Socio-Economic Impact of Technologies Developed By Agricultural Universities on Farmers With Respect To Pomegranate

Bhingardeve, S. D.  
Senior Research Asstt.  
Department of Extension Education, A.C. Kolhapur

B. T. Kolgane  
I/C Professor, Department of Extension Education, College of Agriculture, Kolhapur

S. S. Patil  
Junior Research Asstt.  
Department of Extension Education, A.C. Kolhapur

N. N. Tale  
Asstt. Professor, Department of Extension Education, A.C. Kolhapur

Abstract – A majority of farmers had experience more than 20 years (60.00 per cent), good irrigation status (77.50 per cent) and high adoption index (62.50 per cent) that means the said per cent of respondents highly adopted the recommended technologies of Agriculture University. Majority of respondents had medium to high impact of technologies in yield (70.00 per cent), agricultural assets (62.50 per cent) and household assets (60.00 per cent). All the respondents faced constraints like unavailability of assured irrigation water, unavailability of effective control measures against oily spot disease on pomegranate which is a vulnerable problem in pomegranate cultivation in the area. All the farmers suggested regarding land slab and drip subsidies increased and effective control measures for oily spot disease.

Keywords – Agricultural Universities, Impact, Pomegranate, Socio-Economic, Technologies.

I. INTRODUCTION

The origin of pomegranate (Punica granatum) is Iran. Pomegranate (Punica granatum) is major crop in drought prone area of Maharashtra having 1.70,000 ha area under cultivation in 2010-2011 with production of 492 MT in same year. In 2009-2010, the Sangli district has 8238 ha area under pomegranate. Atpadi is said to be main pomegranate growing tahsil of Sangli district having area 3200 ha under pomegranate fruit crop. Pomegranate is said to be a boon for drought prone area but now a days this crop is heavily infested by oily spot disease with a view this project is conducted with crop the following objectives.

1. To assess the socio economic impact of recommended technologies developed by university in pomegranate on farmers.
2. To understand the constraints faced by the farmers in adopting the recommended technologies in pomegranate.
3. To seek the suggestions of farmers for overcoming the constraints in adoption of recommended technologies.

II. METHODOLOGY

The study was conducted in jurisdiction of Mahatma Phule Krishi Vidyaapeeth, Rahuri. Atpadi Tahsil of Sangli district from Kolhapur region was selected purposively as number of pomegranate growers is large in the area. In all 8 villages from Atpadi tahsil were selected randomly. Five farmers from each village having at least one acre land under pomegranate cultivation for last five years were selected randomly. The farmers were interviewed with the help of structured interview schedule personally. In all 40 farmers were selected for this study.

The data were tabulated and processed through the primary and secondary tables. The statistical tools like frequency, percentages, and means of the averages was used for interpreting the data and inferences are drawn. For calculating knowledge and adoption of recommended technologies Score method is used. For analyzing the impact, percent change was calculated for Knowledge, Adoption and Socio-economic status before and after adoption of recommended technologies.

