

Attitude of Farmers Towards Rose Cultivation

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ABSTRACT

The present study was conducted in Anekal taluk of Bengaluru Rural district of Karnataka during 2020-21 to analyze the attitude of farmers towards rose cultivation and to identify the production problems of farmers. Sixty rose growers were personally interviewed using a pre-tested interview schedule. Attitude of rose growers was analyzed using the scale developed by Mangal Singh (2014). The scale consisted of 14 attitude statements and the response for each attitude statement of rose growers was measured on 'Likert (1932) format' using five response continuum of strongly agree, agree, undecided, disagree and strongly disagree with a score of 5, 4, 3, 2 and 1, respectively. Ex-post facto research design was adopted for the present study. The results revealed that a majority of the farmers (51.67 %) were possessing more favourable attitude towards rose cultivation, whereas 31.67 and less than one-fifth (16.66 %) of the respondents were possessing favourable and less favourable attitude, respectively. Chi square test revealed that education, land holding, annual income, cosmopolitaness, mass media participation, extension agency contact and extension participation of rose growers had significant to highly significant association with their attitude towards rose cultivation. The results of the multiple regression analysis revealed that ten independent variables together contributed to the tune of nearly 72.18 per cent out of the variation in the development of favourable attitude towards rose cultivation among the respondents. High investment for cultivating rose and incidence of pests and disease were the major production problems faced by the farmers in rose cultivation.

Keywords : Attitude, Rose cultivation, Seed money, Chi square test, Extension participation

ROSE is often referred to as the 'Queen of flowers' and it is the symbol of elegant beauty, purity, love, friendship and sympathy. It belongs to the genus *Rosa* and family *Rosaceae*. It is the woody perennial plant with hundreds of species and thousands of cultivars and most species are native to Asia. Flowers vary in their size, shape and fascinating, mainly grown for their beauty and fragrance. Rose have acquired cultural significance and has become an integral part of almost all the religious or spiritual ceremonies in India. Roses are best known ornamental plants grown for their flowers both garden and indoors. They are widely used in commercial perfumery, pharmaceuticals and also as commercial cut flower crops. Scented flowers valued for worship, making garlands and preparation of rose oil, rose water, gulkhanda, rose attar and rose otto. Rose oil is the valuable perfumery raw materials which imparts characteristic fragrance to perfumes. Rose hips (fruits of rose) are occasionally made into

jam, jelly, marmalade, and soup or are brewed for tea, primarily for their high vitamin C content. Rose water, herbal tea, rose syrup, ice cream, kulfi, etc., are also prepared using rose flowers.

Rose is one of the leading cut flowers in the global floriculture trade which is used at almost every event in both local and international markets. The major rose producing countries of the world include :The Netherlands, Colombia, Kenya, Israel, Italy, United States and Japan. The production of rose flowers in India is almost negligible when compared to the developed countries of the world. Rose flowers in the country are mostly grown under cover in Nasik, Pune, Hosur, Kodaikanal, Kalimpong, Ooty, Darjeeling, Bangalore, Solan, Palampur, Shimla, Srinagar, Delhi, Ludhiana and Calcutta.

Attitude is the degree of positive or negative disposition / association towards an innovation, object, programme,

enterprise etc. (Likert, 1932). Whereas, Thurstone (1946) has defined attitude as the degree of positive or negative effect associated with some psychological object. There is no limit to the topics which people may have attitudes. Attitude is nothing but the way of thinking or feeling about diversification. It is found that some characteristic feeling or emotion is experienced as we expect accordingly some definite action. It is also influenced by many factors of farmers like social factors, family, prejudices, personal experience, media exposure, educational and religious institutions and physical factors. The family is the most powerful source for the formation of attitudes. The parents, elder brother or sister provide information about various things. Attitudes developed by an individual, whether positive or negative are the result of family influence and are very powerful and difficult to change. Hence, it can be persuasively argued that everything in life depends on attitude. The success and failure of any enterprise mainly depends upon the people's mindset or attitude towards a particular enterprise, hence attitude of a farmer plays an important role in accepting or rejecting the enterprise. In view of this, the present was carried out with the following specific objectives;

1. To know the profile characteristics of farmers practicing rose cultivation
2. To analyze the attitude of farmers towards rose cultivation
3. To find out the association and extent of contribution of profile characteristics of farmers with their attitude towards rose cultivation
4. To identify the production problems of farmers practicing rose cultivation

METHODOLOGY

The study was carried out in Bangalore urban district of Karnataka state during 2020-21. Bangalore urban district is purposively selected for the study, since it is the largest producer of roses in the Southern districts of Karnataka and more over Bangalore Urban district is the hub of floriculture industry, wherein 70 per cent of the rose exports from India are from this district.

