



Impact of Technologies Developed by Agricultural Universities on Socio-economic Status of Farmers with respect to Pomegranate

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ABSTRACT

The present research investigation was carried out in Nashik district of Maharashtra. The area under pomegranate increases very rapidly in Maharashtra state. For this purpose, it is necessary to find out the adoption of technologies developed by agricultural universities regarding pomegranate by farmers. The study also aims at finding out the changes occurred due to adoption of recommended technologies developed by university on socio-economic status of farmers with respect to pomegranate. Findings revealed that more than half (53.33 percent) of the farmers had moderate adoption of technologies followed by high adoption (46.67 percent) of recommended technologies of pomegranate crop. Overall impact of technologies developed by agricultural universities created a moderate impact on 66.67 percent farmers followed by low impact (30.00 percent) and high impact on very meager (3.33 percent) farmers. Maximum number of farmers i.e. 76.66 percent expressed that the plants are died due to diseases and pest infestation. Majority (76.66 percent) of the farmers suggested that the organization of training about control of diseases and pest infestation followed by fixation of the prices of fruits every year by Govt. (73.33 percent).

Key words – Adoption, Pomegranate, Socio- economic Status, Impact and Technology

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INTRODUCTION

Pomegranate is the most important fruit crop. The total production is concerned mainly in the western Maharashtra, Karnataka, Gujarat, Andhra Pradesh, Tamilnadu and Rajasthan in India. The major markets of pomegranate during the year 2014-15 were UAE, Bangladesh, Netherlands, UK, Saudi Arabia and Russia. Maharashtra is the leading state with 82 thousand ha area under pomegranate cultivation followed by Karnataka and Gujarat with 13.6 thousand ha and 5.8 thousand ha respectively. In Maharashtra the major pomegranate grown districts are Solapur, Nasik, Sangli, Ahmednagar, Pune and Satara. There is tremendous potential for exports of pomegranate from Maharashtra. Moreover, Maharashtra produces finest edible quality of pomegranates which are available almost throughout the year. The area under pomegranate increases very rapidly in Maharashtra state. For this purpose, it is necessary to find out the adoption of technologies developed by agricultural universities regarding pomegranate by farmers. The study also aims at finding out the changes occurred due to adoption of recommended technologies developed by university on farmers with respect to pomegranate.

In view of the above, the study was conducted with the following objects.

1. To know the personal and socio- economic characteristics of the farmers.
2. To study the adoption of recommended technologies in selected crops developed by University among the farmers.
3. To assess the socio – economic impact of recommended technologies developed by University on farmers in selected crops.
4. To understand the constraints faced by the farmers in adopting the recommended technologies in selected crops.
5. To seek the suggestions of the farmers for overcoming the constraints in adoption of recommended technologies

MATERIAL AND METHODS

The study was conducted in Nashik District of Maharashtra. Satana tahsil from Nashik district was selected purposively based on higher area under cultivation of the pomegranate crop. Six villages were selected from Satana tahsil for study. From each selected village, five pomegranate growers were selected randomly. Thus total sample size of study was 30 from six villages. Practicing pomegranate growers at least five years old pomegranate orchard in minimum one acre of land was selected. The data was collected with the help of well constructed and pre-designed interview schedule and analyzed by using statistical methods frequency, percentages and means of averages 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.

RESULTS AND DISCUSSION

1. Profile of Respondents:

From table 1 it is revealed that that large proportion (40.00 Percent) of the pomegranate growers belonged to middle age group, near about one third (30.00 per cent) pomegranate growers had higher secondary level of education, 36.33 percent of the respondents possessed semi-medium land holding (2.01 to 4.00 ha), 40.00 percent of the respondents belonged up to 10 years experience in farming, more than one third (76.67 percent) of the farmers had a good irrigation status followed by fair irrigation status (23.33 percent).

These findings are in conformity with the findings of Anonymous [1], Bhingardev *et al.* [2], Waghmode *et al.* [3].

2. Adoption Index

It is observed from table 2 that it more than half (53.33 percent) of the farmers had moderate adoption of technologies followed by high adoption (46.67 percent) of recommended technologies of pomegranate crop. These findings are in conformity with the findings of Bhingardev *et al.* [2].

