

Research Article

# Knowledge of farmers about papaya cultivation practices in Gulbarga district North Karnataka

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**SUMMARY :** A study on the farmer's knowledge regarding papaya cultivation practices was carried out in Gulbarga districts of Karnataka during 2013. A vast number of the papaya growers belonged to medium knowledge level category (51.33%), followed by high knowledge level (26.67%) and low knowledge level category (22.00%). A very high percentage of the papaya growers had correct knowledge about the cultivation practices like harvesting time (97.33%), planting time (96.67%) and soil type (95.33%), followed by practices like variety (93.33%), pit size (91.33%), irrigation in red soil (90.00%) and irrigation in black soil (87.33%). Majority of respondents had good knowledge about practices like pest and diseases (83.33%) filling material (83.33%) and spacing (48.67%).

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**KEY WORDS :**

Knowledge of papaya cultivation, Papaya growers, Planting time

## BACKGROUND AND OBJECTIVES

Papaya (*Carica papaya* L.) belonging to the family *Caricaceae* is a popular and economically important fruit tree of tropical and sub-tropical countries. The fruit is consumed world-wide as fresh fruit and as a vegetable or used as processed products. Although papaya is mainly grown (>90%) and consumed in developing countries, it is fast becoming an important fruit internationally, both as a fresh fruit and as processed products. The importance of papaya to agricultural and the world's economy is demonstrated by its wide distribution. It has long been known and cultivated in the home garden by the people of tropics, because it is one of the few fruits which bears fruit throughout the year, gives quick returns and adapts itself to diverse soil and climatic condition. It has emerged from the status of a home garden crop to that of a commercial orchard in many tropical countries. It is one of the highest producer of fruits per ha.

India stands as one of the most important

producer of papaya followed by Mexico and Indonesia. Kerala, Karnataka, Orissa, West Bengal, Assam and Gujarat are the most important states growing papaya (Singhal, 1980). Among these, however, in recent years papaya growers are facing several production and marketing problems. The problems in production include non-availability of genuine plant material, high incidence of disease especially viral diseases, etc., have threatened the cultivation of papaya. And enough farm business data on cost of production of papaya in Gulbarga and Bidar districts are not available. Hence, the present study is intended to address the specific objectives to measure the knowledge level of papaya growers about recommended practices in papaya cultivation and to find out the relationship between personal characteristics of papaya growers with their knowledge level.

## RESOURCES AND METHODS

The research design adopted for the study was ex post-facto since the phenomenon had

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already occurred. The study was conducted during 2013 in selected taluka of Gulbarga district of North Karnataka. Out of seven talukas, five talukas were selected were the major area covered under papaya cultivation. From each selected taluka five villages have been selected with highest area of papaya cultivation considered as the criteria. Six farmers from each village were selected for the study. Thus, the total sample size was 150 respondents.

The teacher made knowledge test was developed to measure the knowledge level of farmers about recommended practices of papaya cultivation. The test constituted 11 knowledge questions. The answers to the questions were quantified by giving one score to correct answer and zero score to the incorrect answer. The summation of scores for the correct answer for a particular respondent indicates his knowledge level about recommended practices of papaya cultivation. The respondents were grouped into low, medium and high categories using mean and standard deviation as measures.

## OBSERVATIONS AND ANALYSIS

The data regarding overall knowledge of papaya growers is presented in Table 1. The data inferred that 51.33 per cent of papaya growers belonged to medium knowledge level category, followed by high knowledge level (26.67%) and low knowledge level category (22.00%). The reasons might be due to the fact that more number of the papaya growers were educated and exposed themselves to different mass medias which provided the information about new technologies. In addition, it is very clear from the results that the variables like cosmopolitnes, extension participation, information source consultancy, innovativeness, risk orientation and economic motivation might have influenced the knowledge level of farmers about cultivation practices of papaya crop.

**Table 1 : Distribution of respondents according to their overall knowledge level about recommended papaya cultivation practices (n=150)**

Sr. No.	Category	Respondent	
		Frequency	Percentage
1.	Low (<15.78)	33	22.00
2.	Medium (15.78-17.32)	77	51.33
3.	High (>17.32)	40	26.67
	Total	150	100

Mean = 16.23, S.D = 1.95

It can be observed from Table 2 that, a very high percentage of the papaya growers had correct knowledge about the cultivation practices like harvesting time (97.33%), planting time (96.67%) and soil type (95.33%), followed by practices like variety (93.33%), pit size (91.33%), irrigation

in red soil (90.00%) and irrigation in black soil (87.33%). Majority of respondents had good knowledge about practices like pest and diseases (83.33%) filling material (83.33%) and spacing (48.67%). Possible reason could be regular participation in extension activities like agricultural exhibitions, field visits and extension meetings might have helped the respondents to gain correct knowledge about recommended practices of papaya cultivation. The other reasons may be high information source consultancy pattern, medium risk orientation, high innovativeness and high economic motivation of the respondents might have influenced the knowledge level. The positive and highly significant relationship of personal characteristics such as education, annual income, extension participation, risk orientation and economic motivation with the knowledge level clearly indicates that high knowledge level trend.

