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MANAGERIAL BEHAVIOUR OF FLOWER GROWERS IN CHITRADURGA DISTRICT OF KARNATAKA

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ABSTRACT
Flowers are important commercial horticultural crops that contribute to farm income, employment generation and livelihood diversification. Effective managerial behaviour is essential for the efficient utilization of farm resources, timely execution of cultivation practices and informed decision-making in flower production. The present study was conducted to assess the managerial behaviour of flower growers cultivating tuberose (*Polianthes tuberosa*), chrysanthemum (*Chrysanthemum morifolium*) and marigold (*Tagetes* spp.) in Chitradurga district of Karnataka. An ex-post facto research design was adopted, and data were collected through personal interviews using a structured interview schedule from 240 respondents, comprising 80 growers each of tuberose, chrysanthemum and marigold. Managerial behaviour was assessed across seven dimensions, namely planning, organizing, decision-making, farm supervision, coordination, labour management and financial management. The data were analysed using frequency, percentage, mean and standard deviation. The results revealed that 47.50 per cent of tuberose growers exhibited high overall managerial behaviour, whereas medium managerial behaviour predominated among chrysanthemum growers (38.75 %) and marigold growers (43.75 %). The findings indicate that managerial behaviour varied across the three groups of flower growers, with tuberose growers showing a comparatively higher level of overall managerial behaviour. The presence of a considerable proportion of growers in the low and medium categories highlights the need for further improvement in managerial competencies. Emphasis should be placed on strengthening planning, decision-making, coordination and financial management through crop-specific training programmes, practical demonstrations

INTRODUCTION
Flowers have an important place in human life and are closely associated with religious ceremonies, festivals, weddings, social functions and cultural traditions. Beyond their aesthetic and cultural significance, flowers have emerged as valuable commercial commodities that contribute to agricultural diversification, employment generation and rural livelihood development. Floriculture provides farmers with opportunities to diversify their cropping systems, generate income and participate in domestic and international markets. However, flower cultivation involves production and marketing challenges owing to the perishable nature of flowers, seasonal fluctuations in demand and price variability. Therefore, the successful management of floriculture enterprises requires efficient utilization of resources, timely execution of cultivation practices and appropriate marketing decisions (Vahoniya *et al.,* 2018).

The floriculture sector in India has expanded considerably in terms of cultivated area and production. According to the final estimates for 2024–25, the area under floriculture reached approximately 397.89 thousand hectares, with production of 3,226.20 thousand tonnes of loose flowers and 1,039.29 thousand tonnes of cut flowers. Karnataka accounted for approximately 10.36 per cent of the national floriculture area, highlighting its importance in commercial flower cultivation (Anonymous, 2026). The sector offers opportunities for employment generation, income diversification and improved livelihood security. However, realizing these opportunities depends not only on production practices but also on the ability of growers to manage farm resources and respond effectively to changing production and market conditions.

Chitradurga district of Karnataka represents an important setting for studying commercial flower cultivation. The district's semi-arid conditions and increasing interest in floriculture have contributed to the cultivation of crops such as chrysanthemum, tuberose and marigold. According to district-level horticultural statistics for 2024–25, chrysanthemum occupied 1,964 hectares, followed by tuberose at 249 hectares and marigold at 137 hectares (Anonymous, 2024). These crops differ in their cultivation practices, labour requirements, harvesting schedules and marketing arrangements, creating varied management requirements for growers. Effective management is therefore important for coordinating farm operations, utilizing available resources and maintaining the economic viability of flower-growing enterprises.

Managerial behaviour plays an important role in the effective functioning of agricultural enterprises. It reflects how farmers manage their resources, organize farm activities and make decisions concerning production and other farm operations. Previous studies have examined management efficiency among cut-flower growers (Birajdar,

2012; Madhukar, 2012), while Sangeetha (1997) investigated the managerial behaviour of commercial banana growers. Balaganoormath et al. (2017) also examined the managerial abilities of successful and unsuccessful agripreneurs, highlighting the relevance of management competencies in agricultural enterprises. These studies provide a basis for examining managerial behaviour in floriculture, where the effective management of farm activities is essential for responding to production and marketing requirements.

