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RESEARCH PAPER

# Knowledge and adoption of recommended cultivation technologies by the chilli growers

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## ABSTRACT

The present study on "knowledge and adoption of recommended cultivation technologies by the chilli growers" was conducted in the year 2015–16 in Amravati district. For this study 60 chilli growers were purposively selected from one tehsils of district with the help of random sampling method. The data were collected with the help of structured interview schedule. Collected data was carefully examined, classified quantified and tabulated. Frequencies, mean, standard deviation, correlation of co-efficient analysis were employed for interpreting the results. Results obtained after analysis have been summarized as below. Findings revealed that majority of the respondents 75 per cent were find in the medium experience in chilli cultivation group. Majority of the respondents 61.67 per cent were educated upto college level. Nearly the respondents 50 per cent belonged to semi medium land holding between 2.01 to 4 ha. Maximum percentages of the respondents had their annual income in between Rs. 50,001 to 1,00,000/- and above. Majority of the respondents 70 per cent were had low area under chilli. 70 per cent of the respondents had medium labour availability. 63.33 per cent respondents had area under irrigation upto 2 ha. 40 per cent of the respondents had medium extension contact. 55 per cent of the respondents had medium source of information. Majority of the respondents had medium risk orientation. 68.33 per cent of the respondents had medium level of market orientation. 56.66 per cent of the respondents had medium level knowledge, whereas 68.33 per cent of the respondents had medium level adoption. Findings of relational analysis revealed that the characteristics such experience in chilli cultivation was negatively and significantly correlated while education, land holding, annual income, area under irrigation, labour availability, area under chilli crop, extension contact, source of information and risk orientation were positively and significantly correlated with knowledge about recommended practices of chilli. Whereas market orientation were not associated with knowledge about recommended practices of chilli. Among the characteristics of respondents *viz.*, land holding, education, annual income, area under chilli crop, labour availability, area under irrigation, source of information and risk orientation were positively and significantly correlated with adoption. Whereas experience in chilli cultivation, extension contact and market orientation were non-significant with adoption. Market fluctuation, high cost of insecticides and pesticides, high cost of fertilizer, irregular power supply, high wages of labour were the important constraint.

**Key Words :** Knowledge, Adoption, Chilli growers, Practices,Constraints

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Among vegetable grown in our country chilli [*Capsicum annuum* (L.)] is an important spices crop, belonging to family solanaceae, the chilli is a plant of tropical and sub-tropical region it grows well in warm and humid climate and temperature of 20 to 25 it can be grown in all type of soil but the sandy and sandy-loam, clay loam and loam soil are best suitable for it. It is an important vegetable crop chilli is one of the most valuable crops in India. The crop is grown largely for it's fruits all over India. It is used in India as a principle ingredient of various curries and chutneys. It is also used for vegetables, spices, condiments, sauces and pickles. Dry chillies are used for curry powder. Red colour in chilli is due to "Capsanthin", pungency in chilli is due to the active constitute of capsicum, an alkaloid, is extracted from chillies and is used in medicine, hence, there is medicinal value for it, chillies are harvested at red stage for canning purpose. Now days, even though chilli is being considered as important commodity of international market specially for its natural colour, capsicin, chilli powder etc.

The production of chilli could not be achieved to a desired extent to meet the consumption as well as industrial need of country because of traditional cultivation practices adopted by chilli growers. Some important varieties Pusa Jwala, Guntur-4, Guntur-2, NP-46A, Pant-1 , Jayanti and Parbhani Tejas and so on.

The area under chilli production in the world is about 1776 lakh ha having production 7182 lakh tonnes. The area under chilli in India is 804790 ha and production is 1276300 tonnes of chilli. In India, Maharashtra has occupied position in respect of 99500 ha area under chilli cultivation, with production of 45600 tonnes. The average productivity of dry chilli in Maharashtra is 0.46 MT/ hectare. It is extensively, growing in Ahmednagar, Amravati, Nagpur, Buldhana, Pune, Dhule, Aurangabad, Nanded, Jalna, Latur districts of Maharashtra.

The specific objectives have been undertaken as follows:

- To study the profile of the chilli growers.
- To study the extent of knowledge about recommended cultivation technologies by the chilli growers.
- To study the adoption of recommended cultivation technologies of chilli the growers.
- To find out the relationship of profile of the chilli growers with knowledge and adoption of recommended cultivation technologies of chilli.
- To study the constraints faced by the growers in adoption of recommended cultivation technologies of chilli.