Rose was cultivated in an area of 1082 ha in Bangalore urban district during the year 1082 ha. Out of the five taluks in Bangalore urban district, Anekal taluk was purposively selected for the study since rose was cultivated in more area (656 ha) as compared to Bangalore East (257 ha), Yelhanka (132 ha), Bangalore South (26 ha) and Bangalore North (11 ha) taluks of Bangalore urban district during the year 2019-20 (Anonymous, 2020). Twelve villages were randomly selected in Anekal taluk for the study. Five rose growers were again randomly selected from each of the 12 sampled villages. Thus, the total sample constituted 60 rose growers from twelve villages. Ex-post facto research design was adopted for the present study.

Attitude towards rose cultivation (dependent variable) in the present study refers to 'the degree of positive or negative effect or feelings of farmers towards rose cultivation'. The scale developed by Mangal Singh (2014) was used to analyze the attitude of rose growers towards rose cultivation. The scale consisted of 14 attitude statements and the response for each attitude statement of rose growers was measured on 'Likert (1932) format' using five response continuum of strongly agree, agree, undecided, disagree and strongly disagree with a score of 5, 4, 3, 2 and 1, respectively. The summed score thus obtained was considered as attitude score of individual respondent. The maximum score an individual could get was 70 and minimum score was 14. The respondents were categorized based on mean (50.00) and half standard deviation (3.00).

Category	Score
Less favourable	<47.0-0
Favourable	47.00 to 53.00
More favourable	<53.00

Information regarding ten profile characteristics (independent variables) of farmers practicing rose cultivation was collected using a structured schedule with standardized scale and suitable scales. The collected data was analyzed using frequency, mean, standard deviation, chi square test and multiple regression analysis. Chi-square test was employed to

find out the association between the profile characteristics of rose growers (independent variables) with their attitude towards rose cultivation, while the extent of contribution of the profile characteristics of rose growers to the attitude towards rose cultivation was found out by using multiple regression analysis.

RESULTS AND DISCUSSION

Profile Characteristics of Farmers Practicing Rose Cultivation

The research data in Table 1 presents the profile characteristics of farmers practicing rose cultivation. It is seen from the results in Table 1 that a larger proportion of respondents were of middle aged (45.00 %), while 35.00 per cent of the respondents were of young age and the remaining 20.00 per cent of the respondents were of old age. Half of the respondents were having to medium level of education (50.00 %), where as an equal percentage of respondents (25.00 % each) were belonging to low and high category of education. As high as 48.34 per cent of the respondents had medium size family, while 31.66 and 20.00 per cent of the respondents had large and small sized family, respectively. About 43.33 per cent of the respondents interviewed were small farmers, whereas 38.33 and 18.34 per cent of the respondents interviewed were small and big farmers, respectively.

Table 1 also indicates that a majority of respondents were belonging to medium level of annual income (60.00 %), while 25.00 and 15.00 per cent of the respondents were belonging to low and high annual income groups, respectively. A greater proportion of the respondents (46.67 %) were belonging to high level of cosmopolitaness, 28.33 per cent and one-fourth (25.00 %) of the respondents were belonging to medium and high cosmopolitaness groups, respectively. A perusal of Table 1 reveals that 45.01 per cent of the respondents were falling under high level of social participation, whereas 28.33 and 26.66 per cent of them were belonging to medium and low level of social participation, respectively. As high as 43.34 per cent of the respondents were belonging to high mass media participation group, whereas 30.00 and 26.66 per cent of the respondents were belonging to medium and

TABLE 1
Profile characteristics of farmers practicing rose cultivation (n = 60)