III. RESULT AND DISCUSSIONS

The data regarding socio economic profile of respondents is given below

Socio-economic profile

Table 1: Distribution of respondents according to their socio-economic profile

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Characteristics</th>
<th>No. of Respondents (n=40)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Young (up to 35 years)</td>
<td>05</td>
<td>12.50</td>
</tr>
<tr>
<td></td>
<td>Middle (36-50 years)</td>
<td>13</td>
<td>32.50</td>
</tr>
<tr>
<td></td>
<td>Old (51&amp; above)</td>
<td>22</td>
<td>55.00</td>
</tr>
<tr>
<td>2.</td>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>06</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Pre-Primary</td>
<td>04</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>06</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>15</td>
<td>37.50</td>
</tr>
<tr>
<td></td>
<td>Higher secondary</td>
<td>03</td>
<td>07.50</td>
</tr>
<tr>
<td></td>
<td>Degree &amp; above</td>
<td>06</td>
<td>15.00</td>
</tr>
<tr>
<td>3.</td>
<td>Size of Land holding (ha)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marginal (Up to 1.00)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small (1.01 to 2.00)</td>
<td>10</td>
<td>25.00</td>
</tr>
<tr>
<td></td>
<td>Semi Medium (2.01 to 4.00)</td>
<td>20</td>
<td>50.00</td>
</tr>
<tr>
<td></td>
<td>Medium (4.01 to 10.00)</td>
<td>08</td>
<td>20.00</td>
</tr>
<tr>
<td></td>
<td>Large (10.01 and above)</td>
<td>02</td>
<td>05.00</td>
</tr>
<tr>
<td>4.</td>
<td>Farming Experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to 10</td>
<td>07</td>
<td>17.50</td>
</tr>
<tr>
<td></td>
<td>11 to 20</td>
<td>09</td>
<td>22.50</td>
</tr>
<tr>
<td></td>
<td>Above 20</td>
<td>24</td>
<td>60.00</td>
</tr>
<tr>
<td>5.</td>
<td>Irrigation status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor</td>
<td>01</td>
<td>02.50</td>
</tr>
<tr>
<td></td>
<td>Fair</td>
<td>31</td>
<td>77.50</td>
</tr>
<tr>
<td></td>
<td>Good</td>
<td>08</td>
<td>20.00</td>
</tr>
</tbody>
</table>
The data regarding socio-economic profile of respondents are depicted in table 1 and it is revealed from data that fifty five per cent of respondents are from old age group and having education up to secondary (37.50 per cent). More than half per cent of respondents are semi-medium type of land holding (50.00 per cent), experience more than 20 years (60.00 per cent), and good irrigation status (77.50 per cent).

Adoption Index:

In present study adoption of the recommended technologies of pomegranate crop by respondents are assessed as in table 2

Table 2: Distribution of respondents according to their adoption index

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Categories</th>
<th>Frequency (n = 40)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Low : Up to 33.33</td>
<td>01</td>
<td>02.50</td>
</tr>
<tr>
<td>2.</td>
<td>Medium : 33.34 to 66.66</td>
<td>14</td>
<td>35.00</td>
</tr>
<tr>
<td>3.</td>
<td>High : 66.67 and above</td>
<td>25</td>
<td>62.50</td>
</tr>
</tbody>
</table>

The data from table 2 indicates that majority of respondents (62.50 per cent) had high adoption index that means the said per cent of respondents highly adopted the recommended technologies of Agriculture University. The probable reason for majority might be due to agricultural university jurisdiction of the selected district.

Impact of technologies

Impact of technologies are assessed in terms of educational change, change in social participation, change in annual spending pattern etc. are depicted in table 3.

