Research Article

Knowledge of coconut production technology in Junagadh district of Gujarat state

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SUMMARY : The present investigation was conducted in Junagadh district of Gujarat state. The findings of this investigation reveal that the majority (64.81 %) of the coconut growers had medium level of knowledge regarding recommended practices of coconut. Findings of relational analysis stated that, in respect to knowledge, it was found that independent variables *viz.,* scientific orientation, mass media exposure, innovativeness education, land holding, risk orientation, market orientation experience in coconut cultivation, annual income, yield index, extension participation and social participation, had positive and significant correlation with knowledge level of coconut growers regarding recommended production technology of coconut crop. The variables *viz.*, age, size of family, area under coconut showed non-significant relationship with knowledge level of the coconut growers.

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BACKGROUND AND OBJECTIVES

The coconut palm (*Cocos nucifera* Linn.) is supposed to be one of the five legendary Devavrikshas and is eulogised as Kalpavriksha - the all giving tree - in Indian classics. All parts of the palm are used in some way or another in the daily life of the people of the west coast; the traditional coconut growing area. Its fruit is called Lakshmi Phai and is used in social and religious functions in India irrespective of whether palm is locally grown or not.

Coconut is grown in about 90 countries worldwide, with a total production of 57.514 billion nuts per annum or 10.52 million tons of copra. India occupies the premier position in the world with an annual production of 16.9 billion nuts, overtaking Indonesia and Philippines, the other two prominent coconut growing countries (Anonymous, 2008).

Coconut is one of the important plantation crops of Gujarat state particularly in coastal area. The coconut plant having high economic potential for coconut growers.

Total production of coconut in India is 101.48 million nuts and productivity is 5231 nuts per hectare (Anonymous, 2009), whereas, in Gujarat, coconut grown in 16674 hectare with production 172466 M.T.

Gujarat is one of the major maritime states of India, possessing the largest coastline about 1,600 km. and widest continental shelf-area. It is most suitable for the cultivation of coconut crop. Among all the fruit crops, coconut is the most thrived age old major cash crop of Junagadh district. Considering the area and production of coconut in Gujarat, Junagadh is first. In Junagadh district, the area under the coconut is 7076 hectare producing 77836 M.T. of coconut every year. Hence, the study has been conducted to know the knowledge level of coconut growers and association between knowledge of coconut production technology with personal, socio - economic, communicational and psychological characteristics of coconut growers.

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RESOURCES AND METHODS

The study was conducted through a field survey in Junagadh district of Gujarat state during the year 2010-11 by using a multiple stage purposively random sampling technique. At first stage, two talukas were selected which had highest coconut growing area from the districts. The second stage consisted of selecting 6 villages, randomly from each selected talukas. The final stage consisted of selecting 108 respondents from the selected village. The interview of coconut growers were contacted individually on their farm and data were collected by using a interview schedule. This study was conducted by using an "ex post facto" research design. The association between knowledge of coconut production technology and selected characteristics of coconut growers was determined and tested with help of Karl Pearson's co-efficient correlation test.

OBSERVATIONS AND ANALYSIS

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

Extent of knowledge of coconut growers:

Results presented in Table 1 shows that majority (64.81 %) of the coconut growers had medium level of knowledge regarding recommended practices of coconut, while 20.38 and 14.81 per cent of coconut growers had high and low level of knowledge regarding recommended practices of coconut, respectively.

Thus, it can be concluded that 85.19 per cent of coconut growers had medium to high level of knowledge regarding recommended practices of coconut. This finding is in the line with findings of Bharad (2007) and Thippeswamy et al. (2008).

Relationship between the independent variables and knowledge level of coconut growers:

The variables of coconut growers played a vital role in determining their knowledge level about coconut production technology. Correlation analysis is presented in Table 2 to assess the relationship between the independent variables and knowledge level of coconut growers.

The results in Table 2 reveals that scientific orientation, mass media exposure, innovativeness education, land holding,

Table 1: Distribution of coconut growers according to their knowledge level about coconut cultivation practices (n = 108)

Sr. No.	Level of knowledge	Number	Per cent
1.	Low (below 22.33 score)	16	14.81
2.	Medium (between 22.34 to 28.31 score)	70	64.81
3.	High (above 28.31 score)	22	20.38
	Total	108	100.00

Mean= 25.32   S.D. = 2.99

Table 2 : Relationship between the characteristics of coconut growers and their knowledge level regarding coconut production technology (n = 108)

Sr. No.	Independent variables	Correlation co-efficient ('r' value)
1.	Age	0.1017 (NS)
2.	Education	0.2088**
3.	Family size	0.0322 (NS)
4.	Experience in coconut cultivation	0.2565**
5.	Land holding	0.3291**
6.	Area under coconut	0.0318 (NS)
7.	Annual income	0.2925**
8.	Yield index	0.2887**
9.	Social participation	0.2373**
10.	Extension participation	0.2572**
11.	Mass media exposure	0.3855**
12.	Risk orientation	0.3099**
13.	Scientific orientation	0.5691**
14.	Market orientation	0.3180**
15.	Innovativeness	0.3621**

NS = Non-significant, * and ** indicate significance of values at P=0.05 and 0.01, respectively

risk orientation, market orientation, experience in coconut cultivation, annual income, yield index, extension participation and social participation, had positive and significant correlation with knowledge level of coconut growers regarding recommended production technology of coconut crop. The variables *viz.*, age, size of family, area under coconut showed non-significant relationship with knowledge level of the coconut growers.

The significant and positive relationship between scientific orientation and knowledge was also reported by Moulasab *et al.* (2006) and Shashidara *et al.* (2007). Since a scientific orientation opened the mental horizon which acted as a catalyst in changing behaviour of the coconut growers, which have resulted into its significant influence on knowledge of coconut growers.

However, innovativeness had a significant and positive relationship with knowledge level. The innovative farmer would be more curious enough to use all recommended coconut farming practices relatively earlier than others and look forward for latest information on coconut production technologies. Similar result were also reported by Babanna (2002) and Naik *et al.* (2009).

Risk orientation too had a significant and positive relationship with knowledge level it can be inferred that the farmers with higher levels of risk orientation would be much ahead of other in exploiting the potentiality of technology availed which enforced them to take decision to adopt an innovation resulted in its influence on knowledge level of coconut growers. This finding is in line with the findings of Basanayak (2009).

The results further reveals that there was a significant and positive relationship between education and knowledge level which showed that educated farmers knew many things than less educated and illiterates. Since highly educated farmers collect information from various sources like mass media as well as interaction with experts. Similar results were also reported by Tavethiya (2006) and Jadeja (2008).

Age of coconut growers shows the non-significant relationship between the knowledge level. It might be due to that the young farmers were progressive in nature and always eager to take risk and old aged farmers were traditional, they did not want to change and not taking any risk. This finding is in the line with results of Naik *et al.* (2009).

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