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Identification of problems and suggestions of tissue culture banana growers

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Abstract

The study was conducted in Durg district of Chhattisgarh to identify the major problems and their suggestions to incorporate 120 farmers were considered as respondents for this study. Collected data were analyzed with the help of suitable statistical methods. The analysis result showed that constraints categories were Damage due to unfavourable condition of weather (high wind), Increase in cost of cultivation due to high wind banana plant drop down, Non availability of fertilizer, Damage to plant by animals like wild pig, High cost of planting material, Non availability of insurance in time, Delayed in payment, Fluctuation in selling prices of banana. Majority of the respondents' suggestions were Information should be provided regularly on current market, Early planting in March and April, Subsidy should be provided for fencing by govt. or concern department, Fertilizer should be supplied in proper time, Due to crop damage, insurance claimed should be provided in proper time by respective department.

Keywords: Tissue culture, production technology, problems and suggestions

Introduction

Banana is one of the most widely grown, traded, and consumed fruits on the planet. Bananas come in over 1000 different types around the world, providing essential nutrients to people in both producing and importing countries. The Cavendish banana is the most traded type, accounting for little under half of global output at an estimated annual volume of 50 million tonnes. Banana production is one of India's most popular agricultural activities since the fruit is available all year, unlike most other fruits, which are seasonal. Banana may be a very hip fruit thanks to its low price and high nutritive value. It's consumed in fresh or cooked form both as ripe and raw fruit. Banana could be a rich source of carbohydrate and is rich in vitamins particularly vitamin B complex. It is also a decent source of potassium, phosphorus, calcium and magnesium. It helps in reducing risk of heart diseases when used regularly and is usually recommended for patients laid low with high pressure level, arthritis, ulcer, and gastroenteritis and kidney disorders.

Tissue culture is the regulated and aseptic multiplication of a plant part, single cell, or group cell in a test tube. It has created the groundwork for the mass production of consistent, high-quality, disease-free planting material and true-to-type plants.

In Chhattisgarh total area of the fruit crops within the state is 2, 54,754 hectare together with the assembly of 34,58,745 Mt within the year 2020-21. In Durg district area, production and productivity of banana in year 2020-2021 were 1894ha, 53960 Mt and 28.50 Mt respectively.

Material and Methods

The study was conducted in Durg district of Chhattisgarh. There are 3 Blocks in Durg district namely; Dhamdha, Patan and Durg. All the three blocks of Durg district were selected for the study. From each selected blocks 4 villages were selected purposively from list obtained from the field officers of the respective block. From each selected village, 10 tissue culture banana growers were selected as respondent, thus total (3×4×10=120) banana growers were selected for this study. The data collection was done personally using interview schedule and analyzed by using appropriate statistical tools and methods.

Results and Discussion

The result and discussions of the present study has been summarized on the basis of response of respondents regarding to identify the problems faced by the tissue culture banana growers during tissue culture banana production practices and to obtain the suggestions from them to improve the knowledge and adoption of recommended tissue culture banana production technology.

The results found that multiple responses were taken to ascertain the problems faced by the tissue culture banana growers in adoption of recommendation tissue culture banana production technology. On the basis of responses obtained from the respondents, various problems are presented in Table 1.

Table 1: Distribution of the respondents on the basis of problems faced by the tissue culture banana growers

S. No	Problems	Frequency	Percent	Rank
1.	Damage due to unfavourable condition of weather (high wind)	120	100	I
2.	Increase in cost of cultivation due to high wind banana plant drop down.	70	58.33	III
3.	Non availability of fertilizer.	5	4.16	VII
4.	Damage to plant by animals like wild pig.	9	7	VI
5.	High cost of planting material.	80	66.66	II
6.	Non availability of insurance in time.	3	2.5	VIII
7.	Delayed in payment	11	9.1	V
8.	Fluctuation in selling prices of banana	55	45.83	IV

So far as of the respondents faced problem in adoption of recommended tissue culture banana production technology are concerned and it was found that majority of the respondents faced cent percent of the respondents had damage due to unfavourable condition of weather (high wind) followed by 66.66 percent of the respondents had high cost of planting material, Increase in cost of cultivation due to high wind(58.33), Fluctuation in selling prices of banana (45.83%), Delayed in payment (9.1%), Damage to plant by animals like wild pig (7%),Non availability of fertilizer (4.16%), Non availability of insurance in time (2.5%).

Suggestions obtain from respondents to improve the adoption of recommended tissue culture banana production technology as regards to the 'suggestions given by the respondents to overcome the problem faced by them during the adoption of recommended tissue culture banana production technology the findings are presented in the Table 2.

Table 2: Distribution of the respondents on the basis of suggestions by the tissue culture banana growers

S. No	Suggestion	Frequency	Percentage	Rank
1	Information should be provided regularly on current market	65	54.16	III
2	Early planting in March and April	70	58.33	I
3	Subsidy should be provided for fencing by govt. or concern department	5	4.16	V
4	Fertilizer should be supplied in proper time	9	7.5	IV
5	Due to crop damage, insurance claimed should be provided in proper time by respective department	66	55	I

The majority 58.33 percent of the respondents were suggested that, Early planting in March and April can protect the plant from high wind, followed by 55 percent of the respondents suggested that Due to crop damage, insurance claimed should be provided in proper time by respective department, 54.16 percent of the respondents suggested that Information should be provided regularly on current market, 7.5 percent of the

respondents suggested that Fertilizer should be supplied in proper time, 4.16 percent of the respondents suggested that subsidy should be provided for fencing by govt. or concern department.

Conclusion

It is concluded that major problem faced by the tissue culture banana growers in adoption of recommended popular minor millet production technology were cent percent of the respondents had damage due to unfavourable condition of weather (high wind) followed by 66.66 percent of respondents had high cost of planting material, Increase in cost of cultivation due to high wind (58.33%), Fluctuation in selling prices of banana (45.83%). Some of the suggestions obtained from the respondents were that 58.33 percent of the respondents were suggested that, Early planting in March and April can protect the plant from high wind, followed by 55 percent of the respondents suggested that Due to crop damage, insurance claimed should be provided in proper time by respective department.

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