Table 3: Distribution of respondents according to impact of technologies

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Impact of Technologies</th>
<th>Frequency (n=40)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Educational change</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No change</td>
<td>06</td>
<td>15.00</td>
</tr>
<tr>
<td></td>
<td>• Low : Up to 33.33</td>
<td>21</td>
<td>52.50</td>
</tr>
<tr>
<td></td>
<td>• Medium : 33.34 to 66.66</td>
<td>11</td>
<td>27.50</td>
</tr>
<tr>
<td></td>
<td>• High : 66.67 and above</td>
<td>02</td>
<td>05.00</td>
</tr>
<tr>
<td>2.</td>
<td>Change in income from selected crop</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No change</td>
<td>00</td>
<td>00.00</td>
</tr>
<tr>
<td></td>
<td>• Low : Up to 33.33</td>
<td>34</td>
<td>85.00</td>
</tr>
<tr>
<td></td>
<td>• Medium : 33.34 to 66.66</td>
<td>04</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>• High : 66.67 and above</td>
<td>02</td>
<td>05.00</td>
</tr>
<tr>
<td>3.</td>
<td>Change in Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No change</td>
<td>01</td>
<td>02.50</td>
</tr>
<tr>
<td></td>
<td>• Low : Up to 33.33</td>
<td>18</td>
<td>45.00</td>
</tr>
<tr>
<td></td>
<td>• Medium : 33.34 to 66.66</td>
<td>18</td>
<td>45.00</td>
</tr>
<tr>
<td></td>
<td>• High : 66.67 and above</td>
<td>03</td>
<td>07.50</td>
</tr>
<tr>
<td>4.</td>
<td>Change in Monthly Thrift habit</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No change</td>
<td>03</td>
<td>07.50</td>
</tr>
<tr>
<td></td>
<td>• Low : Up to 33.33</td>
<td>30</td>
<td>75.00</td>
</tr>
<tr>
<td></td>
<td>• Medium : 33.34 to 66.66</td>
<td>02</td>
<td>05.00</td>
</tr>
<tr>
<td></td>
<td>• High : 66.67 and above</td>
<td>05</td>
<td>12.50</td>
</tr>
<tr>
<td>5.</td>
<td>Change in Cropping Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No change</td>
<td>11</td>
<td>27.50</td>
</tr>
<tr>
<td></td>
<td>• Low : Up to 33.33</td>
<td>23</td>
<td>57.50</td>
</tr>
<tr>
<td></td>
<td>• Medium : 33.34 to 66.66</td>
<td>05</td>
<td>12.50</td>
</tr>
<tr>
<td></td>
<td>• High : 66.67 and above</td>
<td>01</td>
<td>02.50</td>
</tr>
<tr>
<td>6.</td>
<td>Change in Land Utilization Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No change</td>
<td>07</td>
<td>17.50</td>
</tr>
<tr>
<td></td>
<td>• Low : Up to 33.33</td>
<td>24</td>
<td>60.00</td>
</tr>
<tr>
<td></td>
<td>• Medium : 33.34 to 66.66</td>
<td>04</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>• High : 66.67 and above</td>
<td>05</td>
<td>12.50</td>
</tr>
</tbody>
</table>

A majority of respondents had low impact of technologies in income from selected crop (85.00 per cent) followed by change in monthly thrift habit (75.00 per cent) and change in land utilization (60.00 per cent). Majority of respondents had medium to high impact of technologies in yield (70.00 per cent). The reason might be the education of respondents up to secondary level.

Overall impact of technology:

Impact of technologies are assessed in terms of educational change, change in social participation, change in annual spending pattern etc. are depicted in table 4.

Table 4 : Distribution of respondents according to overall impact of Technology

<table>
<thead>
<tr>
<th>S. No</th>
<th>Category</th>
<th>Frequency (n=40)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No change</td>
<td>03</td>
<td>07.50</td>
</tr>
<tr>
<td>2.</td>
<td>Low : Up to 33.33</td>
<td>22</td>
<td>55.00</td>
</tr>
<tr>
<td>3.</td>
<td>Medium : 33.34 to 66.66</td>
<td>09</td>
<td>22.50</td>
</tr>
<tr>
<td>4.</td>
<td>High : 66.67 and above</td>
<td>06</td>
<td>15.00</td>
</tr>
</tbody>
</table>

Considering the overall impact of the technology on the respondents it is observed from table 4 that 55.00 percent of respondents had low impact to that of 37.50 percent who had medium to high overall impact of technologies developed by agricultural university.

IV. CONCLUSIONS

1. A majority of farmers had experience more than 20 years (60.00 per cent), good irrigation status (77.50 per cent) and high adoption index (62.50 per cent) that means the said per cent of respondents highly adopted the recommended technologies of agriculture university.

2. A large majority of respondents had low impact of technologies in case of change in house (95.00 percent) followed by change in income from selected crop (85.00 per cent), livestock assets (85.00 per cent).

3. Majority of respondents had medium to high impact of technologies in yield (70.00 per cent), agricultural assets (62.50 per cent) and household assets (60.00 per cent).

4. More than half percent of respondents had low impact to that of 37.50 percent who had medium to high overall impact of technologies developed by agricultural university.

REFERENCES


