

Original Research Article

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## Knowledge Level of Recommended Package of Practices of Pear Growers of District Budgam (Jammu and Kashmir)

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### ABSTRACT

The present study was conducted in one horticultural zone of district Budgam namely Chareshareef to measure the adoption levels of pear growers. Six villages were selected randomly from the zone and 120 growers were randomly selected by using proportionate sampling technique for the study. It was found that Cent percent of the respondents had full knowledge of recommended varieties, root stock, soil type, budding method of propagation and time of harvesting. Majority of the respondents had full knowledge of recommended application of FYM (78.33%), no. of applications of urea (82.5%), grafting method of propagation (58.33%), russetting management (60%), Sanjose scale (49.17%), while (80.83%), (88.3%) of the respondents had partial knowledge of recommended spacing, applications of urea respectively, DAP (89.17%), MOP (90%), no. of applications of MOP (88.33%). Whereas, (64.17%) respondents had no knowledge of recommended pollinizers, orchard layout (68.30%), (52.5%), (55%) and (59.17%) applied micro-nutrient, concentration of CaCl<sub>2</sub> and appropriate time for application respectively training and pruning system (98.3%). While in case of overall knowledge (70%) of the respondents had medium level of knowledge. The independent variables- age, education, family size, land holding, occupation, annual income, experience in pear cultivation, sources of information and scientific orientation were significant and positively related with knowledge level of respondents. While as, age was negatively significant and extension contacts and extension participation were not associated with the knowledge level of the respondents.

#### Keywords

Knowledge, Pear, Package of practices, Pear growers

#### Article Info

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### Introduction

Pear is a wondrous hardy fruit, widely grown in the temperate regions of the world and has been used as food since pre-historic times. It is mostly grown in 10 Indian states namely Jammu and Kashmir, Uttarakhand, Punjab, Tamil Nadu, Himachal Pradesh, Chhattisgarh, Haryana, Nagaland, Sikkim and Arunachal

Pradesh. Jammu and Kashmir ranks 1<sup>st</sup> in production among these states.(Anonymous, 2017a).Jammu and Kashmir being the major temperate fruit producing state of country produces pear as second most important pome fruit after apple (Anonymous, 2011). It is grown on an area of 14533 hectares with production of 88706 million tonnes respectively. The Kashmir division has less

pear area with more production than that of Jammu division. The area and production of pear in Kashmir division is 6933 thousand hectares and 58499 million tonnes. Whereas, the area and production of pear in Jammu division was reported as 7600 thousand hectares and 30257 million tonnes respectively (Anonymous, 2017b). Still there is vast scope to increase the productivity of pear in Kashmir division which indicates that there is urgent need to know the existing knowledge level, level of adoption for deciding the future strategy in respect of promoting the recommended pear production technology. In view of this the study was conducted with objectives to know the level of knowledge of the recommended package of practices of pear.

## **Materials and Methods**

The study carried out in one horticultural zone namely Chareshareef of District Budgam of Jammu and Kashmir, selected purposively on the basis of maximum area. From the selected horticultural zone, 6 villages namely 1. Zinpanchal, 2. Charwani, 3. Tilsara, 4. C.G.Dhar, 5. Zagipora and 6. Rekhai were selected randomly. A total no. of 120 respondents were selected randomly using proportionate sampling technique taking area as auxiliary information and ultimate unit of sampling (farmers). The data was collected by personal interview method with a comprehensive list of all the practices recommended, which were prepared after consulting experts from Division of Fruit Sciences, Plant Pathology and Agricultural Extension and Communication and by referring to the recommended package of practices of fruit crops published by Sheri-Kashmir University of Agricultural Sciences and Technology of Kashmir.

To know the level of knowledge of pear growers regarding various practices of pear

cultivation, the present study was operationalized as the level to which a respondent had awareness of recommended Pear production technology. The questions covering full range of cultivation practices of the pear were framed. The awareness of respondents regarding the recommended practices for the year 2017 was noted down. For estimating the level of knowledge, total of 22 questions were framed under different aspects given in the tables below and for the response full knowledge, 2 score was given, for partial knowledge 1 score was assigned and zero score for no knowledge was assigned. Depending upon the total scores obtained by each respondent, they were grouped into three categories as low, medium and high knowledge with mean (25.942) and standard deviation (5.157).

