

**RESEARCH ARTICLE :**

## Knowledge level of farmers regarding improved cultivation practices of pomegranate crop in Muzaffarpur district of Bihar

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**SUMMARY :** Pomegranate is an important fruit of tropical and subtropical regions of India. The wide adaptability, hardy nature, low maintenance cost, steady and high yields, fine table purpose, better keeping quality and plants go through rest period when there is scarcity of irrigation water. The technologies vary from farmer to farmer according to their personal and socio-economic characteristics, perceived training needs, availability of factors of production and problems in adoption of improved cultivation practices of pomegranate. Therefore, an appropriate understanding of knowledge level of improved cultivation practices and the constraints analysis would help to arrive at appropriate extension and research strategies to increase their knowledge level. Keeping this in view the study was conducted to know the knowledge level of improved cultivation practices of pomegranate growers in Muzaffarpur district of Bihar. The survey was conducted by interview method from pomegranate growers to elicit information regarding knowledge level of improved cultivation practices of them are granted it was revealed that majority of the respondents (55.00%) had medium knowledge level about the improved cultivation practices of pomegranate. The variables such as education, experience, mass media participation, innovative proneness had highly positive and significant relationship with knowledge level of the respondents at 0.01% level of significance. Variable land holding had positive and significant relationship with knowledge at 0.05% level of significance. Age had negatively significant significance in relationship with the knowledge level of pomegranate growers.

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### **BACKGROUND AND OBJECTIVES**

Pomegranate (*Punica granatum*) is a fruit bearing deciduous shrub belongs to the family Lythraceae that grows between 5 and 10m it is a non-climacteric fruit and one of the drought resistant horticultural crops, has

proved to be the best profitable property dry land conditions. The wide adaptability, hardy nature, low maintenance cost, steady and high yields, fine table purpose, better keeping quality and plants go through rest period when there is scarcity of irrigation water. These are some of the qualities which make this fruit

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crop ideally suitable for semi arid and arid regions. Pomegranates are cultivated on commercial scale in Muzaffarpur district of Bihar. It is the major pomegranate growing district in north India with respect to total area under pomegranate. Pomegranate being a dryland horticultural crop is gradually becoming popular with the farmers of the region. These reasons led to the choice of Muzaffarpur district as the area of study. It is important to know that the farmers' knowledge level on improved cultivation practices of pomegranate. Lack of extension contacts is the major constraint in that region so the knowledge level regarding recommended improved cultivation practices is medium to low level. So in order to increase their knowledge level. Extension department should make integrated extension efforts (trainings, demonstrations, field days, literatures etc.) to provide the required technical knowledge about improved cultivation practices, field visit, crop seminar, are the suggestions got from the respondents through this research. So, to know the knowledge level, a study entitled "Knowledge level of farmers regarding improved cultivation practices of pomegranate cultivation in Muzaffarpur district of Bihar" has been conducted.

## RESOURCES AND METHODS

The present study was undertaken in Muzaffarpur district, Bihar. A pre-structured interview schedule was administered on 120 pomegranate growers to gather the general and specific information, highlighting on the Knowledge level of Improved cultivation practices of pomegranate crop. The data was further analysed and tabulated by calculating frequency, percentage and correlation.

## OBSERVATIONS AND ANALYSIS

The results obtained of the present study and relevant discussion have been presented under following heads:

Table 1 indicates that majority (56.67%) respondents belong to middle age group *i.e.* (36-50 years). About 33.33 per cent had education up to primary school, about 95.10 per cent had education upto primary school, about 95.10 per cent were having semi-medium size of land holding. Majority of the respondents (59.17%) had medium farming experience about 44.17 per cent respondents had (3.1-6) lakhs annual income, majority of the respondents had medium level of mass media

exposure (52.50%). About 43.33 per cent respondents had low level innovativeness.

Above, Table 2, indicates that about majority (55.00%) respondents have medium level knowledge regarding improved pomegranate practices followed by 25 per cent high level knowledge and 20 per cent low level knowledge, respectively.

The Table 3 reveals that the variables such as education, farming experience, mass media participation, innovative proneness had highly positive and significant relationship with knowledge level of the respondents at 0.01 per cent level of significance. Variable land holding had positive and significant relationship with knowledge at 0.05 per cent level of significance. Age had negative significant relationship with the knowledge level of pomegranate growers.