3. Impact of technologies

Impacts of technologies are assessed in terms of educational change, change in social participation, change in annual spending pattern, change in income etc. which is depicted in table 3. It is revealed from table 3 that 40 percent of the farmers had low educational change, low social participation (60 percent), high change in spending pattern (53.33 percent), medium change in their household assets (60 percent), high change in their agril. assets (40 per cent), medium change in their thrift habit (63.33 percent). Persual of table 3 showed that after adoption of technologies developed by agricultural universities it created a moderate impact on 66.67 percent farmers followed by low impact on 30 percent farmers and high impact on very merger (3.33 percent) farmers. These findings are in conformity with the findings of Bhingardev *et al.* [2].

4. Constraints faced by the farmers –

A probe into the constraints faced by the farmers revealed that maximum number of i.e. 76.66 percent expressed that the plants are died due to diseases and pest infestation. Near about three fourth (73.33 percent) of the respondents expressed that the selling rate of pomegranate is very low at peak period followed by Chemicals and fertilizers are not available on time (70.00 percent), Unavailability of labours (60.00 percent), unavailability of good market facilities (56.66 percent), lack of knowledge about processing and marketing (50.00 percent) and lack of training and demonstration at the time of plantation (43.33 percent).

5. Suggestions given by the respondents – It is revealed from table 5 that the majority (76.66 percent) of the farmers suggested that the organization of training about control of diseases and pest infestation followed by fixation of the prices of fruits every year by Govt. (73.33 percent), availability of good market facilities (56.66 percent), Organization of training about processing and marketing (50.00 percent) and organization of training and demonstrations at the time of plantation (43.33 percent).

1. Profile of Respondents:

Table 1: Distribution of respondents according to their profile

Sr. No.	Characteristics	No. of respondents (n=30)	Percentage
1.	Age		
	i. Young (up to 35 years)	8	26.67
	ii. Middle (36-50 years)	12	40.00
	iii. Old (51& above)	10	33.33
2.	Education		
	i. Illiterate	3	10

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1.	Age		
	i. Young (up to 35 years)	8	26.67
	ii. Middle (36-50 years)	12	40.00
	iii. Old (51& above)	10	33.33
	ii. Pre- Primary	1	3.33
	iii. Primary	4	13.33
	iv.. Secondary	6	20.00
	v. Higher secondary	9	30.00
	vi. Degree & above	7	23.33
3.	Size of Land holding (ha)		
	i. Marginal (Up to 1.00)	2	6.67
	ii. Small (1.01 to 2.00)	6	20.00
	iii. Semi Medium (2.01 to 4.00)	11	36.66
	iv. Medium (4.01 to 10.00)	9	30.00
	v. Large (10.01 and above)	2	6.67
4.	Farming Experience (Years)		
	i. Up to 10	12	40
	ii. 11 to 20	08	26.67
	iii. Above 20	10	33.33
5.	Irrigation status		
	i. Poor	00	00
	ii.Fair	07	23.33
	iii.Good	23	76.67

2. Adoption Index

Table 2 : Distribution of respondents according to their adoption index N = 30

Sr.No.	Categories	Frequency	Percentage
1	Low : Up to 33.33	00	00
2	Medium : 33.34 to 66.66	16	53.33
3	High : 66.67 and above	14	46.67

3. Impact of technologies

Table 3: Distribution of respondents according to impact of technologies N = 30

Sr.No.	Impact of Technologies	Frequency	Percentage
1.	Educational change		
	i. No change	09	30
	ii. Low : Up to 33.33	12	40
	iii. Medium : 33.34 to 66.66	06	20
	iv. High : 66.67 and above	03	10
2.	Change in social participation		
	i. No change	03	10
	ii. Low : Up to 33.33	18	60
	iii. Medium : 33.34 to 66.66	08	26.67
	iv. High : 66.67 and above	01	3.33
3.	Change in annual spending pattern		
	a. Food		
	i. No change	00	00.00
	ii. Low : Up to 33.33	01	3.33
	iii. Medium : 33.34 to 66.66	13	43.33
	iv. High : 66.67 and above	16	53.33
	b. Cloths		
	i. No change	00	00.00
	ii. Low : Up to 33.33	16	53.33
	iii. Medium : 33.34 to 66.66	06	20
	iv. High : 66.67 and above	08	26.67
4.	Change in income from selected crop		
	i. No change	00	00.00
	ii. Low : Up to 33.33	05	16.67
	iii. Medium : 33.34 to 66.66	16	53.33
	iv. High : 66.67 and above	09	30

