



# Constraints in Adoption of Improved Tomato Production Technologies in Chatra District of Jharkhand

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## ABSTRACT

Tomato is one the most important cash crops of Chatra district of Jharkhand which is grown round the year. However, the improved tomato production technologies have not reached at the farmers' field. Therefore, A study was conducted to identify the constraints faced by farmers in adoption of the improved tomato production technologies in four purposively selected blocks of Chatra district where tomato was grown round the year. In each block, two villages and 20 tomato growers from each village were selected as respondents, thus making a total of 160 respondents for the study. Constraints identified were grouped into four categories *i.e.* input, financial, technical and marketing constraints. Results indicated that financial constraints and marketing constraints were most perceived by the tomato growers followed by technical constraints, where the input constraints were perceive least by the tomato growers.

**Key Words:** Adoption, Tomato Production Technologies.

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## INTRODUCTION

Tomato (*Lycopersicon esculentum*) is an important vegetable crop in India and is grown on an area of 808.54 lakh hectares with the production of 19,696 MT. Jharkhand is major tomato growing state with an area of 19.46 lakh hectares and production of 226.20 MT with the productivity of 11.62 t/ha. (Anon, 2017). In Chatra district of Jharkhand tomato is the one of most important cash crop which grown round the year in 8,000 ha area with the production of 2.56 MT. In the wake of trade liberalization and globalization, the agriculture sector in India faces an uphill task of meeting global competition, reducing unemployment and enhancing income in rural area. Diversification of agriculture towards selective high value crops like tomato has been recommended as one of the strategies for meeting these challenges. The generation and transfer of improved production technologies is influenced not only by knowledge and biological gap but also by input, financial, technical and marketing factors. Despite of several promotional efforts under taken by the Krishi Vigyan Kendra (KVKs), State departments

of Horticulture, ATMA, Private sector, business organization and nongovernment organization, still only 45 per cent improved technologies reached at farmers field in district. Hence, an effort was made to study the constraints in adoption of improved tomato production technologies in Chatra district of Jharkhand

## MATERIALS AND METHODS

The district was purposively selected for the study because so many efforts were done by the KVK and other agencies of the district to transfer improved tomato production technologies at farmers' field. The study was conducted in four selected blocks (Chatra, Gidhour, Simariya and Lowalong) covering 8 village *i.e.* Turag, Ramna from Chatra block, Gidhour Barisakhi under Gidhour block, Amgawa and Piri in Simariya and Lawalong and Bandu in Lawalong block respectively. Twenty tomato growers selected from each village covering 160 respondents in study by using proportionate random sampling technique. For collection of data questionnaire was prepared

**Table 1. Input constraints perceived by the respondents in adoption of improved production technologies.**

Sr. No.	Constraint	MPS	Rank
01	Unavailability of labour	85.71	I
02	Unavailability of quality seed at the time of sowing	82.16	II
03	Non availability of recommended weedicides	79.76	III
04	Lack of irrigation facility	77.38	IV
05	Subsidy is not given on vegetable cultivation related inputs	72.62	V
06	Unavailability of chemical fertilizer micro elements in the local market	62.14	VI
07	Unavailability of recommended chemical for seed treatment	61.90	VII

\*MPS= Mean Percentage Score

with the help of horticulture scientist and ATMA functionaries. Data were collected from two point continuum response namely yes and no. The score awarded 1 for yes response and 0 for no response. The mean scores of individual constraints were computed and ranked in descending order.

## RESULTS AND DISCUSSION

### Input Constraints

Input constraints indicated that unavailability of labour (85.71) perceived as the most important input constraints in adoption of improved tomato production technologies. The second most perceived constraint was unavailability of quality seed at the time of sowing (82.16) followed by non availability of recommended weedicides (79.76), lack of irrigation facility (77.38), subsidy is not given on vegetable cultivation related input

(72.62), unavailability of chemical fertilizer and micro elements in the local market (62.14), unavailability of recommended chemical for seed treatment (61.90) respectively. These findings were in consonance with Singh (2018) who reported that declining area under tomato was due to various constraints like low yield, low market price, time factor and use of local available seed.

### Financial constraints

The perusal of the financial constraints revealed that high cost of hybrid varieties of tomato and high cost of chemical and micro elements fertilizer, were reported with (82.14 MPS) and (74.62 MPS) and as such these were ranked at first and second place, respectively. The other constraints like high cost of improved farm implements, minimum support price not fixed by the government and high electricity

**Table 2. Financial constraints perceived by the respondents.**

Sr. No.	Constraint	MPS	Rank
01	High cost of hybrid varieties	82.14	I
02	High cost of chemical and micro elements	74.62	II
03	High cost of improved farm implements	72.62	III
04	Minimum Support price is not fixed by the government	69.04	IV
05	Higher electricity charge.	64.67	V

\*MPS= Mean Percentage Score

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**Table 3. Marketing constraints perceived by the response.**

Sr. No.	Constraint	MPS	Rank
01	Manipulation of price by middleman.	86.90	I
02	Lack of storage facility	82.14	II
03	Absence of assured marketing on remunerative price.	77.38	III
04	Problem of marketing in remote areas	70.24	IV
05	Lack of transportation facility	69.07	V
06	Lower price at harvesting time	64.28	VI

\*MPS= Mean Percentage Score

charges were reported with (72.62 MPS), (69.04 MPS) and (64.67 MPS) and as such these were ranked at third fourth and fifth place respectively.

### Marketing Constraints

The finding on marketing constraints indicated that manipulation of price by middlemen, lack of storage facility and absence of assured marketing on remunerative price were reported with (86.90MPS), (82.14MPS) and (77.38 MPS) as such these were ranked at first second and third places, respectively. The other constraints like problem of marketing in remote areas, lack of transportation facility and lower price at harvesting time reported with (70.24 MPS), (69.07 MPS) and (64.28 MPS) and as such these were ranked at fourth, fifth and sixth place respectively.

### CONCLUSION

It was concluded that unavailability of labour, high cost of hybrid seeds, lack of knowledge about plant protection measure and manipulation of price by middlemen perceived to be important constraints which create problem for the adoption of improved production technologies of tomato cultivation. This problem need to be solved through linkage with marketing and financial institution for

providing storage and preservation facility at least Panchyat level so that full potential of scientific tomato production technology could be translated in farmers field.

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