

Research Article

Assessments of training need of sweet orange growers in Marathwada region

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SUMMARY : Present study was purposively conducted in Nanded districts because this district occupies highest area under sweet orange. The district consist 16 talukas, out of that Bhokar and Nanded taluka was chosen purposively based on maximum area under cultivation. Six villages from each taluka were selected thus, total 12 village were selected from the talukas. The respondents were selected those having he sweet orange garden of at least 5 years old. From each village 10 sweet orange growers were selected randomly. Near about half of the respondent (45.84 %) were educated upto primary education, with (40.90 %) of semi-medium land holding, 83.33 per cent had medium annual income, 65.83 per cent had medium economic motivation, respondents 60.00 per cent had medium social participation, 72.50 per cent had medium extension contact, 63.34 per cent were in medium category of use of sources of information, 72.50 per cent had medium risk preference, respondents 74.16 per cent had medium market orientation, (63.34 %) had medium farming experience, 66.66 per cent were having the orchard of 11-15 years old age, 63.33 per cent found in medium level of training needs. This might be due to satisfactory level of knowledge and skill of the respondents about sweet orange plantation. extension contact, land holding, annual income, risk preference, economic motivation social participation and market orientation this variables had positive but non-significant relationship with training need.

KEY WORDS:

 Sweet orange growers,
Training need

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BACKGROUND AND OBJECTIVES

Citrus (*Citrus sinensis*) is one of the important fruit crops grown throughout the world. Sweet orange belongs to the plant family *Rutaceae*, sub family *Aurantiodeae*. Sweet orange contribute 71 per cent of the total citrus fruit production in the world. Citrus is a fruit of par excellence and has exceptionally good nutritive value. The citrus fruits dominate in their contribution in the Horticultural crops due to their healthful diet and commercial value. Orange provides an energy of 4 g calorie per 100 g and 10.60 per cent carbohydrates. Fruits are gaining increasing popularity not only due to their high economic returns but also due to their nutritive and commercial values. Orange growers facing number of problems in areas of orange cultivation. Selection of soil, layout of gardens, training and

pruning of plants. Therefore, they need training and guidance about different practices which is essential for successful and efficient use of available technology by them. Training is one of the commonly used methods that imparts knowledge and skill to the trainees. Training is a process by which the desired knowledge, attitude, skill and ideas are included fostered and reiforsed in an organism. Realizing the need of sweet orange growers a study on the training needs of sweet orange growers was undertaken to understand the training needs.

Objectives :

- To study the personal, socio-economic and psychological characteristics of the sweet orange growers.
- To identify the training need of sweet orange growers.

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- To find out relationship between the personal, socio-economic and psychological characteristics of the sweet orange growers and their training needs.

RESOURCES AND METHODS

Present study was purposively conducted in Nanded districts because this district occupies highest area under sweet orange. The district consist 16 talukas, out of that Bhokar and Nanded taluka was chosen purposively based on maximum area under cultivation. Six villages from each taluka were selected thus total 12 village were selected from the talukas. The respondents were selected those having he sweet orange garden of at least 5 years old. From each village 10 sweet orange growers were selected randomly.

An Ex-post facto research design was used and the requisite data were collected from the selected sweet orange growers with the help of a structured schedule in a face to face situation. Questionnaire was prepared each question was having three point response *i.e.* most important, important and less important with a score of 3, 2 and, respectively considering the mean and standard deviation of the distribution, the sweet orange growers were classified into three levels as low, medium and high.

OBSERVATIONS AND ANALYSIS

The experimental findings obtained from the present study have been discussed in following heads:

Personal, socio-economic and psychological characteristics of sweet orange growers :

Education :

As regards the education of the respondents, it was clear from Table 1 that (45.84 %) of the respondents were educated upto primary education (1-4), while (29.17%) of the respondents could only read and write, followed by (16.17%) of the respondents were educated upto middle school. Very less percentage of them (4.17%) each was educated upto secondary school and were illiterate. It meant that with the increase in education of the respondents there was corresponding decrease in expression of training needs about the sweet orange growers.