In view of the importance of floriculture and the management challenges faced by flower growers, the present study was undertaken entitled "Managerial Behaviour of Flower Growers in Chitradurga District of Karnataka." The study aimed to assess the managerial behaviour of growers cultivating tuberose, chrysanthemum and marigold, examine their overall managerial behaviour and compare the three groups of flower growers.

METHODLOGY

The study was conducted in Chitradurga district of Karnataka, India, using an ex-post facto research design. The district was purposively selected based on the prevalence of tuberose (*Polianthes tuberosa*), chrysanthemum (*Chrysanthemum morifolium*) and marigold (*Tagetes* spp.) cultivation. For tuberose, Challakere and Hiriyur taluks were selected; for chrysanthemum, Chitradurga and Challakere taluks were selected; and for marigold, Challakere and Hiriyur taluks were selected. Four villages were selected from each taluk for each respective crop, and ten growers were randomly selected from each village using simple random sampling, resulting in a total sample of 240 respondents, comprising 80 growers for each crop. Primary data were collected through personal interviews using a structured interview schedule. Managerial behaviour was assessed across seven dimensions: planning, organizing, decision-making, farm supervision, labour management, coordination and financial management. Respondents were classified into low, medium and high managerial behaviour categories based on the mean and standard deviation. The data were analysed using frequency, percentage, mean and standard deviation, while the Kruskal–Wallis test was used to compare managerial behaviour among the three groups of flower growers.

RESULT AND DISCUSSION

Statement-wise distribution of managerial behaviour of flower growers

Managerial behaviour of flower growers in Planning

Table 1: Statement wise managerial behaviour of flower growers in Planning (n=240)

Sl. No.	Statements	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		MS	R	MS	R	MS	R
1	Setting an objective of profit target from the crop	2.90	X	2.45	X	2.40	X
2	Consulting a horticulture expert for the crop planning	1.91	XI	1.95	XI	1.79	XI
3	Preparing calendar of various operations of crop cultivation well in advance	3.74	IV	3.60	III	2.93	V
4	Working out operation-wise expenditure before the cultivation starts	3.44	VII	3.05	VIII	2.75	VII
5	Assessing the amounts of inputs needed for raising the crop	3.81	I	3.64	II	3.16	III
6	Estimating the labour requirements	3.40	VIII	3.31	V	2.88	VI
7	Estimating the financial requirements	3.76	III	3.08	VII	2.94	IV
8	Calculating the finance in possession and to be acquired before cultivation starts	3.65	V	3.44	IV	3.26	II
9	Adjusting sowing and planting time to ensure flowers are available during festivals when demand is high	3.41	VI	3.88	I	4.01	I
10	Locating different sources of availability of credit and rate of interest	3.01	IX	2.99	IX	2.71	IX
11	Planning for increasing or decreasing the total area of cultivation in future	3.78	II	3.25	VI	2.74	VIII

Note: MS = Mean score and R = Rank

The results presented in Table 1 revealed that, among tuberose growers, assessing the amount of inputs required for raising the crop ranked first with a mean score of 3.81, followed by planning for increasing or decreasing the area under cultivation in the future (3.78) and estimating financial requirements (3.76). Preparing a calendar of cultivation operations well in advance ranked fourth (3.74), followed by calculating the available and required finance before cultivation (3.65), working out operation-wise expenditure before cultivation (3.44), adjusting planting time to ensure flower availability during festivals (3.41), estimating labour requirements (3.40), identifying sources of credit and interest rates (3.01), setting a profit target (2.90), and consulting a horticultural expert for crop planning (1.91), which ranked last.

