Relationship between profile of pomegranate grower with knowledge and adoption of pomegranate production technology

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Abstract
The present study was conducted with specific objective to study the Knowledge and adoption of pomegranate production technology in Aurangabad district. 02 tehsils and four villages from each tehsil were selected purposively. Fifteen farmers from eight villages were selected to comprise a sample of 120 respondents.

It was noticed that majority of farmers As regards the education, 40.80 percent of farmers were educated up to secondary school level and 02.50 percent of farmers were illiterate.

It is also observed during the study that from 46.70 percent farmers possessed small and semi-medium land holding. The findings also indicate that 71.20 percent of farmers had medium level of annual income and 20.00 percent of farmers had high level of annual income. It was show that 56.66 percent of the respondents had farming experience of 12 to 32 years and 15.83 percent had farming experience up to 11 years. It was noticed that 58.33 percent of the respondents had medium social participation and 20.84 percent of the respondents were found in low category of social participation. It was also found in research that 92.50 percent farmers had medium extension contact. It was notice that 62.50 percent of the respondents had medium category of sources of information and 18.33 percent of farmers had low category of sources of information. It was noticed that most of the respondents 50.83 had medium level of economic motivation and the findings also indicate that 65.83 percent of farmers had medium risk orientation.

Characteristics of respondents namely education, social participation, extension contact and sources of information had positive and highly significant and whereas land holding, annual income, economic motivation, and risk orientation was positively and significantly related with the knowledge level of pomegranate production technologies by the respondents and whereas, farming experience was having negative and non-significant relationship with knowledge level of pomegranate production technology.

Keywords: Pomegranate grower, adoption, pomegranate production technology

Introduction
Pomegranate (Punica granatum L.) belongs to the family Punicaceae, having 2n=16 number of chromosomes. Pomegranate (Punica granatum L.), an ancient and commercially important fruit of both tropical and subtropical countries, belongs to the smallest botanical family punciace. Pomegranate is native of Iran, where it was first cultivated in about 2000 BC, but spread to the Mediterranean countries at an early date. It is extensively cultivated in Spain, Morocco and other countries around the Mediterranean, Egypt, Iran, Afghanistan, Arabia and Baluchistan. In India pomegranate is extensively grown in Maharashtra, Karnataka, Andhra Pradesh, Gujarat and it picking up fast in Himachal Pradesh, Rajasthan and Madhya Pradesh. The total area under pomegranate in India is 1.27 lakh ha out of which 90,000 ha is in Maharashtra. The total production in India is 822.80 thousand MT, and production of Maharashtra is 477 MT. Export of pomegranate has increased from 18.21 thousand MT (Rs. 710 million) in 2010-2011 to 31.33 thousand MT (Rs. 2985.00 million) in 2013-2014.

Methodology
The present Study was conducted in Aurangabad district of Marathwada region in Maharashtra state. Out of nine talukas of Aurangabad district Aurangabad and Phulambri tehsils have been purposively selected because there tehsil constituted maximum area under pomegranate cultivation. Four villages from each talukas were selected purposively. From each village fifteen pomegranate growers were selected purposively. Thus a total of 120 respondents were selected as sample respondents for this study.
The respondents were personally interviewed with interview schedule. The data were tabulated and analyzed by using statistical tools like frequency, percentage and correlation coefficient.

### Results

#### Relationship between profile (independent variable) of respondents and their level of knowledge (dependent variable)
It is conspicuous from the below table that, result of correlation coefficient (r) showed that independent variable namely education, social participation, extension contact, source of information, were positive and highly significant with the knowledge level of pomegranate production technologies by the respondents. While land holding, annual income, economic motivation, and risk orientation was positively and significantly related with the knowledge level of pomegranate production technologies by the respondents. Whereas, farming experience was having negative and non-significant relationship with knowledge level of pomegranate production technologies by the respondents.

Table 1: Result of correlation coefficient (r) showed that independent variable namely education, social participation, extension contact, source of information, were positive and highly significant with the knowledge level of pomegranate production technologies by the respondents.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Independent variable</th>
<th>Correlation coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Education</td>
<td>0.392**</td>
</tr>
<tr>
<td>2.</td>
<td>land holding</td>
<td>0.197*</td>
</tr>
<tr>
<td>3.</td>
<td>Annual income</td>
<td>0.201*</td>
</tr>
<tr>
<td>4.</td>
<td>Farming experience</td>
<td>0.046 NS</td>
</tr>
<tr>
<td>5.</td>
<td>Social participation</td>
<td>0.386**</td>
</tr>
<tr>
<td>6.</td>
<td>Extension contact</td>
<td>0.385**</td>
</tr>
<tr>
<td>7.</td>
<td>Source of information</td>
<td>0.278**</td>
</tr>
<tr>
<td>8.</td>
<td>Economic motivation</td>
<td>0.203*</td>
</tr>
<tr>
<td>9.</td>
<td>Risk orientation</td>
<td>0.238*</td>
</tr>
</tbody>
</table>

* Significant at 0.05 percent level of probability  
** Significant at 0.01 percent level of probability  
NS - Non significant

1. **Education and knowledge**
The correlation coefficient conspicuous that there was a positive and highly significant relationship between the education and knowledge level of respondents about pomegranate production technologies.