**Table 2 : Knowledge level of farmers about selected recommended practices in papaya cultivation (n=150)**

Sr. No.	Cultivation practices	Frequency	Percentage
1.	Variety	140	93.33
2.	Soil type	143	95.33
3.	Planting time/season	145	96.67
4.	Spacing	73	48.67
5.	Pit size	137	91.33
6.	Filling material	125	83.33
7.	Irrigation (black soil)	131	87.33
8.	Irrigation (red soil)	135	90.00
9.	Fertilizer application	44	29.33
10.	Harvesting time	146	97.33
11.	Pests and disease control	125	83.33

In case of knowledge about the practice like fertilizer applications it was 29.33 per cent. It was due to lack of regular training and unavailability of skilled labour. The findings of the study were in agreement with the results obtained by Kadam (1999) and Raghavendra (2007).

The results presented in Table 3 revealed the relationship between personal characteristics of papaya growers with knowledge level and technological gap of the respondents about cultivation practices of papaya crop.

The variables such as age, cosmopolitnes and information source consultancy were shows not significantly related with the knowledge level of papaya growers. Whereas, the variables like education and risk orientation were found to be significant in relationship with 0.05 per cent level of significance. The variables such as annual income, extension participation and economic motivation had highly positive relationship with knowledge level of the respondents. In case of agricultural experience and

**Table 3 : Correlation co-efficient (r) between knowledge level and technological gap of papaya farmers (n=150)**

Sr. No.	Variables	Knowledge
1.	Age	0.04 <sup>NS</sup>
2.	Education	0.250*
3.	Agriculture experience	-0.127 <sup>NS</sup>
4.	Annual income	0.309**
5.	Cosmopolitnes	0.039 <sup>NS</sup>
6.	Extension participation	0.251**
7.	Information source consultancy	0.23 <sup>NS</sup>
8.	Innovativeness	0.031 <sup>NS</sup>
9.	Risk orientation	0.224*
10.	Economic motivation	0.253**

\* and \*\* Indicate significance of value at P=0.05 and 0.01, respectively  
NS = Non-significant

innovativeness were negative and non-significant relationships with the knowledge level of papaya growers.

The results indicated that education had positive and significant relationship with the knowledge level of cultivation practices of papaya crop. It established fact that an educated person is in a better position to gather information, better understanding capacity and interpretation of complex information related to farming. Obviously the knowledge gain and retention is more among the educated people and they become more receptive to the innovations compare to the less educated or illiterates farmers. The findings were in consonance with the research findings of Raghavendra (1997) and Thippeswamy (2007) who found that there was a significant and positive relationship between education and knowledge level.

The relationship between annual income and knowledge level of respondents was found to be significant at 0.01 per cent level of probability. The possible reason for above situation might be that the farmers who have higher income can afford to take the risk of accepting the recommended practices irrespective of cost factor. So, as the income level of the respondents increased the knowledge also increased. Findings are supported with the results of Angadi (1999) and Thippeswamy (2007) .

There was positive and significant association between extension participation and knowledge of cultivation practices of papaya crop. The participation in extension activities provides opportunities for contrived experiences and serves as reinforcement in gaining knowledge about cultivation practices of papaya crop. The findings are in conformity with the findings of Balasubramani (1997) and Lakshmisha (2000).

It is clear from the Table 3 that there was a significant relationship between risk orientation and knowledge of papaya cultivation practices. Risk orientation is expressed as the degree to which farmer is oriented to take risk and has courage to face uncertainties in papaya cultivation. A farmer who is having this particular trait normally will have better

knowledge. This might be the probable reason for the existence of this type of relationship. This finding is in accordance with the findings of Borkar *et al.* (2000) and Ranganath (2001).

It is observed that there was positive and significant association between economic motivation and knowledge level of papaya cultivation practices. Economic motivation is an indication that the individuals are oriented towards achievement of maximum economic returns like maximization of farm profits. The positive and significant relationship clearly shows, the respondents with higher economic motivation tend to acquire more knowledge about papaya cultivation. The finding was in conformity with the findings of Thippeswamy (2007).

### Conclusion :

Majority of the respondents belonged to medium level of knowledge category in respect of recommended cultivation practices of papaya crop. Hence, it is imperative that, the State Department of Horticulture, Government of Karnataka should integrate extension efforts to provide the required knowledge about recommended cultivation practices through demonstrations, periodical visits, training programmes, field trips and educational tours etc.

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