Among chrysanthemum growers, adjusting sowing and planting time to ensure flower availability during festivals ranked first with a mean score of 3.88, followed by assessing input requirements (3.64), preparing a calendar of

cultivation operations in advance (3.60), calculating available and required finance before cultivation (3.44), estimating labour requirements (3.31), planning future changes in cultivated area (3.25), estimating financial requirements (3.08), working out operation-wise expenditure (3.05), identifying sources of credit and interest rates (2.99), setting a profit target (2.45), and consulting a horticultural expert (1.95), which ranked last. In the case of marigold growers, adjusting planting time to coincide with festivals ranked first with a mean score of 4.01, followed by calculating available and required finance (3.26), assessing input requirements (3.16), estimating financial requirements (2.94), preparing a calendar of cultivation operations (2.93), estimating labour requirements (2.88), working out operation-wise expenditure (2.75), planning future changes in cultivated area (2.74), identifying sources of credit and interest rates (2.71), setting a profit target (2.40), and consulting a horticultural expert (1.79), which ranked last.

The findings indicate that planning priorities differed according to the requirements of the three flower crops. Tuberose growers placed greater emphasis on input assessment, future area planning and financial requirements, whereas chrysanthemum and marigold growers prioritised the timing of planting to coincide with festivals, reflecting the importance of seasonal demand in flower cultivation. Across all three groups, consulting a horticultural expert received the lowest mean score, suggesting scope for improving access to expert guidance and strengthening systematic crop planning. Greater attention to profit-target setting, expenditure estimation and credit planning could further support more effective managerial practices among flower growers.

Managerial behaviour of flower growers in Organizing

Table 2: Statement wise managerial behaviour of flower growers in Organizing (n=240)

Sl. No.	Statements	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		MS	R	MS	R	MS	R
1	Enumerate the farm activities before hand	3.55	IV	3.16	V	3.15	IV
2	Assign the works to farm labourers based on priorities	2.74	VI	2.24	VII	2.46	VII
3	Organize all necessary inputs for their timely use	3.70	III	3.26	IV	2.94	V
4	Provide needful facilities to farm workers to increase efficiency	4.00	II	3.39	II	3.83	II
5	Organize timely marketing of farm produce	4.34	I	4.38	I	4.41	I
6	Arrange proper storage	2.73	VII	2.60	VI	3.24	III
7	Ensure transportation facilities	3.35	V	3.38	III	2.80	VI

Note: MS = Mean score and R = Rank

The results presented in Table 2 revealed that, among tuberose growers, organizing the timely marketing of farm produce ranked first with a mean score of 4.34, followed by providing necessary facilities to farm workers to increase their efficiency (4.00) and organizing all necessary inputs for timely use (3.70). Enumerating farm activities beforehand ranked fourth (3.55), followed by ensuring transportation facilities (3.35), assigning work to farm labourers based on priorities (2.74) and arranging proper storage (2.73), which ranked last. Among chrysanthemum growers, organizing timely marketing of farm produce ranked first with a mean score of 4.38, followed by providing necessary facilities to farm workers (3.39), ensuring transportation facilities (3.38), organizing inputs for timely use (3.26), enumerating farm activities beforehand (3.16), arranging proper storage (2.60) and assigning work to farm labourers based on priorities (2.24). Similarly, among marigold growers, organizing timely marketing of farm produce ranked first with a mean score of 4.41, followed by providing necessary facilities to farm workers (3.83), arranging proper storage (3.24), enumerating farm activities beforehand (3.15), organizing inputs for timely use (2.94), ensuring transportation facilities (2.80) and assigning work to farm labourers based on priorities (2.46), which ranked last.

The findings indicate that timely marketing was the most prominent organizing practice among all three groups of flower growers, highlighting the importance of coordinating farm activities with the timely disposal of highly perishable flower produce. Providing necessary facilities to farm workers also received relatively high scores, suggesting the importance of maintaining labour efficiency during cultivation and harvesting. However, assigning work to farm labourers based on priorities received comparatively low scores among all three groups, indicating scope for improving labour allocation and work organization. Greater attention to advance enumeration of farm activities, timely arrangement of inputs, storage and transportation facilities could further strengthen the organizing abilities of flower growers.