## **Results and Discussion**

The data given in Table 1 shows those cent percent respondents had full knowledge of recommended pear varieties, soil type and rootstock. Whereas, (80.83%) and (19.17%) and (25.83%) and (74.17%) of the respondents had partial and full knowledge of recommended spacing and time for nursery raising respectively. However, (64.17%) of the respondents had no knowledge and (35.83%) had full knowledge regarding recommended pollinizer. Majority (68.30%) of the respondents had no knowledge and (31.7%) had partial knowledge of the recommended layout respectively.

The data presented in Table 2 depicts that, (78.33%) of the respondents had full knowledge and (21.77%) had partial knowledge regarding recommended quantity of FYM. Regarding quantity of urea (87.5%) and (12.5%) of the respondents had partial and full knowledge respectively. Majority (82.5%) respondents had full knowledge and (17.5%) had partial knowledge regarding

recommended no. of applications of urea. Whereas, majority of the respondents (89.17%) and (10.83%) had partial and full knowledge of recommended quantity of DAP respectively. (90%) of the respondents had partial knowledge and (10%) had full knowledge of recommended quantity of MOP. Meanwhile, (88.33%) and (11.67%) had partial and full knowledge regarding recommended no. of applications respectively.

The data in Table 3 depicts that majority of the respondents (60%) had full knowledge while as, (7.5%) and (32.5%) had partial and no knowledge of recommended management for rusetting respectively. (49.17%) had full knowledge, (05%) had partial knowledge, (45.83%) had no knowledge of the recommended management for Sanjose Scale.

The data in Table 4 clearly shows that majority of the respondents (43.33 %) had full knowledge while as, (4.17%) and (52.5%) had partial and no knowledge of recommended micro-nutrient application respectively. (17.5%) had full knowledge, (27.5%) had

partial knowledge, (55%) had no knowledge of the recommended concentration of CaCl<sub>2</sub>. Whereas, (15.83%), (25%) and (59.17%) had full, partial and no knowledge of appropriate time for application of CaCl<sub>2</sub> respectively.

The data presented in Table 5 revealed that 100 percent of the respondents had knowledge of recommended budding method while as, (58.33%) of respondents had full knowledge, (41.7%) had no knowledge regarding recommended grafting method. Majority of the respondents (93.3%) had no knowledge of recommended training and pruning system while as, (6.67%) had full knowledge of recommended training and pruning system.

The Table 6 clearly depicts that 100 percent of the respondents had full knowledge regarding the recommended harvesting time of pear crop. From the Table 7, it is evident that majority (70%) of the respondents had medium level of knowledge, while (17.5%) and (12.5%) had high and low level of knowledge respectively. This finding is in line with the findings of Quadri (2004).

**Table.1** Varieties and layout management of orchard

S.No.	Practice	Level of knowledge (N=120)					
		Full knowledge		Partial knowledge		No knowledge	
		F	%	F	%	F	%
1	Varieties (Naak tang)	120	100	00	00	00	00.00
2	Soil type (wide range of soils with moisture)	120	100	00	00	00	00.00
3	Rootstock (Wild pear)	120	100	00	00	00	00.00
4	Time for nursery raising (Nov-20 <sup>th</sup> Dec)	89	74.17	31	25.83	00	00.00
5	Pollinizer (fertility, William bartlet)	43	35.83	00	00	77	64.17
6	Layout (Square)	38	31.7	00	00	82	68.30
7	Spacing (6 x 6m)	23	19.17	97	80.83	00	00.00

Note: F= Frequency, %= Percentage

**Table.2** Fertilizer management per tree

S.No.	Practice	Level of knowledge(N=120)					
		Full knowledge		Partial knowledge		No knowledge	
		F	%	F	%	F	%
1	FYM(48.75kgs)	94	78.33	26	21.77	00	00
2	Urea (750g)	15	12.5	105	87.5	00	00
3	No. Of applications of urea (3 split doses)	99	82.5	21	17.5	00	00
4	DAP (375g)	13	10.83	107	89.17	00	00
5	MOP (1150g)	12	10.00	108	90.00	00	00
6	No. Of applications of MOP (2 split doses)	14	11.67	106	88.33	00	00