Land holding :

Table 1 revealed that (8.30 %) of the respondents were marginal farmers, while (12.50 %) of the respondents were small farmers, followed by (8.30 %) and (40.90 %) of the respondents were semi-medium and medium category. Majority (30.00 %) of the respondents were large farmers. The probable reason might be that the land holding is being reduced continuously due to fragmentation.

Table 1 : Distribution of the respondents

Sr.No.	Category	Frequency	Percentage
Education			
1.	Illiterate	05	4.17
2.	Only read and write	35	29.17
3.	Primary education	55	45.84
4.	Middle school	20	16.17
5.	Secondary school	5	4.17
Land holding			
1.	Marginal (upto 1.00)	10	8.30
2.	Small farmers (1.01 to 2.00)	15	12.50
3.	Simi medium (2.01 to 4.00)	10	8.30
4.	Medium (4.01 to 10.00)	49	40.90
5.	Large farmers (10.01 and above)	36	30.00
Annual income			
1.	Low (Upto Rs. 55,000)	5	4.17
2.	Medium (Rs. 55,001 to 3,48,000)	100	83.33
3.	High (Rs. 3,48,001 and above)	15	12.50
Economic motivation			
1.	Low	13	10.84
2.	Medium	79	65.83
3.	High	28	23.33
Extension contact			
1.	Low	16	13.33
2.	Medium	87	72.50
3.	High	17	14.17
Social participation			
1.	Low	43	35.83
2.	Medium	72	60.00
3.	High	5	4.17
Sources of information			
1.	Low	17	14.16
2.	Medium	76	63.34
3.	High	27	22.50
Risk preference			
1.	Low	11	9.16
2.	Medium	87	72.50
3.	High	22	18.34
Market orientation			
1.	Low	10	8.34
2.	Medium	89	74.16
3.	High	21	17.50
Farming experience			
1.	Low (Upto 15 years)	17	14.16
2.	Medium (16 to 37 years)	76	63.34
3.	High (38 years and above)	27	22.50
Age of orchard			
1.	5 to 10 years	13	10.84
2.	11 to 15 years	80	66.66
3.	16 years and above	27	22.50

Annual income :

It was noticed from Table 1 that most of the respondents 83.33 per cent had medium annual income, while 12.50 per cent of the respondents had higher income. Whereas, 4.17 per cent of the respondents belonged to low annual income category. The sample of sweet orange growers seem to have better income level as compared to other farmers. This might be due to increased income from their orchard.

Economic motivation :

From Table 1, it is observed that more than half of the respondents 65.83 per cent had medium economic motivation, while 23.33 per cent of the respondents had high economic motivation. Whereas, only 10.84 per cent of the respondents had low economic motivation. This indicated that the farmers are becoming more aware and are trying to maximize their income, therefore, such findings are noticed.

Extension contact :

It was noticed from Table 1 that most of the respondents 72.50 per cent had medium extension contact, while 14.17 per cent of the respondents had high extension contact, followed by 13.33 per cent of the respondents had low extension contact. The reason may be that for getting information regarding different schemes and programmes the sweet orange growers may be contacted frequently.

Social participation :

Table 1 indicates that most of the respondents 60.00 per cent had medium social participation, while 35.83 per cent of the respondents had low social participation. Whereas, 4.17 per cent of the respondents were found in high social participation. The probable reason might be that the respondents being the farmers are always engaged in farming and they find comparatively less time to participate in different formal and informal organization.

Sources of information :

From Table 1 it is revealed that majority of the respondents 63.34 per cent were in medium category of use of sources of information whereas, 22.50 per cent of the respondents were high category of use of sources of information, while 14.16 per cent of the respondents were in low category of use of sources of information. This could be due to the availability and easy access to the different sources of information like personal, personal cosmopolite and mass media.

Risk preference :

It is manifested from Table 1 that majority of the respondents 72.50 per cent had medium risk preference whereas 18.34 per cent of the respondents had high risk preference followed by 9.16 per cent of the respondents had low risk

preference. It means that farmers are better prone to take the moderate risk and face the challenges to get maximum returns.

Market orientation :

Table 1 concludes that majority of the respondents 74.16 per cent had medium market orientation, while 17.50 per cent of the respondents had high market orientation. Whereas, only 8.34 per cent of the respondents had low market orientation. The farmers with more market information are more prone towards the market and market prices, in order to get maximum returns, this information useful for taking decision.