Managerial behaviour of flower growers in Decision making

Table 3: Statement wise managerial behaviour of flower growers in Decision making (n=240)

Sl. No.	Statements	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		MS	R	MS	R	MS	R
1	Making the decision on the area to be allocated for growing flower crop each year	3.71	III	3.78	II	4.19	I
2	Making timely decision related to flower crop production	3.73	II	3.49	III	3.41	III
3	Consulting with the persons/experts before making decisions related to farming flower production practices	2.21	IV	2.83	IV	2.16	IV
4	Consider all possible alternatives before arriving at a decision related to flower production	1.69	V	1.75	V	1.90	V
5	Evaluating past experiences and previous crop outcomes before making present decisions	4.30	I	3.85	I	3.93	II

Note: MS = Mean score and R = Rank

The results presented in Table 3 revealed that, among tuberose growers, evaluating past experiences and previous crop outcomes before making present decisions ranked first with a mean score of 4.30, followed by making timely decisions related to flower crop production (3.73) and deciding the area to be allocated for flower cultivation each year (3.71). Consulting persons or experts before making decisions related to flower production practices ranked fourth with a mean score of 2.21, while considering all possible alternatives before arriving at a decision ranked fifth with a mean score of 1.69. Among chrysanthemum growers, evaluating past experiences and previous crop outcomes ranked first with a mean score of 3.85, followed by deciding the area to be allocated for flower cultivation (3.78), making timely production-related decisions (3.49), consulting persons or experts before making decisions (2.83), and considering all possible alternatives (1.75). In the case of marigold growers, deciding the area to be allocated for flower cultivation ranked first with a mean score of 4.19, followed by evaluating past experiences and previous crop outcomes (3.93), making timely production-related decisions (3.41), consulting persons or experts before making decisions (2.16), and considering all possible alternatives before arriving at a decision (1.90).

The findings indicate that tuberose and chrysanthemum growers relied primarily on their past experiences and previous crop outcomes while making farm decisions, whereas marigold growers gave greater importance to deciding the area allocated for cultivation. Timely decision-making related to flower production also received relatively high scores across all three groups, highlighting its importance in managing crop operations. However, considering all possible alternatives before making decisions received the lowest mean score among growers of all three crops, suggesting scope for strengthening systematic evaluation of alternatives and consultation with knowledgeable persons before making important farm-level decisions.

Managerial behaviour of flower growers in Farm supervision

Table 4: Statement wise managerial behaviour of flower growers in Farm supervision (n=240)

Sl. No.	Statements	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		MS	R	MS	R	MS	R
1	Examining the flower seedling for its quality before planting	3.83	VI	3.59	VI	3.35	VI
2	Supervising the farm operations regularly	4.00	V	3.61	IV	3.58	V
3	Visiting the field regularly	4.04	III	3.99	I	3.98	I
4	Supervising the irrigation of flower crops regularly	4.15	I	3.81	II	3.65	III
5	Keeping watch for pest attacks in flower crops regularly	4.13	II	3.61	IV	3.88	II
6	Keeping watch for disease attacks in flower crops regularly	4.03	IV	3.64	III	3.66	III

Note: MS = Mean score and R = Rank

The results presented in Table 4 revealed that, among tuberose growers, supervising the irrigation of flower crops regularly ranked first with a mean score of 4.15, followed by keeping watch for pest attacks (4.13) and visiting the field regularly (4.04). Keeping watch for disease attacks ranked fourth with a mean score of 4.03, followed by

supervising farm operations regularly (4.00) and examining the quality of flower seedlings before planting (3.83), which ranked sixth. Among chrysanthemum growers, visiting the field regularly ranked first with a mean score of 3.99, followed by supervising irrigation (3.81), keeping watch for disease attacks (3.64), supervising farm operations regularly and monitoring pest attacks (3.61 each) and examining seedling quality before planting (3.59), which ranked last. Similarly, among marigold growers, visiting the field regularly ranked first with a mean score of (3.98), followed by keeping watch for pest attacks (3.88), keeping watch for disease attacks (3.66), supervising irrigation (3.65), supervising farm operations regularly (3.58) and examining the quality of flower seedlings before planting (3.35), which ranked last.

