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A Study on Cost and Return of Marigold Flower in Tiruchirapplli District of Tamilnadu

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Abstract

Agriculture work is the largest sector in the world economy particularly many developing countries. Most of the developing countries have to depend much upon the field of agriculture for their economic development in order to overlook the raw-materials demand for food and agricultural, to earn more foreign exchange for overhead investment and expansion of domestic industries, to meet the growing demand for employment opportunities and to raise cash on hand income of rural people to stimulate industrial expansion. World is so beautiful only with flowers. Flowers playing pivotal role in every celebration, irrespective of the sex, race, religion, community and country. In India the attachment towards the flowers is very significant as it is a near necessary consumption to the people. The age-old culture, paintings, art and craft, ideas, emotions, religion, philosophy and social customs exhibit their memory haunting filled and association with flowers. In short, flowers have played an important role in the course of human civilization and social development and are inseparable from the social fabric of human life. Flowers being adorable creation of God, benefits all occasions, be it at birth, marriage or death. In the past, flowers were not of much economic importance. India has evolved from an agricultural country to a growing economy. In India, agricultural work is carried out by less than forty percent of the total population.

Keywords: *World Economy, Economic Development, Foreign Exchange, Overhead Investment.*

Introduction

Today, it can be said that flowers have become an indispensable item in human life and a daily necessity. We should remember here that fragrant flowers have been cultivated in Tamil Nadu since the Sangam period, as mentioned in the Paripadal. Flower cultivation is brought under the horticulture department of agriculture and is maintained. Floriculture is included in the list of commercial crops. Although there are many types of flowers, the flowers grown in Tamil Nadu have a unique feature today. Flowers with a fragrant and captivating aroma are cultivated in significant areas in the southern districts of Tamil Nadu. It is cultivated in large quantities, especially in the districts of Kanyakumari, Madurai, Theni, Dindigul, Namakkal, Karur and Tiruchirappalli. Flowers' ritualistic contribution to home decoration,

festival seasons, and various sectoral celebrations is inevitable. Most of the flower farmers in Tamil Nadu are small farmers. The costs of cultivating flowers have become more expensive than the income these days. On that basis, this article has been prepared based on research conducted in flower cultivation villages within the Anthanallur Panchayat Union area of Trichirappalli district of Tamil nadu.

Statement of the Problem

Tiruchirappalli District has been a renowned centre for flower production and marketing. Though Tiruchirappalli District is known for flower productions since time immemorial it still maintains its uniqueness. Marigold flower demand is increasing day by day. In spite of all these, the flower market in Tiruchirappalli District still remains under developed. There is no adequate special area earmarked for a flower market in Tiruchirappalli District. The present flower markets (Srirangam and Ghandhi Market) is operating at a place covering small area devoid of facilities like electricity, cold storage, proper toilets, water taps, weighing arrangements and waiting sheds. There is no protection from rain or shine for the traders. In the absence of cold storage facilities and seasoning facilities, it has been found very difficult to protect marigold flowers from dehydration. This trend very often flay in the face of marigold flower producers in Tiruchirappalli District. It dampens their interest resulting in unavoidable slumps in flower production. The present study is focussed on the production costs and income returns by marketing of marigold flowers in Tiruchirapplli district of Tamilnadu. Hence, the present study also deals with area under marigold flowers cultivation, volume of marigold flower production and cultivation cost structure and how it generates employment, income to the individual flower farmers and also deals with the cultivation pattern of marigold flower with special reference to Thuraiyur, Marungapuri and Vaiyampatti Blocks in Tiruchirappalli district.

Importance of the Study

Trichirapplli district is considered to be a spiritually developed region. The flower cultivation lands in Thuraiyur, Marungapuri and Vaiyampatti blocks area have fertile soil type. Flower varieties like jasmine, Crysanthemum and marigold, vadamalli, kozhikondai, rose, and sammangi are cultivated in large quantities in this area. The fertile soil in this area is a natural gift. Flowers are cultivated here using both traditional and modern methods. Cultivation costs are high in both methods. There are major problems with the availability of workers for flower and plant maintenance tasks. Workers are reluctant to work in this industry because the wages are low. Floriculture is an industry that provides employment only for a limited number of days in a year. However, there is no way to reduce cultivation costs. There is a need in this industry to complete all types of cultivation work on time. Cultivational costs are inevitable. The present study is thus significant and it is expected to be useful not only to the farmers of flowers in Tamil Nadu but also to flower traders in different places in the study area. The result of the analysis of this study would be useful to the flower growing farmers to minimize the cost and will provide ways for getting more return.