Farming experience :

Table 1 indicated that the most of the respondents (63.34 %) had medium farming experience while 22.50 per cent of the respondents had high farming experience. Whereas, 14.16 per cent of the respondents were found in low farming experience category. Majority of respondents are having medium level of experience in farming.

Age of orchard :

It was noticed from Table 1 that most of the respondents 66.66 per cent were having the orchard of 11-15 years old age, while 22.50 per cent of the respondents were having above 16 years of age of orchard, 10.84 per cent having the orchard of 5-10 years age. This might be due to that the farmers having orange orchard were availed the benefit of fruit plantation scheme launched by government.

Training need of sweet orange growers :**Preparatory tillage :**

From Table 2 in preparatory tillage, it can be stated from the data that under important area of training need 70.00 per cent of the sweet orange growers expressed training need for information about preparatory tillage for sweet orange. The reason might be that the farmers being familiar with these practices from generation to generation might have felt these practices are easily understand.

Selection of variety :

In selection of variety, under important area (50.84%) and (47.50 %) of sweet orange growers expressed need for the preparation of seedling and selection of sweet orange variety.

Land preparation :

In land preparation, under most important area (36.67 %) of sweet orange growers expressed training need about planting distance followed by 61.67 per cent of sweet orange growers preferred number of plant per hectare. Practices to being crucial might have been expressed to be important by the respondents as far as subjecting them to training is concerned.

Table 2 : Distribution of respondent according to their training needs**(n = 120)**

Sr. No.	Practices	Most important		Important		Less important	
		Freq.	%	Freq.	%	Freq.	%
Preparatory tillage							
1.	Preparatory tillage	7	5.84	84	70.00	29	24.16
Selection of variety							
1.	Preparation of seedlings	21	17.5	61	50.84	38	31.66
2.	Care to be taken at the time of budding	22	18.34	48	40.00	50	41.67
3.	Selection of variety	15	12.5	57	47.50	48	40.00
Land preparation							
1.	Number of plants per hectare	26	21.67	74	61.67	20	16.66
2.	Planting distance	44	36.67	58	48.33	18	15.00
Water management							
1.	Use of drip irrigation	52	43.34	56	46.66	12	10.00
2.	Different methods of irrigation	45	37.5	56	46.67	19	15.83
3.	Irrigation interval	43	35.83	68	56.67	9	7.5
Interculture operation and fertilizer dose							
1.	Care to be taken at the time of inter-cultural operations	32	26.67	71	59.17	17	14.16
2.	Use of different growth regulators	45	37.5	60	50.00	15	12.5
3.	Care to be taken at the time of application of chemical fertilizer	43	35.84	61	50.83	16	13.33
4.	Use of chemical fertilizers	44	36.67	63	52.5	13	10.83
5.	Use of organic fertilizers	35	29.17	62	51.67	23	19.16
Pest management							
1.	Black or white fly, citrus psylla, bark eating caterpillar etc.	38	31.67	76	63.33	6	5.00
2.	Preparation and application of nimbiol against fruit borer	37	30.83	78	65.00	5	4.17
3.	Selection of plant protection method against severe attack of pest	64	53.34	49	40.83	7	5.83
4.	Spraying of pesticide	22	18.34	89	74.16	9	7.5
Disease management							
1.	Protection against viral disease	47	39.17	63	52.5	10	8.33
2.	Protection from dieback	54	45.00	61	50.84	5	4.16
3.	Use of fungicides	66	55.00	47	39.16	7	5.84
4.	Preparation of bordeaux mixture	53	44.17	62	51.67	5	4.16
5.	Application of bordeaux mixture	54	45.00	58	48.33	8	6.67
Handling of insecticides and chemicals							
1.	How to spray ?	42	35.00	55	45.84	23	19.16
2.	Side effect of pesticides	29	24.17	66	55.00	25	20.83
3.	Use weedicide	54	45.00	45	37.5	21	17.5
4.	Use of power spray	26	21.67	64	53.33	30	25.00
Bahar treatment							
1.	Training and pruning of plant	39	32.5	68	56.67	13	10.83
2.	Fruit drop	36	30.00	69	57.5	15	12.5
3.	Bahar treatment	35	29.17	70	58.34	15	12.49
4.	Use of NAA	41	34.17	59	49.16	20	16.67
5.	Taking care while selecting bahar	30	25.00	61	50.83	29	24.17
Post harvest technology							
1.	Processing of sweet orange	17	14.17	74	61.66	29	24.16
2.	Storage of sweet orange	17	14.17	56	46.67	47	39.17
3.	Improving self life of fruits	18	15.0	41	34.17	61	50.83
4.	Care at the time of transport	9	7.5	41	34.17	70	58.33

