

## ADOPTION OF RECOMMENDED ONION PRODUCTION TECHNOLOGY

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### ABSTRACT

*With a view to determine the extent of adoption of recommended onion production technology and its relationship with selected characteristics of the onion growers, the present study was conducted in Bhavnagar district with a sample of 120 farmers. The findings reflected that more than one-half (56.67 per cent) of the onion grower had medium level adoption about recommended onion production technology. Except size of land holding; all independent variables under study were positively and significantly correlated with the level of adoption of recommended onion production technology by the onion growers.*

### INTRODUCTION

Onion (*Allium cepa* L.) is one of the basic vegetables of mass consumption in India. It is popularly used both in the raw and mature bulb stages as a vegetable as well as spice around the year. India is a second largest producer of onion in the world next to China. The area under onion cultivation is 384 thousand hectares and annual production is 40.58 lakh million tones with accounting for 16 per cent of the world area and 12 per cent of world output of onion. India is world second largest exporter of onion with a market share of 13.6 per cent (Kumar and Mittal, 1998).

Gujarat ranks fifth in the area and first in the production of onion in the country (Singhal, 1999). In Gujarat, Saurashtra region accounts for 87.62 per cent the area and 85.17 per cent of the total production of onion in the state. Adoption of improved crop technology is positively and significantly related with yield (Patel, 1995). The average yield of onion is 10 tones/ha against the potential yield of 30 tones/ha received in demonstration plot or on research farm. This clearly indicated that a wide gap exists

between potential and average yield/ha of onion in Saurashtra region. It might be due to lack of adoption of improved onion production technology. Simultaneously some constraints will also be there that come in the way of adoption of improved onion production technology. Therefore, the present investigation was planned with the following objectives:

1. To determine the extent of adoption of recommended onion production technology by the onion growers.
2. To ascertain the relationship between selected characteristics of onion growers and their adoption of recommended onion production technology.

### METHODOLOGY

The study was undertaken in Mahuva and Talaja talukas of Bhavnagar district where onion is grown on large area. From these two talukas six villages were selected on the basis of area under onion cultivation. The lists of onion growers from these selected villages were obtained. Out of them, a total of 120

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farmers were selected by proportionate random sampling method. Thus, 120 onion growers constituted the sample respondents for this study. The adoption index was developed and used to measure the adoption level of improved onion production technology. In light of the objectives set forth, the interview schedule was prepared. The data were collected by personal interview of the respondents. They were analyzed and interpreted in view of the objectives.

## RESULTS AND DISCUSSION

### Extent of adoption:

Practice wise adoption of recommended onion production technology was ascertained in the respect of important recommended practices and the data thus obtained have been reported in Table 1. A critical perusal of the data in table 1 indicated that the extent of adoption was found very high (more than 66%) in practices like seed treatment (rank I), use of FYM fertilizer (rank II), harvesting (rank III), sowing distance (rank IV), time of sowing (rank V) and preparatory tillage (rank VI).

The probable reason for high adoption (above 80 %) of seed treatment (rank I) may be due to the fact that most of farmers used to go for seed treatment with Diathem-M-45 for protecting the crop from seed born disease. Application of FYM (rank II), the farmers who applied FYM as per recommendation had their own source of FYM or capacity of purchasing FYM from out side. Majority of the farmers are harvesting (rank III) in time due to the fact that this crop is grown since last five decades and they are aware of the impact of time of harvest on yield. Moreover, all the above practices are of low cost and essential for better yield.

### Level of adoption

Based on overall adoption, respondents were categorized in to three groups and data have been reported in Table 2. It could be observed that more than half (56.67 %) of the respondents had medium level of adoption, followed by 27.50 per cent of them having high adoption, whereas only 15.83 per cent of them had low level of adoption of recommended onion production technology. Similar finding were reported by Yawalkar *et. al.* (1991) and Deshmukh *et. al.* (1998).

**Table 1: Practice wise extent of adoption of recommended onion production technology**

(n=120)					
Sr. No.	Name of practices	Weightage	Weighted mean score	Per cent	Rank
1	Soil testing	3	0.20	06.66	XVII
2	Preparatory tillage	4	2.70	67.50	VI
3	FYM fertilizers	7	5.56	81.50	II
4	Improved variety	10	4.98	49.80	XV
5	Sowing time	6	4.28	1.30	V
6	Seed rate	4	2.05	51.25	XIII
7	Seed treatment	3	2.70	90.00	I
8	Preparation of seedbed	6	2.99	49.83	XIV
9	Sowing distance	3	2.37	79.00	IV
10	Sowing(Seedbed/Kanzi)	7	3.95	56.40	XII
11	Chemical fertilizers	10	4.95	49.50	XVI
12	Irrigation	9	5.15	57.22	X
13	Weed control	6	3.41	56.83	XI
14	Diseases	6	.88	64.66	VII
15	Insect/pest	6	3.69	61.50	IX
16	Harvesting	4	3.26	80.71	III
17	Storage	6	3.88	64.66	VII

Table 2 : Level of adoption of the onion growers (n=120)

Categories	No.	Percentage
Low adoption	19	15.83
Medium adoption	68	56.67
High adoption	33	27.56

### Relationship of selected characteristics with adoption of onion growers

It is evident from table 3 that of the 11 variables the coefficient of correlation of education, social participation, extension participation, annual income, irrigation potentiality, farm mechanization index, onion

of family, social participation, extension participation, annual income, irrigation potential, farm mechanization index, onion crop intensity and risk orientation were positively and significantly correlated with the level of adoption of recommended onion production technology by the onion growers.

Table 3 : Relationship of selected characteristics with adoption of onion growers

Sr. No.	Name of variables	r' value (df=118)
1.	Age	-0.1609*
2.	Education	0.5934**
3.	Size of family	-0.1674*
4.	Social participation	0.1923**
5.	Extension participation	0.2233**
6.	Annual income	0.1695*
7.	Size of land holding	0.1325 <sup>NS</sup>
8.	Irrigation potentiality	0.1702*
9.	Farm mechanization index	0.2032**
10.	Onion crop intensity	0.2443**
11.	Risk orientation	0.1688*

NS: non significant \* = significant 0.05 level 'r' = 0.1509  
\*\* = significant 0.01 level 'r' = 0.1793

crop intensity and risk orientation with adoption of recommended onion production technology was positive and significant to 0.001 level of probability. The remaining variables viz, size of land holding was non significant in relation with adoption.

### CONCLUSION

It can be concluded from the above findings, that more than one-half (56.67 per cent) of the onion grower had medium level adoption about recommended onion production technology. The relational analysis has indicated that the except size of land holding; all the independent variables included in the study, namely education, size

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