Objectives of the Study

The general objective of the study is to assess the production costs and returns are as given below:

- To study the cost and returns of marigold flower in the study area.
- To analyze the problems faced by the marigold flower growers in the study area.
- To give suitable suggestions to improve the life of marigold flower growing farmers.

Hypotheses

- There is no significant between the age and various marigold flower production.
- There is no possibility of returns to scale for small and medium farmers in flowers cultivation.

Study Period

Various research articles on flower cultivation were supervised and many comments were taken for review. Both primary and secondary data were used for the study. A primary data questionnaire was prepared and information was obtained on the expenditure and income details of marigold flower cultivation. The primary data was collected from July 2025 to September 2025.

Methodology

There are fourteen blocks in Tiruchirappalli district. The present study is confined to Three blocks in Tiruchirappalli District of Tamil Nadu. Thuraiyur, Marungapuri and Vaiyampattiare the leading blocks in this districtin flowers cultivation especially marigold production. Hence, these three blocks has been chosen for the present study. The study was conducted in each block three villages wise totally fifteen villages with the help of well-structured questionnaire during July 2025 to August 2025. Multistage sampling method was applied in selection of farmers in the study area. For the study fifteen villages were selected because they were having highest share in the area under cultivation of rose, jasmine, marigold, chrysanthemum and crossandra in these three blocks . Among the three sample blocks 285 cultivators of the selected fifteen villages 115 flowers cultivating farmers have been identified. Out of these 115 flower growers (40 %) 46 marigold flower growing farmers were interviewed for conducting survey for this study. The secondary data is collected from Season and Crop Report of Government of Tamil Nadu and the district records of Tiruchirappalli District Statistical Office. Collected data were distributed in required type of tables. Simple average, percentage calculation analysis was made. For details on the cost of cultivating marigold flowers, Cost Category – A, Cost Category – B, Cost Category - C were used.

Cost Category – A1 represents all actual expenditures incurred in production by the producer.

Cost Category A2 = Cost Category A1 + Rent paid for leased-in land.

Cost Category B1 = Cost Category A1+ Interest on value of owned capital assets (excluding land) .

Cost Category B2 = Cost Category B1+ Rental value of owned land (net of land revenue) and rent paid for leased-in land.

Cost Category C1 = Cost Category B1 + imputed value of family labour.

Cost Category C2 = Cost Category B2 + imputed value of family labour.

Cost Category C3 = Cost Category C2 + 10 percent Cost Category C2.

Profile of Area Study

There are 14 panchayat unions in Tiruchirappalli district. Out of these, three Blocks namely, Thuraiyur, Marungapuri matrum, vaiyampatti were selected for the study. Among the three blocks five villages from each block totally 15 villages that are heavily engaged in flower cultivation were selected by proportionate sampling method used for field research. Thuraiyur block is situated in north part and bank of river cauvery of Tiruchirappalli district, Marungapuri and Vaiyampatti blocks are situated in the south and west part of the Tiruchirappalli district.

Table 1: G.Return (2015-2025) Tiruchirappalli District – Irrigated – Unirrigated

Total Flower Cultivation Crop Wise Area Details in Ha

S.No	Flowers	2015-16	2016-17	2017-18	2018-19	2021-22	2022-23	2023-24	2024-25
1	Rose	29	23	21	29	30	36	34	39
2	Jasmine	554	546	630	567	629	608	573	598
3	Mullai	12	36	31	21	26	31	31	41
4	Jadhimalli	6	21	36	16	6	8	3	4
5	Crosssandra	17	13	15	16	4	10	5	13
6	Crysanthemum	10	12	4	3	6	18	13	34
7	Chevanthi	98	76	77	59	55	157	44	83
8	Arali	10	20	24	14	34	53	67	73
9	Kozhikondai	9	32	30	30	45	41	32	83
10	Sendumalli	0	0	0	3	6	21	12	5
11	Mary Gold	0	6	4	2	15	6	16	22
12	Anthoorium	2	0	0	1	0	0	0	0
13	Sampangi	61	71	79	89	105	107	107	101
14	Kakada	0	1	0	1	1	2	0	3
15	Vaadamalli	3	0	1	0	0	0	0	0
16	Chembaruthi	0	0	0	0	0	0	0	0

17	Kaanthal	0	1	1	0	3	6	1	0
18	Pichi	50	67	68	85	76	114	96	111
19	Kethi	0	4	3	7	19	13	13	32
20	Marugu	0	2	0	0	0	1	0	2
21	Thazhambu	3	2	0	2	0	3	2	2
22	Nandhiyavattai	0	0	0	0	0	0	2	1
23	Others	0			0	0	0	47	42
Total Flowers Area in Hecters		864	933	1024	945	1060	1235	1098	1289

Source: Deputy Director of Statistics, Tiruchirappalli District July, 2025.