In this study the socio-economic status and knowledge level were analysed by collecting data which reveals that more than half of the pomegranate growers (56.67%) were middle aged. Usually, farmers of middle aged are enthusiastic having more responsibility and are more efficient than the younger and older ones. Further, respondents between 36 to 50 years of age group have more physical vigor and also more responsibility towards family than the younger ones. Maximum 33.33 per cent respondents were having education upto primary level because majority of them were forced to do farming in young age and also due to lack of interest in education. 79.67 per cent were having medium size of land holding. Farming experience mainly depends upon age of the farmer. A majority of pomegranate growers (56.67%) belonged to middle age category and they might have started farming in their early age itself. So, majority of respondents had medium farming experience. 44.7 per cent of the respondents income was in the range of Rs.3.1 lakhs to 6 lakhs, the possible reason that could be attributed for the better socio-economic condition maybe due to majority of the respondents were having medium land holdings which enable them to generate more income. 43.33 per cent respondents have lower level of innovativeness, as majority of the respondents were having education level up to primary school this is the reason that they have majority of them having low innovativeness majority of the pomegranate growers of 55 per cent fell and a medium knowledge level category the positive and highly significant relationship of personal characteristics of education, mass media participation,

**Table 1: Socio-economic status of respondents**

Variables	Category	Frequency	Percentage
Age	Young age (20-35 years)	35	29.17
	Middle age (36-50 years)	68	56.67
	Old age (>50 years)	17	14.16
Education	Illiterate	28	23.33
	Primary school (1 <sup>st</sup> to 7 <sup>th</sup> )	40	33.33
	High school (8 <sup>th</sup> to 10 <sup>th</sup> )	36	30
	Intermediate	9	7.50
	Graduate and above	7	5.84
Land holding	Small size (1-3 acre)	38	31.67
	Semi medium (3-5 acre)	54	45
	Medium size (5-8 acre)	23	19.67
	Large Size (>10 acre)	5	4.16
Farming experience	Low (1-10 years)	33	27.50
	Medium (10-20 years)	71	59.17
	High (>20 years)	16	13.33
Annual income	Low (1-3 lacs)	39	32.50
	Medium (3.1-6 lacs)	53	44.17
	High (>6 lacs)	28	23.33
Mass media exposure	Low (0-0.96)	36	30
	Medium (0.97-2.19)	63	52.50
	High (2.20-3.41)	21	17.50
Innovativeness	Low (0-1.66)	52	43.33
	Medium (1.67-3.32)	47	39.17
	High (3.33-4.98)	21	17.50

**Table 2: Level of knowledge of the respondents regarding improved cultivation practices of pomegranate crop**

Level	Frequency	Percentages
Lowest level (37-43)	24	20.00
Medium level (44-50)	66	55.00
High level (51-57)	30	25.00
Total	120	100.00

Mean = 46.38 SD = 4.00

**Table 3: Relationship between characteristics of farmers with knowledge level**

Sr. No.	Independent variables	r' value
1.	Age	.221**
2.	Education	.265**
3.	Farming experience	.319**
4.	Land holding	0.148*
5.	Annual income	0.221**
6.	Mass media participation	0.232**
7.	Innovative proneness	0.349**

\*and \*\* indicate significance of values at P=0.05 and 0.01, respectively

farming experience and innovative proneness with the knowledge level clearly indicates medium knowledge level trend.

### Conclusion:

It is conclude that majority of the respondents were middle aged people and majority of them were had education up to primary level and majority of them had medium level of farming experience, risk orientation, market orientation, economic orientation, mass media exposure and majority of them were having low level of extension contact, innovativeness, scientific orientation. Education, farming experience, mass media participation, innovative proneness had highly positive and significant relationship with knowledge level of the respondents. Variable land holding had positive and significant relationship with knowledge level. Age had negatively significant relationship with the knowledge level of pomegranate growers. Majority of them had medium level of knowledge regarding improved cultivation practices of pomegranate crop. So in order to increase their knowledge level, extension dept. should make integrated extension efforts (trainings, demonstrations, field days, literatures etc.) to provide the required technical knowledge about improved cultivation practices of pomegranate growers. The future prospects are study of possibilities of export marketing for pomegranate.

Capacity building programmes for pomegranate growers. Study on integrated pomegranate based farming system for sustainable agriculture. Development of suitable marketing strategies for pomegranate growers. This study was conducted within the time and resource limitations of a student researcher, but there is further scope for serve and action research intros field.

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