Characteristics	Category	Farmer's	
		Number	Per cent
Age			
	Young (<35 years)	21	35.00
	Middle (36 - 50 years)	27	45.00
	Old (>50 years)	12	20.00
Education			
	Low (< 3.52 score)	15	25.00
	Medium (3.52 to 4.52 score)	30	50.00
	High (> 4.52 score)	15	25.00
Family size (members per family)			
	Small (< 4)	12	20.00
	Medium (4 to 6)	29	48.34
	Large (> 6)	19	31.66
Land holding			
	Marginal farmers (<2.5 acres)	23	38.33
	Small farmers (2.5 to 5.0 acres)	26	43.33
	Big farmers (> 5.0 acres)	11	18.34
Annual income (Rs)			
	Low (< 3 lakh)	15	25.00
	Medium (3 to 6 lakh)	36	60.00
	High (> 6 lakh)	11	15.00
Cosmopolitaness			
	Low (<5.71 score)	15	25.00
	Medium (5.71 to 6.71 score)	17	28.33
	High (>6.71 score)	28	46.67
Social participation			
	Low (<12.02 score)	16	26.66
	Medium (12.02 to 13.98 score)	17	28.33
	High (>13.98 score)	27	45.01
Mass media participation			
	Low (<10.94 score)	16	26.66
	Medium (10.94 to 12.44 score)	18	30.00
	High (>12.44 score)	26	43.34
Extension agency contact			
	Low (<10.46 score)	14	23.33
	Medium (10.46 to 11.46 score)	18	30.00
	High (>11.46 score)	28	46.67
Extension participation			
	Low (<10.77 score)	15	25.00
	Medium (10.77 to 11.89 score)	16	26.67
	High (>11.89 score)	29	48.33

low mass media participation groups, respectively. Table 1 also reveals that 46.67 per cent of the respondents were belonging to high extension agency contact group followed by 30.00 and 23.33 per cent of the respondents were belonging to medium and low extension agency contact groups, respectively. Less than half of the respondents (48.33 %) exhibited high level of extension participation followed by medium (26.67 %) and low (25.00 %) level of extension participation .

The above findings reveals that more number of farmers practicing rose cultivation were of middle

age (45.00 %), having land size of 2.50 to 5.00 acres (43.33 %), medium size family (48.34 %) with medium level of education (50.00 %) and annual income (60.00 %). A greater proportion of the rose growers were belonging to high category of cosmopolitanness (46.67 %), social participation (45.01%), mass media participation (43.34 %), extension agency contact (46.67 %) and extension participation (48.33 %).

Attitude of Farmers towards Rose Cultivation

Table 2 presents the data on the attitude of farmers towards rose cultivation. A majority of the respondents

TABLE 2
Attitude of farmers towards rose cultivation (n=60)

Statements	Farmer's				
	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Adoption of rose cultivation is quite difficult for small and marginal farmers	01 (1.66)	02 (3.33)	03 (5.00)	11 (18.33)	43 (71.69)
The most successful rose grower is one who gets maximum return with minimum cost	41 (68.35)	41 (18.33)	04 (6.66)	01 (1.66)	03 (5.00)
It is better to grow other traditional crops than to go for rose cultivation.	01 (1.66)	01 (1.66)	06 (10.00)	19 (31.66)	33 (55.02)
I think that resource poor people can also grow rose	43 (71.68)	11 (18.33)	03 (5.00)	02 (3.31)	01 (1.66)
I consider that rose cultivation is possible for rich farmers only	01 (1.66)	02 (3.31)	03 (5.00)	11 (18.33)	43 (71.68)
In my view adoption of rose cultivation means inviting risks	03 (5.00)	03 (5.00)	07 (11.66)	16 (26.66)	31 (51.68)
Rose cultivation can improve the living standard of growers	45 (75.03)	09 (15.00)	03 (5.00)	01 (1.66)	02 (3.31)
I think that the cost of rose cultivation is very high	31 (51.68)	13 (21.66)	06 (10.00)	05 (8.33)	05 (8.33)
Investment on rose cultivation is wastage of money	02 (3.31)	04 (6.66)	01 (1.66)	10 (16.69)	43 (71.68)
Rose cultivation ensures assured income for a farmer	46 (76.70)	08 (13.33)	03 (5.00)	01 (1.66)	02 (3.31)
Rose cultivation is the effective way to utilize family members	48 (79.99)	10 (16.69)	0 (0.00)	01 (1.66)	01 (1.66)
I think that rose cultivation is suitable only for those farmers who have irrigation facility	45 (75.03)	12 (19.99)	01 (1.66)	01 (1.66)	01 (1.66)
Rose cultivation could obtain good price by following effective post-harvest management practices	46 (76.70)	10 (16.67)	01 (1.66)	02 (3.31)	01 (1.66)
I feel that rose cultivation is like gambling	05 (8.33)	07 (11.66)	06 (10.00)	11 (18.33)	31 (51.68)