2. **Land holding and knowledge**
The correlation coefficient indicated that the relationship between the land holding and knowledge level of the respondents was positive and significant.

3. **Annual income and knowledge**
The correlation coefficient conspicuous that there was a positive and significant relationship between the annual income and knowledge level of respondents about pomegranate production technologies.

4. **Farm experience and knowledge**
The correlation coefficient showed that there was a negatively and non-significant relationship between the farm experience and knowledge level of respondents about pomegranate production technologies.

5. **Social participation and knowledge**
The correlation coefficient indicated that the relationship between the social participation and knowledge level of the respondents was positive and highly significant.

6. **Extension contact and knowledge**
The correlation coefficient conspicuous that there was a positive and highly significant relationship between the extension contact and knowledge level of respondents about pomegranate production technologies.

7. **Sources of information and knowledge**
The correlation coefficient showed that there was a positive and highly significant relationship between the sources of information and knowledge level of respondents about pomegranate production technologies.

8. **Economic motivation and knowledge**
The correlation coefficient conspicuous that there was a positive and significant relationship between the economic motivation and knowledge level of respondents about pomegranate production technologies.

9. **Risk orientation and knowledge**
The correlation coefficient indicated that the relationship between the risk orientation and knowledge level of the respondents was positive and significant.

Table 2: Relationship between profile (independent variable) of respondents and their level of adoption (dependent variable)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Independent variable</th>
<th>Correlation coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Education</td>
<td>0.287**</td>
</tr>
<tr>
<td>2.</td>
<td>land holding</td>
<td>0.304**</td>
</tr>
<tr>
<td>3.</td>
<td>Annual income</td>
<td>0.356**</td>
</tr>
<tr>
<td>4.</td>
<td>Farming experience</td>
<td>-0.045 NS</td>
</tr>
<tr>
<td>5.</td>
<td>Social participation</td>
<td>0.274**</td>
</tr>
<tr>
<td>6.</td>
<td>Extension contact</td>
<td>0.267**</td>
</tr>
<tr>
<td>7.</td>
<td>Source of information</td>
<td>0.384**</td>
</tr>
<tr>
<td>8.</td>
<td>Economic motivation</td>
<td>0.234*</td>
</tr>
<tr>
<td>9.</td>
<td>Risk orientation</td>
<td>0.213*</td>
</tr>
</tbody>
</table>

* Significant at 0.05 percent level of probability  
** Significant at 0.01 percent level of probability  
NS - Non significant

It is observed from the above table that, education, social participation and source of information land holding, annual income, and extension contact, were positive and highly significant relationship with adoption of pomegranate production technologies. While, economic motivation, and risk orientation were positively and significantly related with adoption of pomegranate production technologies. Whereas, farming experience was having negatively non-significant relationship with adoption of pomegranate production technologies.

1. **Education and adoption**
The correlation coefficient conspicuous that there was a positive and highly significant relationship between the education and adoption level of respondents about pomegranate production technologies.

2. **Land holding and adoption**
The correlation coefficient indicated that the relationship between the land holding and adoption level of the
respondents was positive and highly significant.

3. Annual income and adoption
The correlation coefficient indicated that the relationship between the annual income and adoption level of the respondents was positive and highly significant.

4. Farm experience and adoption
The correlation coefficient showed that there was a negatively non-significant relationship between the farm experience and adoption level of respondents about pomegranate production technologies.

5. Social participation and adoption
The correlation coefficient indicated that the relationship between the social participation and adoption level of the respondents was positive and highly significant.

6. Extension contact and adoption
The correlation coefficient indicated that the relationship between the extension contact and adoption level of the respondents was positive and highly significant.

7. Sources of information and adoption
The correlation coefficient showed that there was a positive and highly significant relationship between the sources of information and adoption level of respondents about pomegranate production technologies.

8. Economic motivation and adoption
The correlation coefficient indicated that the relationship between the economic motivation and adoption level of the respondents was positive and significant.

9. Risk orientation and adoption
The correlation coefficient indicated that the relationship between the risk orientation and adoption level of the respondents was positive and significant.

Conclusions
Relationship of profile of respondents with knowledge about pomegranate production technologies
It is conspicuous that result of correlation coefficient (r) showed that independent variable namely education, social participation, extension contact, source of information, were positive and highly significant with the knowledge level of pomegranate production technologies by the respondents. While land holding, annual income, economic motivation, and risk orientation was positively and significantly related with the knowledge level of pomegranate production technologies by the respondents. Whereas, farming experience was having negative and non-significant relationship with knowledge level of pomegranate production technologies by the respondents.

Relationship of profile of respondents with adoption of pomegranate production technologies
It is observed that, education, social participation and source of information were positive and highly significant relationship with adoption of pomegranate production technologies. While, land holding, annual income, extension contact, economic motivation, and risk orientation were positively and significantly related with adoption of pomegranate production technologies whereas, farming experience was having negatively non-significant relationship with adoption of pomegranate production technologies.

References
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