Table no: 1 emphasized that the major flowers area cultivated in Tiruchirappalli district details from 2015-2016 to 2024-2025. Periods of 2019-2020 and 2020-2021 years of area under flowers cultivation details due to Covid-19 are not available. Rose, Jasmine, Mullai, Crosssandra, Crysanthemum, Chevanthi, Sampangi, Pichi and Arali flowers area grown are noted in detailed. It is clearly known from this table that the area under flower cultivation has increased significantly in the years 2021-2022 to 2022 -2024 than the previous years. It can also be seen that the cultivated areas have increased significantly (1289 ha) due to the increase in groundwater levels due to increased rainfall last year.

Table 2: Tiruchirappalli District Block Wise Flower Cultivation Area in Ha (2024-2025)

S. No	Name of Block and Flower	Rose	Jasmine	Mullai	Jathimalli	Crossandra	Chrysan themum	Marygold	Nerium	Cock comb	Gomphrena	Ixora	Kakada	Tube rose	Nandhi yavanttai	Loose flower
1.	Andhanallur	11	252	0	0	0	2	0	1	0	0	18	0	0	0	284
2.	Lalgudi	1	1	0	0	0	0	2	0	0	0	18	0	16	0	38
3.	Manapparai	1	24	8	2	1	16	3	0	3	0	13	0	6	0	77
4.	Manikandan	3	26	0	0	0	0	0	0	0	0	12	0	0	0	41
5.	Manachanallur	3	34	18	1	0	7	3	12	6	0	22	2	22	1	131
6.	Marungapuri	5	0	0	0	0	36	19	0	0	0	0	0	0	0	60
7.	Musiri	0	28	1	0	0	0	2	18	10	0	24	0	5	0	88
8.	Pullambadi	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
9.	Thathaiengar pettai	0	13	0	0	0	0	0	0	0	0	0	0	2	0	15
10.	Thottiyam	0	175	0	0	0	0	0	2	0	0	1	0	0	0	178
11.	Thuraiyur	1	24	2	0	0	34	5	0	37	0	19	0	26	0	148
12.	Uppiliapuram	1	3	0	0	0	0	4	0	0	0	2	0	13	0	23
13.	Vaiyampatti	8	18	5	2	10	12	12	29	2	1	28	0	4	0	131
14.	Thiruvarambur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source : Deputy Director of Horticulture, Tiruchirappalli District Grand Total:1217

Farmers in the Vaiyampatti block are known to cultivate flowers as one of their primary crops, alongside millets and vegetables. Jasmine (Malli, Jathi malli, Mullai, Pitchi), marigold, tuberose, and nerium are major flower types grown in the broader region. Tiruchirappalli district as a whole has an estimated 800 hectares dedicated to flower cultivation. Jasmine is the most prominent flower crop in the district, accounting for more than half of the total flower area. Flower cultivation in the region provides significant income and employment opportunities, especially for small, marginal, and female farmers. Organizations like AHIMSA have worked with 1000 farmers across 45 villages in the Vaiyampatti block, who are predominantly engaged in cultivating these crops.

Results and Discussion

The economics of marigold crop is presented in table no: 3. It clearly shows that the cost of cultivation per hectare of marigold seed production. Overall, on an average the cost of cultivation charges incurred per hectare of marigold was marginal farmer Rs. 82345.00, small farmer cultivation charges incurred Rs.85588.00 and overall cultivation average charges incurred Rs.84595.00 ha.

Table 3: Various Input-wise Cost of Cultivation of Marigold Flower (Rs/ha)

Sl. No	Particulars	Marginal farmers	Small farmers	Overall
	Variable Costs			
1	Family labour	7011 (8.51)	3765 (4.40)	4760 (5.63)
2	Hired labour	20478 (24.87)	21492 (25.11)	21181 (25.04)
	Total labour cost	27489 (33.38)	25257 (29.50)	25941 (30.67)
3	Machine charges	5902 (7.17)	7084 (8.28)	6722 (7.95)
4	Planting Material	18562 (22.54)	20063 (23.44)	19603 (23.17)
5	Manures and Fertilizers	14600 (17.73)	15800 (18.46)	15432 (18.24)
6	Plant Protection	2877 (3.49)	3513 (4.10)	3318 (3.92)
7	Irrigation	3666 (4.45)	3772 (4.41)	3739 (4.42)
8	Interest on working capital	1542 (1.87)	1692 (1.98)	1646 (1.95)
	Total	**74639 (90.64)**	**77180 (90.18)**	**76401 (90.31)**
	Fixed Cost			
1	Revenue	12 (0.01)	12 (0.01)	12 (0.01)
2	Depreciation	112 (0.14)	125 (0.15)	121 (0.14)
3	Rental value of land	7333 (8.91)	8000 (9.35)	7796 (9.22)
4	Interest on fixed capital	249 (0.30)	271 (0.32)	264 (0.31)
	Total	**7706 (9.36)**	**8408 (9.82)**	**8193 (9.69)**
	Grand Total	**82345 (100.0)**	**85588 (100.0)**	**84595 (100.0)**