Figures in parenthesis indicates percentage

had strongly agreed for the positive attitude statements such as: rose cultivation helps for effective utilization of family members (79.99 %), rose cultivation assures guarantee income for a farmer (76.70 %), rose growers could obtain good price by following effective post-harvest management practices (76.70 %), rose cultivation improves the standard of living of rose growers (75.03 %), rose cultivation is suitable only for the farmers who are having irrigation facility (75.03 %), resource poor farmers could also cultivate rose (71.68 %), the successful rose farmer will get maximum return with minimum cost (68.35 %) and the cost of cultivation of rose is very high (51.68 %).

The results in Table 2 also reveals that over half of the rose growers have strongly disagreed for the following negative attitude statements: adoption of rose cultivation is difficult for small and marginal farmers (71.69 %), rose cultivation is for rich farmers only (71.68 %), investment on rose cultivation is mere waste of money (71.68 %), it is better to grow other traditional / conventional crops than to go for rose cultivation (55.02 %), adoption of rose cultivation means taking risks (51.68 %) and rose cultivation is like gambling (51.68 %). Parmar *et al.* (2015) have reported similar findings such as: adoption of rose cultivation practices is difficult for marginal farmers (70.00 %), rose cultivation is for elite and rich farmers (68.00 %), investment on rose cultivation is waste of money (65.00 %), it is easier and better to grow conventional crops than rose (56.00 %), rose cultivation is a risky venture (55.00 %) and rose cultivation is mere gambling (51.00 %).

The results of the research study revealed that a majority of respondents had strongly agreed for the positive attitude statements, on the other hand more than half of the respondents had strongly disagreed for the negative attitude statements. It is very clear from the research results that majority of the farmers practicing rose cultivation possessed favorable attitude towards rose cultivation. The cultivation of rose could be taken up by all the categories of farmers (including the resources poor farmers), provides employment to the family members, gives maximum returns with minimum cost, assures good income and thereby

improves the living standard of the farmers, hence majority of the respondents possessed favourable attitude towards rose cultivation.

Overall Attitude of Farmers towards Rose Cultivation

A majority of the farmers (51.67 %) were possessing more favourable attitude towards rose cultivation, whereas 31.67 and less than one-fifth (16.66 %) of the respondents were possessing favourable and less favourable attitude, respectively (Table 3). The cultivation of rose ensures maximum return with minimum costs and improves the standard of living of the farmers, hence a majority of farmers were possessing more favourable attitude towards rose cultivation.

TABLE 3
Overall attitude of farmers towards
rose cultivation (n = 60)

Attitude category	Farmer's	
	No.	Per cent
Less favorable (<47 score)	10	16.66
Favorable (47 to 53 score)	19	31.67
More favorable (>53 score)	31	51.67
Total	60	100.00

Association and Extent of Contribution of Profile Characteristics on the Attitude of Farmers towards Rose Cultivation

Chi square test was employed to find out the association between the profile characteristics of farmers with their attitude towards rose cultivation (Table 4). The results of chi square test reveals that age, family size and social participation of the farmers had no association with their attitude towards rose cultivation. Whereas, education, land holding, annual income, cosmopolitaness and mass media participation of farmers had significant association with their attitude towards rose cultivation at five per cent level of probability. The extension agency contact and extension participation of farmers had highly significant association with their attitude towards rose cultivation at one per cent level of probability. Favorable attitude

