



Constraints in Production of Maize in Warangal Rural District of Telangana State

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ABSTRACT: Maize was one of the major crops grown in Warangal Rural district of Telangana. The present study was undertaken to examine constraints in the production of maize. The findings of the study revealed that the sample farmers expressed labour scarcity and was assigned first rank followed by Irregular availability of irrigation water, High labour cost, Input supply center is far away, Inadequate credit supply by financial institution, High cost of growth regulators, Low quality of seeds, High incidence pest & diseases, Shortage of fertilizer, Non availability of recommended pesticides, Scarcity of farm yard manure, Low productivity, and finally low yield which assigned least rank. Opinioned occurrence of pests and diseases *i.e.* fall army worm incidence was the major problem in the study area with a Garrett's score of 76.1 which was followed by unavailability of labour during the peak period with a score of 66.9. In the next order high cost of plant protection chemicals, high cost of fertilizers and less seed viability constraints were observed.

Keywords: Constraints, Production, Maize, Labour scarcity, Incidence, Pest & Diseases.

INTRODUCTION

Maize (*Zea mays* L.) referred to as the Queen of Cereals, is a vital crop in India, standing as the third cash crop after wheat and rice. With 15 million Indian farmers engaged in maize cultivation, states like Karnataka, Rajasthan, Madhya Pradesh, and Telangana contribute significantly to the country's maize production. To ensure remunerative prices for farmers, India must plan production by enhancing productivity and reorienting the value chain (IIMR, 2022-23).

In Telangana, maize ranks third among all crops, covering an extensive area of 12.74 lakh acres. The maize production in Telangana reached 28.65 lakh tonnes during 2022-23 (DES, 2022-23). Major maize-growing districts in Telangana include Warangal Rural, Khammam, Nirmal, Siddipet, Kamareddy, Mahabubabad, Nizamabad, Warangal Urban, Jagityal and Karimnagar. Over the last decade, both the area and production of maize have witnessed significant growth in the state (TSAGRICULTURE, 2022-23).

Survey of Literature: Kumari *et al.* (2015) examined problems and prospects of maize crop in eastern zone of Bihar. Results showed that, for Kharif maize, 90 per cent of farmers used a native variety. The primary (70%) institutional limitation was the village's market connectedness, which was followed by an inadequate and inconsistent supply of energy. A major (90%) marketing limitation in the research area was lack of effective marketing infrastructure, which seem to be a very depressing development for the maize farmers.

Krishna *et al.* (2018) listed out constraints in the production and marketing of maize in Karimnagar district of Telangana. According to the findings, the sample farmers suffered from crop damage from wild animals and birds, labour shortages, and excessive labour costs. A major obstacle that affected 58.33 per cent of maize growers was the high cost of inputs. More specifically, lack of credit, dearth of storage options, lack of seed options suitable for the region, late crop planting, excessive weed infestation, *etc.* One of the main issues that 50 per cent of corn growers mentioned was abnormal weather in the following order. Another obstacle cited by 35 per cent of corn farmers was the low price of grains.

The biggest issues with marketing are a lack of storage and warehouse facilities (31 percent), poor transportation, and high transportation costs. Involvement of middlemen during marketing to obtain fair prices (Muramatti *et al.*, 2022).

Yadav *et al.* (2021) concluded that major constraints in cotton crop production was high cost of seeds and the unfavourable weather conditions that led to crop failure followed by lack of technical guidance, unavailability of credit, marketing facilities and technical knowledge. Further, fall in prices during harvesting season also affected farmers with lower returns.

Padhy *et al.* (2022) based on the data collected from 240 cotton growing farmers from two districts *viz.*, Gajapati and Rayagada of Odisha state, identified the constraints faced by cotton growing farmers. The study recommended for soil testing to assess the soil fertility

status and also suggested on fertilizer application, measurement and grading transparency, immediate payments, providing market information and conducting awareness programmes through cluster approach.

The study revealed that the major constraint was frequent price fluctuations and was assigned first rank followed by high transportation cost, lack of information about government schemes and subsidies, high commission charges, lack of awareness of new technologies, lack of availability of market information at farm level, lack of cooperatives in marketing societies at village level, weighing loss during storage, lack of scientific training about maize cultivation, lack of amenities and facilities in the market, lack of support prices when there is a glut in the market, lack of proper infrastructure in market, lack of storage facility, and finally delay in cash payment which assigned least rank (Maheshnath *et al.*, 2024).