The findings indicate that farm supervision practices varied slightly across the three groups of flower growers. Tuberose growers placed greater emphasis on irrigation supervision and pest monitoring, whereas chrysanthemum and marigold growers prioritised regular field visits. The relatively high scores for monitoring pest and disease attacks across all three crops highlight the importance of regular observation in identifying crop problems and facilitating timely management. However, the comparatively lower scores for examining seedling quality before planting suggest scope for greater attention to the quality of planting material. Strengthening regular field supervision and systematic monitoring of crop health could further improve farm management practices among flower growers.

Managerial behaviour of flower growers in Labour management

Table 5: Statement wise managerial behaviour of flower growers in Labour management (n=240)

Sl. No.	Statements	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		MS	R	MS	R	MS	R
1	Evaluating the labour efficiency by assessing the amount of work accomplished per unit time	3.66	II	3.19	III	3.45	III
2	Using available family labour at appropriate time and operation	4.03	I	3.75	I	3.75	I
3	Fixing labourers well in advance to overcome the constraint of labour availability for the operation planned	3.29	IV	3.58	II	2.98	IV
4	Providing necessary amenities in the field itself for the labourer to reduce the wastage of time by the labourers	3.59	III	3.01	IV	3.53	II

The results presented in Table 5 revealed that, among tuberose growers, using available family labour at the appropriate time and for the required operation ranked first with a mean score of 4.03, followed by evaluating labour efficiency by assessing the amount of work accomplished per unit time (3.66), providing necessary amenities in the field to reduce labourers' time wastage (3.59), and fixing labourers well in advance to overcome labour availability constraints (3.29). Among chrysanthemum growers, using available family labour at the appropriate time and for the required operation ranked first with a mean score of (3.75), followed by fixing labourers well in advance (3.58), evaluating labour efficiency (3.19) and providing necessary field amenities to reduce time wastage (3.01). Similarly, among marigold growers, using available family labour at the appropriate time and for the required operation ranked first with a mean score of 3.75, followed by providing necessary amenities in the field to reduce labourers' time wastage (3.53), evaluating labour efficiency (3.45), and fixing labourers well in advance to overcome labour availability constraints (2.98).

The findings indicate that the effective utilization of available family labour was the most prominent labour management practice across all three groups of flower growers. This may reflect the importance of family labour in carrying out timely farm operations. Tuberose growers gave comparatively greater importance to assessing labour efficiency, while chrysanthemum growers emphasized arranging labourers in advance. Marigold growers placed greater emphasis on providing field amenities to reduce time wastage. The comparatively lower scores for advance labour arrangements among tuberose and marigold growers suggest scope for improving labour planning to ensure the timely completion of farm operations.

Managerial behaviour of flower growers in Coordination

Table 6: Statement wise managerial behaviour of flower growers in Coordination (n=240)

Sl. No.	Statements	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		MS	R	MS	R	MS	R

1	Arrange all the inputs at right time and right place for carrying out farm operations	3.75	IV	3.61	IV	3.89	III
2	Maintain good relations with workers for timely progress of the farm operations	3.95	II	3.85	II	3.75	IV
3	Synchronize credit with farm operations for better utilization	3.11	V	3.05	V	2.64	V
4	Seek neighbour's cooperation for smooth running of the farm	1.69	VIII	1.73	VIII	2.19	VI
5	Maintain good relations with extension personnel	2.38	VI	2.49	VI	2.09	VIII
6	Maintain good relations with marketing agencies	3.81	III	4.06	I	4.11	II
7	Maintain good relations with input agencies	4.15	I	3.76	III	4.16	I
8	Ensure good human relations with all government officials	1.94	VII	2.00	VII	2.19	VII

