Percentage
1.	Low (up to 34)	31	25.84
2.	Medium (35 to 37)	66	55.00
3.	High (above 37)	23	19.16
	Total	120	100.00

In Table 2, it was observed that more than half 55.00 percent of cotton growers had a medium level of perception toward contingency crop plans of improved cotton cultivation practices, while 25.83 percent had a low level of perception.

Only 22.50 percent of cotton growers had a high perception about a contingency crop strategy.

These findings coincide with those reported by Kabir *et al.* (2010)<sup>[7]</sup>, Bhalerao (2010)<sup>[3]</sup>, Nguyen (2015)<sup>[8]</sup> and Shankar (2017)<sup>[6]</sup>.

### Conclusions

It was evident that most cotton growers had a moderate level of perception regarding contingency crop plans.

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