Water management :

In water management, under most important area (46.66 %) of sweet orange growers expressed training need about use of drip irrigation system. The reason might be that these practices are very easy to do and they are did these were from long back.

Intercultural operations and fertilizer doses :

In intercultural operation and fertilizer doses, under most important area (37.5 %) and (35.84 %) respondents expressed training need about and care to be taken at the time of application of chemical fertilizers use growth regulator. These operations are second most important things hence, these preferences have been given for imparting training.

Pest management :

In pest management, under most important area 53.34 per cent of sweet orange growers want training in selection of plant protection methods against severe attack of pest. Such training are logical and natural as the fate of higher production is majority dependent upon these practices hence, more number of respondents has been given the preference.

Disease management :

In disease management, under most important area (55.00 %) of sweet orange growers expressed training need about use of fungicide. The reason might be that these practices have more effect on production of fruits.

Handling of insecticides and chemicals :

In Insecticides and chemical handling, under most important area (45.00%) of sweet orange growers expressed need of training about use weedicide. This might be due to the local ways of measuring the quantity of chemicals and fertilizer.

Bahar treatment :

In bahar treatment, under most important area (34.17 %) of sweet orange growers expressed training need about use of NAA to avoid flower drop, followed by 56.67 per cent of sweet orange growers expressed training need of training and pruning of plant as important area. This is also a matter of enlightenment.

Post harvest technology :

In post harvest technology, under most important area (14.17 %) and (15.00 %) of sweet orange growers expressed training need about processing of fruit and improve self-life of fruits. This implies that farmers are still to be convinced about these paramount operations.

The earlier scientist is also quoted same findings Bansod (1998), Parvathy and Sushmakumari (2000) and Kumbhar (2003).

Relationship between training need and personal socio-economic and psychological characteristics of sweet orange growers :

From Table 3 it was observed that out of eleven independent variable education, age of orchard, sources of information, farming experience had negative and significant relationship with training need at 0.01 level of probability. The variable like extension contact, land holding, annual income, risk preference, economic motivation social participation and market orientation this variables had positive but non-significant relationship with training need.

Table 3 : Relation between training needs and personal, socio-economic and psychological characteristics of sweet orange growers

Sr. No.	Independent variables	Correlation
1.	Education	-0.308**
2.	Land holding	0.017
3.	Age of orchard	-0.295**
4.	Farming experience	-0.368**
5.	Annual income	0.103
6.	Social participation	-0.088
7.	Extension contact	0.010
8.	Sources of information	-0.311**
9.	Risk preference	0.125
10.	Market orientation	-0.051
11.	Economic motivation	0.033

** indicate significance of value at P=0.01

Overall training needs of sweet orange growers :

From Table 4, most of the respondents 63.33 per cent found in medium level of training needs. This might be due to satisfactory level of knowledge and skill of the respondents about sweet orange plantation. Wangikar and Kadam (2007).

Table 4: Distribution of the respondents according to their level of training needs

Sr.No.	Category	Frequency	Percentage
1.	Low	21	17.50
2.	Medium	76	63.33
3.	High	23	19.17
	Total	120	100.00

Implications :

The finding of the present investigation would be helpful to the planners, progressive farmers, extension workers and research workers to fill up gap which exist between knowledge and adoption of practices. For improvement of agriculture practices by taking into account their needs of orchard growers and in order to develop future strategy to exploit their potentialities as well as full use of all the resource which leads

to effective utilization of sweet orange cultivation.

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