**Table.3** Disease and pest management

S.No.	Practice	Level of knowledge (N=120)					
		Full knowledge		Partial knowledge		No knowledge	
		F	%	F	%	F	%
1	Russetting (2-3 sprays of wettable Sulphur+ boric acid 1g) Pest Management	72	60	09	7.5	39	32.5
2	Sanjose Scale (HMO'S@ 2% during dormant stage and chloropyriphos@ 100ml/ltr of H2O)	59	49.17	06	5.0	55	45.83

**Table.4** Micro-nutrient management

S.No	Practice	Level of knowledge (N=120)					
		Full knowledge		Partial knowledge		No knowledge	
		F	%	F	%	F	%
1	Common micro-nutrient applied (CaCl <sub>2</sub> )	52	43.33	05	4.17	63	52.5
2	Concentration of CaCl <sub>2</sub> (3g/ltr of H <sub>2</sub> O)	21	17.5	33	27.5	66	55
3	Appropriate time for CaCl <sub>2</sub> spray (21 days after petal fall)	19	15.83	30	25	71	59.17

**Table.5** Propagation method

S.No.	Practice	Level of knowledge (N=120)					
		Full knowledge		Partial knowledge		No knowledge	
		F	%	F	%	F	%
1	Budding (T-budding)	120	100	00	00	00	00.0
2	Grafting (tongue grafting)	70	58.33	00	00	50	41.7
3	Training and pruning system (modified ladder system)	08	6.67	00	00	112	93.3

**Table.6** Harvesting of pear

S.No.	Practice	Level of knowledge (N=120)	
		Full knowledge	
		Frequency	Percentage
1	Harvesting(2 <sup>nd</sup> -3 <sup>rd</sup> week of Aug)	120	100

**Table.7** Overall knowledge of pear growers

Variable	Categories	Respondents (N=120)	
		Frequency	Percentage
Knowledge	Low(below mean- S.D)	15	12.5
	Medium(btwn mean ±S.D)	84	70.0
	High(above mean +S.D)	21	17.5

**Table.8** Relationship of independent variables of respondents with their knowledge level

S.No	Variable	Correlation coefficients ('r' Value)	'p' Value
1	Age	-0.225*	0.013
2	Education	0.337*	0.003
3	Family size	0.190*	0.037
4	Land holding	0.183*	0.045
5	Occupation	0.244*	0.007
6	Annual income	0.332*	0.000
7	Experience in pear cultivation	0.181*	0.043
8	Extension contacts	0.158 <sup>NS</sup>	0.084
9	Sources of Information	0.199*	0.029
10	Extension participation	0.171 <sup>NS</sup>	0.062
11	Scientific Orientation	0.360*	0.000

\* 'p' value less than 0.05 implies that correlation is significant

NS- Non-significant

It can be inferred from the Table 8, that education, family size, land holding, occupation, annual income, experience in pear cultivation, information sources and scientific orientation of growers were significantly and positively related with the level of knowledge. The age of the respondents was negatively significant with the knowledge level of respondents as most of the farmers belonged to middle age category having medium level of knowledge regarding recommended package of practices. These findings are in line with Choudhary (2006), Pawar (2008),

Sawale (2011) and Koli (2012). The other variables, extension contacts and extension participation were not associated with the knowledge level of respondents as farmers were not aware of various extension agencies which they could have contacted for getting information regarding package of practices and other services. This finding was in line with Bhandare *et al.*, (2014).

In conclusion from the findings, it was concluded that 100 percent respondents had full knowledge of recommended varieties,

soil type, rootstock, budding method of propagation and time of harvesting, while majority of the respondents had no knowledge of recommended pollinizer, layout of orchard, application, concentration and appropriate time of micro-nutrient applied and training and pruning system. Majority of the respondents had full knowledge regarding recommended time for nursery raising, quantity of FYM, no. of applications of urea, pest control for Sanjose scale, russetting and grafting method of propagation. Majority of the respondents had partial knowledge regarding recommended quantity of urea, DAP, MOP and no of applications of MOP in fertilizer management. Majority of the respondents had medium knowledge of recommended package of practices. All the independent variables have significant relationship with the knowledge level except extension participation and extension contacts as the pear growers were not aware of various extension agencies, which they could have contacted for getting information regarding package of practices and other services.

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