## RESEARCH METHODOLOGY

Amravati district was purposively selected for the study. The study was conducted in Morshi tehsil of Amravati district. The farmers were interviewed with the help of structured interview schedule personally. From one tehsil 60 respondents were selected. The interview schedule was constructed by formulating relevant questions in accordance with objectives of the study. The schedule included questions pertaining to experience in chilli cultivation, education, land holding, annual income, area under chilli crop, labour availability, area under irrigation, extension contact, source of information, risk orientation and market orientation as well as knowledge and adoption.

The information from the respondent was collected by personal interview methods and their responses were considered for the purpose of present study. Data was collected. Mean, S.D. and co-efficient correlation methods were used for analysis of the data.

## RESULTS AND REMONSTRATION

The findings of the study as well as relevant discussion have been summarized under the following heads:

**Relation analysis :**

In order to find out the relationship of the selected characteristics of respondents with their knowledge and adoption, correlation co-efficient were worked out. The findings are presented in this part.

**Relationship of selected characteristics of respondents with their knowledge :**

The co-efficient of correlation of knowledge with personal, situational, socio-economic and communication characteristics of the respondents have been furnished in Table 1.

It is evident from Table 1 that source of information, risk orientation and land holding was positively and significantly correlated with knowledge at 0.01 level of probability. Whereas experience in chilli cultivation, Education, annual income, area under chilli, labour

availability, area under irrigation and extension contact were positively and significantly correlated with knowledge at 0.05 level of probability. Thus, the Null hypothesis was rejected for these variables.

The variables market orientation did not show any significant association with knowledge possessed by respondents. The Null hypotheses for these variables were, therefore, accepted. The findings of present study in accordance with finding reported by Jalit (2012) and Ambavane (2014).

**Relationship of selected characteristics of respondents with their adoption :**

The co-efficient of correlation of adoption with personal, situational, socio-economic and communication characteristics of the respondents have been furnished in Table 2.

It is evident from Table 2 that risk orientation was positively and significantly correlated with adoption at 0.01 level of probability. Whereas education, land holding, annual income, area under chilli, labour availability, area under irrigation and source of information were positively and significantly correlated with adoption at 0.05 level of probability. Thus, the Null hypothesis was rejected for these variables.

It clearly indicates that experience in chilli cultivation, extension contact and market orientation were non-significantly related with adoption of recommended practices of chilli. Thus, the Null hypothesis was accepted for these variables. The findings of present study is in accordance with the findings reported by Jalit (2012) and Ambavane (2014)

**Conclusion:**

Study indicates that the majority of respondents were belonged to medium experience group, majority of them

**Table 1 : Co-efficient of correlation of characteristics of the respondents with their knowledge**

| Sr. No. | Variable | 'r' value |
|---|---|---|
| 1. | Experience in chilli cultivation | -0.3139* |
| 2. | Education | 0.2952* |
| 3. | Land holding | 0.5164** |
| 4. | Annual income | 0.3277* |
| 5. | Area under chilli crop | 0.2886* |
| 6. | Labour-availability | 0.2953* |
| 7. | Area under irrigation | 0.3060* |
| 8. | Extension contact | 0.3166* |
| 9. | Source of information | 0.3920** |
| 10. | Risk orientation | 0.5867** |
| 11. | Market orientation | 0.2419 NS |

* and ** indicate significance of values at P=0.05 and 0.01, respectively NS =Non-significant

**Table 2 : Co-efficient of correlation of characteristics of the respondents with their adoption**

| Sr.No. | Variable | 'r' value |
|---|---|---|
| 1. | Experience in chilli cultivation | -0.2642 NS |
| 2. | Education | 0.3288* |
| 3. | Land holding | 0.2903* |
| 4. | Annual income | 0.2947* |
| 5. | Area under chilli crop | 0.3216* |
| 6. | Labour availability | 0.3605* |
| 7. | Area under irrigation | 0.3151* |
| 8. | Extension contact | 0.2620 NS |
| 9. | Source of information | 0.2732* |
| 10. | Risk orientation | 0.4585** |
| 11. | Market orientation | 0.1603 NS |

* and ** indicate significance of values at P=0.05 and 0.01, respectively NS= Non- significant

completed college education, majority of the respondents had semi medium land holding, annual income in between Rs. 50,001 to 1,00,000/-, majority of the respondents had upto 1 ha area under chilli crop, majority of the respondents had medium level of labour availability, low level of irrigation, medium extension contact, medium level of source of information, medium level of risk orientation , medium level of market orientation. Medium level of knowledge and adoption, respectively. Among the characters experience in chilli cultivation, Education, land holding, annual income, area under chilli, labour availability, area under irrigation, extension contact, source of information and risk orientation were positively and significantly correlated with knowledge.

Among the characters education, land holding, annual income, area under chilli, labour availability, area under irrigation, source of information and risk orientation were positively and significantly correlated with adoption.

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