

## Original Research Article

# Correlates of Knowledge and Adoption of Recommended Cultivation Practices of Onion among the Growers

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## ABSTRACT

The study was conducted in Aurangabad district and total 120 respondents were selected as sample of the study with an objective to study the profile of the onion growers and their relationship with their knowledge and adoption of recommended cultivation practices of onion. The data were collected with help of the structured interview schedule and analyzed by using statistical tools. Results showed that majority of the respondents were belongs to middle age group, educated upto high school education, medium level of land holding, medium area under onion cultivation, medium level of annual income, medium level of social participation, medium level of source of information, medium level of extension contact, medium level economic motivation, medium level of market orientation and medium level of risk orientation. Data further showed that independent variables namely education, land holding, annual income, social participation, source of information, economic motivation, and risk orientation are positively and significantly correlated with knowledge of onion cultivation. Whereas independent variables namely education, land holding, area under onion cultivation, annual income, social participation, source of information, extension contact, economic motivation, market orientation and risk orientation are positively and significantly correlated with Adoption of protected onion cultivation. Whereas Age does not shows any relation with Adoption of protected onion cultivation.

### Keywords

Adoption,  
Knowledge,  
Onion  
Cultivation,  
Correlation  
Coefficient

## Introduction

Vegetables are gaining much popularity on account of their significant contribution towards food and nutritional security of growing population of the country. Vegetable growing is an effective source for generating greater income from per unit area, additional employment, and provision of nutritive and proteins diet. Among vegetables, onion is the most important bulb crop and one of the most popular vegetable crops. Onion (*Allium sepa* L.) belongs to family Alliaceae. It is one of the most important commercial vegetable crops

grown in India from ancient times. Onion is an important and indispensable item in every kitchen as condiment and vegetable, hence, commands an extensive internal market. The green leaves and immature and mature bulbs are eaten raw as salads and used in preparation of vegetables. Dehydrated bulbs, onion powder and oleoresin are also in great demand due to low transport cost and storage losses. Onion can grow in all types of soils such as sandy loam, silt loam and heavy clay soils. In heavy soils, bulb development is restricted and the crop

matures late compared to light soils. Soil should be rich in humus and withhold sufficient moisture for proper growth. Onion share 11.90 per cent of the total vegetable production of India in 2014-15. India has the largest area under onion in the world through output wise it is second in the world after China. In India, onion is cultivated in Maharashtra, Bihar, Karnataka, Gujarat and Madhya Pradesh.

The Nasik region of Maharashtra account for 30.00 per cent of the total crop, followed by Gujarat with 11-13 per cent, Karnataka 10 per cent and Uttar Pradesh 8 to 10 per cent. India is the second largest exporter of onion after the china. The major onion growing districts in Maharashtra, Nasik, Jalgaon, Ahmadnagar, Pune, Sangli, Satara and Solapur.

India's country-wise export of fresh or chilled onion increases day by day. In spite of being a major onion producing country, India has very low productivity, about 15-16 tonnes/ha and Maharastra has about 12-13 tonnes/ha productivity. By adopting the recommended varieties, recommended cultivation practices, agronomic and various other management practices, onion yield could be increased. However, the desired target of onion production cannot be achieved unless majority of the farmers are motivated to adopt recommended onion cultivation practices. At present the farmers are following their own cultivation methods based on their experience. Few of them might be aspiring for taking onion on large scale. So for this there is a necessity to disseminate the onion production technology among the potential farmers so as to have the wider adoption of the improved technology and bring radical change in onion yield. The study was therefore undertaken with the following specific objectives;

### **Objectives of the study**

To study the profile of the onion growers.

To study relationship between profile of the growers with their knowledge and adoption of recommended cultivation practices of onion.

### **Materials and Methods**

The study was conducted in two tahsils of Aurangabad district *viz.* Vaijapur and Gangapur. Three villages from each taluka were selected.

Twenty respondents from each of selected villages, thus a total of 120 respondents were selected as sample of the study. The data were collected with help of the structured interview schedule and analyzed by using statistical tools like percentage, frequencies, mean and correlation coefficient.

### **Results and Discussion**

#### **Profile of the onion growers**

It was observed from the Table 1 that majority of the respondents were belongs to middle age group (44.17%), educated upto high school education (35.00%), medium level of land holding (46.66%), medium area under onion cultivation (81.67%), medium level of annual income (80.83%), medium level of social participation (68.34%), medium level of source of information (70.00%), medium level of extension contact (67.50%), medium level economic motivation (62.50%) medium level of market orientation (70.83%) and medium level of risk orientation (70.00%). These findings are in line with the results of Bedre (2009), Sawale (2011) and Ambavane (2014).