5.	Change in house		
i.	No change	00	00.00
ii.	Low : Up to 33.33	11	36.67
iii.	Medium : 33.34 to 66.66	11	36.67
iv.	High : 66.67 and above	08	26.66
6.	Change in Employment		
i.	No change	00	00.00
ii.	Low : Up to 33.33	12	40
iii.	Medium : 33.34 to 66.66	11	36.67
iv.	High : 66.67 and above	07	23.33
7.	Change in Occupation		
i.	No change	26	86.66
ii.	Low : Up to 33.33	00	00
iii.	Medium : 33.34 to 66.66	03	10.00
iv.	High : 66.67 and above	01	3.33
8.	Change in Assets		
	a) Household Assets		
i.	No change	00	00.00
ii.	Low : Up to 33.33	06	20
iii.	Medium : 33.34 to 66.66	18	60
iv.	High : 66.67 and above	06	20
	b) Agricultural Assets		
i.	No change	00	00.00
ii.	Low : Up to 33.33	09	30
iii.	Medium : 33.34 to 66.66	09	30
iv.	High : 66.67 and above	12	40
	c) Livestock Assets		
i.	No change	20	66.67
ii.	Low : Up to 33.33	08	26.66
iii.	Medium : 33.34 to 66.66	01	3.33
iv.	High : 66.67 and above	01	3.33
9	Change in monthly thrift habit		
i.	No change	00	00.00
ii.	Low : Up to 33.33	06	20
iii.	Medium : 33.34 to 66.66	19	63.33
iv.	High : 66.67 and above	05	16.67
10	Area expansion		
i.	No change	00	00.00
ii.	Low : Up to 33.33	10	33.33
iii.	Medium : 33.34 to 66.66	16	53.34
iv.	High : 66.67 and above	04	13.33
11	Change in cropping pattern		
i.	No change	00	00.00
ii.	Low : Up to 33.33	10	33.33
iii.	Medium : 33.34 to 66.66	15	50.00
iv.	High : 66.67 and above	05	16.67
12	Change in Land utilization pattern		
i.	No change	00	00.00
ii.	Low : Up to 33.33	06	20
iii.	Medium : 33.34 to 66.66	18	60
iv.	High : 66.67 and above	06	20
13.	Change in yield		
i.	No change	00	00.00
ii.	Low : Up to 33.33	04	13.33
iii.	Medium : 33.34 to 66.66	19	63.34
iv.	High : 66.67 and above	07	23.33
14.	Overall Impact of technology		
ii.	Low : Up to 33.33	09	30
iii.	Medium : 33.34 to 66.66	20	66.67
iv.	High : 66.67 and above	01	3.33

4. Constraints faced by the farmers -

Table 4 – Distribution of respondents according to constraints faced by them in adoption of recommended technologies N = 30

Sr.No.	Constraints	Frequency	Percentage
1.	Plants died due to diseases and pest infestation	23	76.66
2.	The selling rates of pomegranate fruits are very low at peak period	22	73.33
3.	Chemicals and fertilizers are not available on time	20	70.00
4.	Unavailability of labours	18	60.00
5.	Good market facilities are not available for sale of fruits	17	56.66
6.	Lack of knowledge about processing and marketing.	15	50.00
7.	Lack of training and demonstration at the time of plantation	13	43.33

5. Suggestions given by the respondents -

Table 5- Distribution of respondents according to suggestions given by them N = 30

Sr.No.	Constraints	Frequency	Percentage
1.	Organization of training about control of diseases and pest infestation.	23	76.67
2.	Govt. should fix the prices of fruits every year and purchase the same on the line of onion	22	73.33
3.	Availability of good market facilities for the sale of fruits	17	56.66
4.	Organization of training about processing and marketing should be arranged every season	15	50.00
5.	Organization of training and demonstrations at the time of plantation	13	43.33

CONCLUSIONS

More than half (53.33 percent) of the farmers had moderate adoption of technologies followed by high adoption (46.67 percent) of recommended technologies of pomegranate crop. Overall impact of technologies developed by agricultural universities created a moderate impact on 66.67 percent farmers followed by low impact (30 percent) and high impact on very meager (3.33 percent) farmers. 76.66 percent expressed that the plants are died due to diseases and pest infestation and majority (76.66 percent) of the farmers suggested that the organization of training about control of diseases and pest infestation

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