TABLE 4
Association and extent of contribution of profile characteristics on the attitude of farmers towards rose cultivation

(n=60)

Characteristics	Degrees of freedom (df)	Chi-square value	Regression co-efficient (b)	Standard error	't' value
Age	4	2.599 ^{NS}	0.176	0.199	0.884 ^{NS}
Education	4	10.199 [*]	0.671	0.317	2.116 [*]
Family size	4	1.922 ^{NS}	0.259	0.280	0.925 ^{NS}
Land holding	4	11.961 [*]	0.861	0.358	2.402 [*]
Annual income	4	11.011 [*]	0.911	0.414	2.211 [*]
Cosmopolitaness	4	12.101 [*]	0.440	0.219	2.111 [*]
Social participation	4	3.961 ^{NS}	0.479	0.482	0.993 ^{NS}
Mass media participation	4	10.001 [*]	0.260	0.123	2.118 [*]
Extension agency contact	4	11.111 ^{**}	0.912	0.251	3.633 ^{**}
Extension participation	4	13.999 ^{**}	0.916	0.308	2.970 ^{**}

NS= Non-significant; * = Significant at 5% level; ** = Significant at 1% level; R² = -0.7218; F=18.33**

may be developed towards rose cultivation when there is higher level of education, land holding, annual income, cosmopolitaness, mass media participation, extension agency contact and extension participation among rose growers.

The results in Table 4 also reveals that variables such as education, land holding, annual income, cosmopolitaness, mass media participation, extension agency contact and extension participation were significantly contributing in explaining the variation in the development of favourable attitude towards rose cultivation, whereas variables like age, family size and social participation were not significantly contributing to the variation in the development of favourable attitude towards rose cultivation. Ten independent variables together contributed to the tune of nearly 72.18 per cent out of the variation in the development of favourable attitude towards rose cultivation among the farmers practicing rose cultivation. The 'f' value (18.33) was found to be significant at one per cent level. It can be inferred that variables such as education, land holding, annual income, cosmopolitaness, mass media participation, extension agency contact and extension participation of farmers were significantly contributing in developing favourable attitude towards rose cultivation.

Production Problems Encountered by Farmers Practicing Rose Cultivation

Table 5 presents the data on the production problems encountered by farmers in rose cultivation. Requirement of high investment for cultivating rose

TABLE 5
Production problems faced by farmers in rose cultivation

(n=60)

Problems*	Farmer's		
	No.	%	Rank
High investment requirement	60	100.00	I
Incidence of more pests and disease	60	100.00	I
Water scarcity	55	91.66	III
Scarcity of skilled labours	52	86.66	IV
Non-availability of timely credit	49	81.66	V
Lack of knowledge on pruning	45	75.00	VI
Expensive agricultural inputs (fertilizers, plant protection chemicals etc.)	43	71.66	VII
High labour cost	35	58.33	VIII
Non availability of quality planting materials	18	30.00	IX

*Multiple response

and incidence of pests and disease were accorded the first ranks by the respondents. Water scarcity, scarcity of skilled labour, non-availability of timely credit, lack of knowledge on pruning and expensiveness of agricultural inputs were accorded III, IV, V, VI and VII rank, respectively by the respondents. High labour cost (Rank VIII) and non-availability of quality planting materials (Rank IX) was accorded the last two ranks by the respondents. The Karnataka State Department of Horticulture should address the above production problems of farmers for the development of favourable attitude towards rose cultivation.

It can be concluded from the study results that a majority of the farmers (51.67 %) were possessing more favourable attitude towards rose cultivation, whereas 31.67 and less than one-fifth (16.66 %) of the rose growers were possessing favourable and less favourable attitude, respectively. It was also found that mass media participation extension agency contact and extension participation of farmers had significant to highly significant association with their attitude towards rose cultivation. Seed money to farmers who are willing to take up rose cultivating, timely credit facilities, subsidy for agro-chemicals, availability of adequate quantity of planning materials and training on recommended rose cultivation practices would help the farmers in developing favourable attitude towards rose cultivation leading to adoption of more recommended rose cultivation practices for getting higher yield and income.

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