Note: MS = Mean score and R = Rank

The results presented in Table 6 revealed that, among tuberose growers, maintaining good relations with input agencies ranked first with a mean score of 4.15, followed by maintaining good relations with workers for the timely progress of farm operations (3.95), maintaining good relations with marketing agencies (3.81), arranging all inputs at the right time and place for carrying out farm operations (3.75), synchronizing credit with farm operations for better utilization (3.11), maintaining good relations with extension personnel (2.38), ensuring good human relations with all government officials (1.94), and seeking neighbours' cooperation for the smooth running of the farm (1.69). Among chrysanthemum growers, maintaining good relations with marketing agencies ranked first with a mean score of 4.06, followed by maintaining good relations with workers for the timely progress of farm operations (3.85), maintaining good relations with input agencies (3.76), arranging all inputs at the right time and place for carrying out farm operations (3.61), synchronizing credit with farm operations for better utilization (3.05), maintaining good relations with extension personnel (2.49), ensuring good human relations with all government officials (2.00), and seeking neighbours' cooperation for the smooth running of the farm (1.73). Similarly, among marigold growers, maintaining good relations with input agencies ranked first with a mean score of 4.16, followed by maintaining good relations with marketing agencies (4.11), arranging all inputs at the right time and place for carrying out farm operations (3.89), maintaining good relations with workers for the timely progress of farm operations (3.75), synchronizing credit with farm operations for better utilization (2.64), seeking neighbours' cooperation for the smooth running of the farm (2.19), ensuring good human relations with all government officials (2.19), and maintaining good relations with extension personnel (2.09).

The findings indicate that coordination among flower growers was primarily oriented towards maintaining relationships with input and marketing agencies and workers, which are essential for the timely availability of inputs and smooth marketing of produce. Input agency relations were particularly prominent among tuberose and marigold growers, whereas chrysanthemum growers placed the highest importance on relations with marketing agencies. In contrast, coordination with extension personnel, government officials and neighbouring farmers received relatively lower scores across the crops, indicating scope for strengthening institutional linkages and cooperation among farmers to improve farm management.

Managerial behaviour of flower growers in Financial management

Table 7: Statement wise managerial behaviour of flower growers in Financial management (n=240)

Sl. No.	**Statements**	**Tuberose (n_1=80)**		**Chrysanthemum (n_2=80)**		**Marigold (n_3=80)**	
		MS	**R**	**MS**	**R**	**MS**	**R**
1	Recording the expenditure incurred in various operations	3.61	II	3.33	II	3.50	II
2	Recording the income obtained from sales of produce	3.76	I	3.41	I	3.58	I
3	Calculating the profit or loss in the cultivation	2.63	III	2.51	IV	2.14	IV
4	Fixing wages for labourers based on quantum of work turned out	2.16	V	2.39	V	1.91	V
5	Preparing budget for each season of cultivation	2.19	IV	2.68	III	2.33	III

Note: MS = Mean score and R = Rank

The results presented in Table 7 revealed that, among tuberose growers, recording the income obtained from sales of produce ranked first with a mean score of 3.76, followed by recording the expenditure incurred in various

operations (3.61), calculating the profit or loss in cultivation (2.63), preparing a budget for each season of cultivation (2.19), and fixing wages for labourers based on the quantum of work turned out (2.16). Among chrysanthemum growers, recording the income obtained from sales of produce ranked first with a mean score of 3.41, followed by recording the expenditure incurred in various operations (3.33), preparing a budget for each season of cultivation (2.68), calculating the profit or loss in cultivation (2.51), and fixing wages for labourers based on the quantum of work turned out (2.39). Similarly, among marigold growers, recording the income obtained from sales of produce ranked first with a mean score of 3.58, followed by recording the expenditure incurred in various operations (3.50), preparing a budget for each season of cultivation (2.33), calculating the profit or loss in cultivation (2.14), and fixing wages for labourers based on the quantum of work turned out (1.91). The findings indicate that flower growers placed greater emphasis on maintaining records of income and expenditure than on other financial management practices. This suggests that growers were relatively more attentive to tracking cash inflows and cultivation expenses, while systematic budgeting and profit-or-loss calculations received comparatively less attention. Fixing labour wages according to the quantum of work performed was the lowest-ranked practice across all three crops, indicating scope for improving financial planning, cost assessment and labour-related financial management to support better farm-level decision-making.