MATERIALS AND METHODS

Garrett’s ranking technique. Garrett’s ranking technique was used to rank the constraints faced by the farmers in the study area. Respondents were asked to rank the listed constraints and rank one meant most important and last rank meant least important. Then, the

rank assigned to each constraint by each individual farmer was converted into per cent position using the following formula

$$\text{Percent position} = \frac{100 \times (R_{ij} - 0.50)}{N_j}$$

Where, R_{ij} stands for rank given for the i^{th} constraint ($i= 1, 2, \dots, n$) by the j^{th} individual ($j=1,2, \dots, 50$) and N_j stands for number of constraints ranked by j^{th} individual.

RESULTS AND DISCUSSION

Table and figure revealed that constraints faced by the different size of farms group in production of Maize. Most of the Respondents expressed that major constraint was identified that labour scarcity and was assigned first rank followed by Irregular availability of irrigation water (II), High labour cost (III), Input supply center is far away (IV), Inadequate credit supply by financial institution (V), High cost of growth regulators (VI), Low quality of seeds (VII), High incidence pest & diseases (VIII), Shortage of fertilizer (IX), Non availability of recommended pesticides (X), Scarcity of farm yard manure (XI), Low productivity (XII), and finally low yield which assigned least rank *i.e.* (XIII) respectively.

Table 1: Constraints in Production of Maize in Different Size of Farms Group.

Sr. No.	Particulars	(Value in Numbers)				
		S M L = 57 + 44 + 19 = 120			Number of Respondents = 120	
		Size of Farms Groups			Total in percentage	Rank
		Small	Medium	Large		
1.	Low quality seed	22	14	12	48(40.00)	VII
2.	Shortage of fertilizers	13	20	10	43(35.83)	IX
3.	Labour scarcity	45	44	24	113(94.17)	I
4.	High labour cost	32	23	15	70(58.33)	III
5.	Scarcity of farm yard manure	10	16	11	37(30.83)	XI
6.	Input supply center is far away	27	21	19	67(55.83)	IV
7.	High cost of growth regulators	20	18	11	49(40.83)	VI
8.	Non availability of recommended pesticides	15	17	10	42(35.00)	X
9..	High incidence pest & diseases	24	12	11	47(39.17)	VIII
10.	Inadequate credit supply by financial institution	33	18	15	66(55.00)	V
11.	Regular availability of irrigation water	33	26	16	75(62.50)	II
12.	Low yield	10	10	5	25(20.83)	XIII
13.	Low productivity	14	11	10	35(29.17)	XII

Note: Figures in the parenthesis indicate percentage to the total

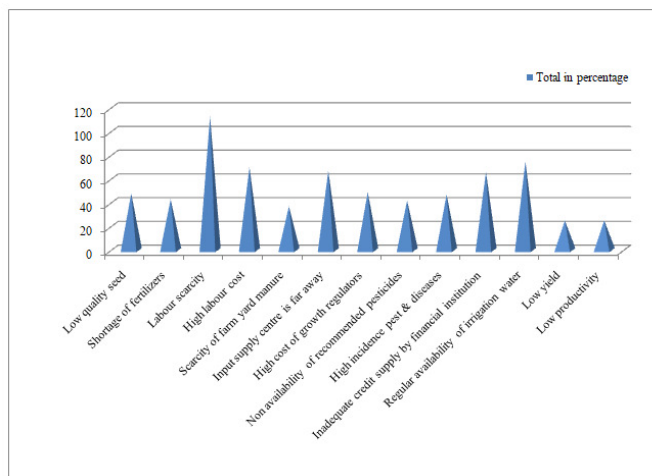


Fig. 1. Constraints in Production of Maize in Different Size of Farms Group Data.

SUMMARY AND CONCLUSION

Farmers expressed production problems were that labour scarcity and was assigned first rank followed by Irregular availability of irrigation water, High labour cost, Input supply center is far away, Inadequate credit supply by financial institution, High cost of growth regulators, Low quality of seeds, High incidence pest & diseases, Shortage of fertilizer, Non availability of recommended pesticides, Scarcity of farm yard manure, Low productivity, and finally low yield which assigned least rank.

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