**Table.1** Distribution of respondents according to their profile (N=120)

Sr. No.	Category	Frequency	Percent
	<b>Age</b>		
1.	Young (up to 29 years)	43	35.83
2.	Middle (30 to 52 years)	53	44.17
3.	Old (53 years and above)	24	20.00
	<b>Education</b>		
1.	Illiterate	12	10.00
2.	Primary School (1 <sup>st</sup> to 4 <sup>th</sup> std.)	14	11.66
3.	Middle School (5 <sup>th</sup> to 10 <sup>th</sup> std.)	14	11.66
4.	High School (11 <sup>th</sup> and 12 <sup>th</sup> std.)	42	35.00
5.	College level and above	38	31.68
	<b>Land holding</b>		
1.	Marginal (Up to 1.00)	00	00.00
2.	Small (1.01 to 2.00)	03	02.50
3.	Semi medium (2.01 to 4.00)	36	30.00
4.	Medium (4.01 to 10.00)	56	46.66
5.	Large (Above 10.00)	25	20.84
	<b>Area under onion cultivation</b>		
1.	Low (up to 0.70)	10	08.33
2.	Medium (0.71 to 2.29)	98	81.67
3.	High (2.30 and above)	12	10.00
	<b>Annual income</b>		
1.	Low (up to Rs.23,969/-)	04	03.33
2.	Medium (Rs.23,969 to Rs 2,29,314/-)	97	80.83
3.	High (Rs.2,29,315 and above)	19	15.84
	<b>Social participation</b>		
1.	Low (up to 2.90)	20	16.66
2.	Medium (2.91 to 6.76)	82	68.34
3.	High (6.77 and above)	18	15.00
	<b>Source of information</b>		
1.	Low (up to 18.50)	16	13.33
2.	Medium (18.51 to 35.31)	84	70.00
3.	High (35.32 and above)	20	16.67
	<b>Extension contact</b>		
1.	Low (up to 7.65)	19	15.84
2.	Medium (7.66 to 11.85)	81	67.50
3.	High (11.86 and above)	20	16.66
	<b>Economic motivation</b>		
1.	Low (up to 14.85)	16	13.34
2.	Medium (14.86 to 23.62)	75	62.50
3.	High (23.63 and above)	29	24.16
	<b>Market orientation</b>		
1.	Low (upto 18.23)	16	13.34
2.	Medium (18.24 to 25.54)	85	70.83
3.	High (25.55 and above)	19	15.83
	<b>Risk orientation</b>		
1.	Low (upto 18.36)	18	15.00
2.	Medium (18.37 to 25.13)	84	70.00
3.	High (25.14 and above)	18	15.00

**Table.2** Coefficient correlation between profile (independent variables) of respondents and their level of knowledge (dependent variable)

Sr. No.	Independent variable	Correlation coefficient (r)
1.	Age	-0.107
2.	Education	0.241*
3.	Land holding	0.214*
4.	Area under annual income	0.346**
5.	Annual income	0.202*
6.	Social participation	0.201*
7.	Source of information	0.240*
8.	Extension contact	0.280**
9.	Economic motivation	0.216*
10.	Market orientation	0.268**
11.	Risk preference	0.212*

\* Significant at 0.05 per cent level of probability

\*\* Significant at 0.01 per cent level of probability

NS - Non significant

**Table.3** Coefficient correlation between profile (independent variable) of respondents and their level of adoption (dependent variable)

Sr. No.	Independent variable	Correlation coefficient (r)
1.	Age	0.067
2.	Education	0.201*
3.	Land holding	0.355**
4.	Area under onion cultivation	0.258**
5.	Annual income	0.295**
6.	Social participation	0.223*
7.	Source of information	0.262**
8.	Extension contact	0.199*
9.	Economic motivation	0.202*
10.	Market orientation	0.271**
11.	Risk preference	0.217*

\* Significant at 0.05 per cent level of probability

\*\* Significant at 0.01 per cent level of probability

NS - Non significant

**Relationship between profile of the growers with their knowledge and adoption of recommended cultivation practices of onion**

**Coefficient correlation for knowledge**

Table 2 showed that independent variables namely education, land holding, annual

income, social participation, source of information, economic motivation, and risk orientation are positively and significantly correlated with knowledge of onion cultivation.

Age does not show any relation with knowledge of protected onion cultivation. Whereas area under onion cultivation,

extension contact, market orientation are positively and highly significantly relationship with knowledge of the respondents above onion cultivation.

### **Coefficient correlation for adoption**

Table 3 showed that independent variable namely education, land holding, area under onion cultivation, annual income, social participation, source of information, extension contact, economic motivation, market orientation and risk orientation are positively and significantly correlated with

Adoption of protected onion cultivation. Whereas Age does not shows any relation with Adoption of protected onion cultivation. These findings are in line with

the results of Bedre (2009), Sawale (2011) and Ambavane (2014).

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