Dimension wise distribution managerial behaviour of the flower growers

Table 8: Dimension wise distribution for managerial behaviour of the flower growers (n=240)

Sl. No.	Managerial behaviour indicators	Category	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
			f	%	*f*	%	*F*	%
1	Planning Mean = 34.50 S.D = 4.69	Low (<32.16)	17	21.25	23	28.75	20	25.00
		Medium (32.16-36.85)	35	43.75	32	40.00	36	45.00
		High (> 36.85)	28	35.00	25	31.25	24	30.00
2	Organizing Mean = 23.23 S.D = 3.43	Low (<21.52)	17	21.25	27	33.75	26	32.50
		Medium (21.52-24.95)	24	30.00	32	40.00	32	40.00
		High (>24.95)	39	48.75	21	26.25	22	27.50
3	Decision making Mean = 15.60 S.D = 2.38	Low (<14.41)	25	31.25	23	28.75	25	31.25
		Medium (14.41-16.80)	28	35.00	30	37.50	26	32.50
		High (>16.80)	27	33.75	27	33.75	29	36.25
4	Farm supervision Mean = 22.83 S.D = 2.77	Low (< 21.44)	13	16.25	28	35.00	30	37.50
		Medium (21.44-24.21)	25	31.25	41	51.25	38	47.50
		High (>24.21)	42	52.50	11	13.75	12	15.00
5	4. Labour management Mean = 13.93 S.D = 2.41	Low (< 12.73)	14	17.50	27	33.75	25	31.25
		Medium (12.73-15.14)	37	46.25	34	42.50	34	42.50
		High (>15.14)	29	36.25	19	23.75	21	26.25
6	Coordination Mean = 24.79 S.D = 2.98	Low (<23.30)	23	28.75	31	38.75	26	32.50
		Medium (23.30- 26.28)	36	45.00	28	35.00	29	36.25
		High (> 26.28)	21	26.25	21	26.25	25	31.25
7	Financial management Mean = 13.93 S.D = 2.75	Low (<12.55)	20	25.00	17	21.25	26	32.50
		Medium (12.55- 15.30)	36	45.00	38	47.50	37	46.25
		High (>15.30)	24	30.00	25	31.25	17	21.25

Note: f = Frequency and % = Percentage

The results presented in Table 13 revealed that the distribution of flower growers across managerial behaviour dimensions varied among the three crops. In planning, the majority of tuberose (43.75 %), chrysanthemum (40.00 %) and marigold growers (45.00 %) belonged to the medium category. In organizing, nearly half of the tuberose growers (48.75 %) exhibited a high level, whereas the majority of chrysanthemum and marigold growers (40.00 % each) belonged to the medium category. Regarding decision-making, the medium category accounted for the highest proportion of chrysanthemum growers (37.50 %), while the high category was more prominent among marigold growers (36.25 %); tuberose growers were predominantly in the medium category (35.00 %). In farm supervision, a majority of tuberose growers (52.50 %) belonged to the high category, whereas most chrysanthemum (51.25 %) and marigold growers (47.50 %) were in the medium category. For labour

management, the medium category predominated among tuberose (46.25 %), chrysanthemum (42.50 %) and marigold growers (42.50 %). Similarly, medium-level coordination was observed among 45.00 per cent of tuberose growers, while the largest proportions of chrysanthemum (38.75 %) and marigold growers (36.25 %) were in the low and medium categories, respectively. In financial management, the medium category was predominant among tuberose (45.00 %), chrysanthemum (47.50 %) and marigold growers (46.25 %).

Overall distribution of managerial behaviour of flower growers

Table 8: Overall managerial behaviour flower growers (n=240)

Sl. No.	Category	Tuberose (n_1=80)		Chrysanthemum (n_2=80)		Marigold (n_3=80)	
		f	*%*	*%*	*f*	*%*	*%*
1	Low (< 143.63)	11	13.75	27	33.75	28	35.00
2	Medium (143.63- 153.81)	31	38.75	31	38.75	35	43.75
3	High (>153.81)	38	47.50	22	27.50	17	21.25
Mean = 148.72 S D = 10.18							

Note: f = Frequency and % = Percentage

The results presented in Table 8 revealed that the overall managerial behaviour of flower growers varied across the three crops. Among tuberose growers, the highest proportion (47.50 %) belonged to the high managerial behaviour category, followed by 38.75 per cent in the medium category and 13.75 per cent in the low category. In contrast, among chrysanthemum growers, 38.75 per cent belonged to the medium category, followed by 33.75 per cent in the low category and 27.50 per cent in the high category. Similarly, among marigold growers, the majority (43.75%) belonged to the medium category, while 35.00 per cent and 21.25 per cent belonged to the low and high categories, respectively. The overall mean and standard deviation of managerial behaviour scores were 148.72 and 10.18, respectively.

The findings indicate that tuberose growers exhibited comparatively better overall managerial behaviour than chrysanthemum and marigold growers, as a greater proportion of them fell within the high category. However, the predominance of medium-level managerial behaviour among chrysanthemum and marigold growers, along with the considerable proportion in the low category, suggests that further improvement in managerial capabilities is necessary. Hence, targeted training, demonstrations and extension support focusing on planning, organizing, decision-making, farm supervision, labour management, coordination and financial management may help growers strengthen their managerial practices and improve the overall performance and profitability of flower cultivation.

Comparative analysis of managerial behaviour of flower growers

Table 9: Comparative analysis of managerial behaviour of flower growers (n=240)

Sl.No.	Category	Sample size	Mean rank	Chi-square
1	Tuberose	80	160.21	43.417***
2	Chrysanthemum	80	111.78	
3	Marigold	80	89.51	

Note: Significance at 1 per cent level

The results presented in Table 9 revealed a statistically significant difference in the overall managerial behaviour of flower growers across the three crops, as indicated by the Kruskal–Wallis test ($\chi^2 = 43.417$, df = 2, $p < 0.001$). Among the three groups, tuberose growers recorded the highest mean rank (160.21), followed by chrysanthemum growers (111.78) and marigold growers (89.51). The higher mean rank of tuberose growers indicates comparatively higher managerial behaviour scores, while marigold growers recorded the lowest mean rank.

The findings suggest that managerial behaviour differed significantly among flower growers cultivating different crops, with tuberose growers exhibiting comparatively stronger managerial capabilities than chrysanthemum and marigold growers. These differences may be associated with variations in crop management requirements, production practices, labour utilization and marketing activities. However, the Kruskal–Wallis test establishes an overall difference among the three groups and does not, by itself, identify which specific pairs of crops differ significantly. Therefore, post-hoc pairwise comparisons would be required to establish the significance of differences between individual crop groups.

CONCLUSION

The study revealed variations in the managerial behaviour of flower growers cultivating tuberose, chrysanthemum and marigold in Chitradurga district of Karnataka. Tuberose growers exhibited comparatively better overall managerial behaviour, followed by chrysanthemum and marigold growers. Dimension-wise findings indicated that tuberose growers demonstrated strengths in organizing and farm supervision, whereas medium-level

managerial behaviour predominated across several dimensions among chrysanthemum and marigold growers. However, the presence of a considerable proportion of growers in the low and medium categories highlights the need for further improvement in managerial competencies. Particular emphasis should be placed on strengthening planning, decision-making, coordination and financial management through crop-specific training programmes, practical demonstrations and continuous extension support. Enhancing farmers' capabilities in resource allocation, labour utilization, financial planning and market coordination can contribute to more efficient farm operations, improved profitability and sustainable development of the floriculture sector in the district. Therefore, crop-specific extension interventions and continuous managerial guidance are essential to enhance the managerial competence of flower growers.

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