*Figure in Paranthesis show percentage

- **Cost concept at Sample Households**

The cultivation cost and farmer income returns on the basis of cost concept in the production of Marigoldis presented in Table no: 4 On an overall Cost-Category A1,Cost Category -A2 Cost Category-B1, Cost Category-B2, Cost Category-C1, Cost Category-C2 and Cost Category-3 as Rs.71774.48 per ha, Rs.71774.48 per ha, Rs72038.74 per ha, Rs.79834.60 per ha, Rs.76798.68 per ha, Rs.84594.37 per ha, and Rs.93053.27 per ha for marigold respectively, on the sample farmers. All costs were comparatively higher at small farmers followed by marginal farmers.

Table 4: Various Cost on the basis of Cost Concept at sample Households (Rs/ha)

Break up Cost	Marginal farmers	Small farmers	Overall
Cost category -A1(All actual expenses)	67751. 18	73551.38	71774.48
Cost category -A2 Cost A1 + Rent paid for leased-in land	67751. 18	73551.38	71774.48
Cost category B = Cost category A1+ Interest on fixed capital + rental value of land.	75333. 28	81823.15	79834.60
Cost category B1= Cost category A1+ Interest on value of owned fixed capital	67999. 38	73823.38	72038.74

Cost category B2 = Cost category B1+ Rental value of owned land and rent paid for leased-in land.	75333. 38	81823.40	79834. 60
Cost category C = Cost category B + Imputed value of family labour.	82344. 76	85588.30	84594. 05
Cost category C1 = Cost vB1 + Imputed value of family labour.	75011. 69	77588.47	76798. 68
Cost category C2 = Cost category B2 + Imputed value of family labour	82344. 13	85588.38	84594.37
Cost category C3 = Cost category C2 + 10% of cost category C2 on account of management function performed by farmer	90578. 26	94146.36	93053.27

- **Yield, Cost and return of Marigold at the Sample farmers**

The yield , value of output per hectare and cost of production per quintal of marigold on the sample farmers have been worked out in Table no.5. It depicts that the overall yield per hectare of marigold was 84.78 quintal on the sample farmers. The overall cost of cultivation per ha was Rs.84595.67. Net return was Rs.100555.99. family labour income was rs.105327.84. Farmers business income was Rs.113367.77 and farmers investment income was Rs. 108620.25

Table 5: Yield ,cost and return of Marigold at the Sample farmers (Rs/ha)

Sl.no	Partriculars	Marginal farmers	Small farmers	Overall
1	Average Yield (Quintal)	80	86	84.78
2	Average Price (Rs / kg)	22	22	22
3	Cost of Cultivation (Cost category C)	82344.48	85588.14	84595. 67
4	Cost of Production /Quintal	1029.30	995.21	1005.16
5	Gross Return	176000.23	189200.27	185152.12
6	Net Return	93655. 51	103611.87	100555.99
7	Family labour related income	100666.95	107376.97	105327.84
8	Family Business income	108248.51	115648.19	113367.77
9	Farm investment income	101237.43	111883.13	108620.25
10	Input Output - Ratio	1: 2.13	1: 2.21	1: 2.18
11	Benefit Cost Ratio (B-C Ratio)	1: 1.14	1: 1.21	1: 1.19

- **Income over different Cost at Sample farmers**

The incomes over different costs were also worked out (Table no.6). The overall per hectare income over Cost category-A1, Costcategory-A2, Costcategory-B1, cost category-B2, Cost category-C1, Cost category-C2 and Cost category-C3 calculated was Rs. 113378.57, Rs.113378.57, Rs.113123.28, Rs.105337.65, Rs.108358.43, Rs.100587.36 and Rs.92102.66 respectively.

Table 6: Farm Income over different Cost at Sample farmers

Slno	Income over different Costs	Marginal Farmers (Rs)	Small Farmers (Rs)	Overall(Rs)
1	Income over Cost category A1	108248.63	115648.25	113378.57
2	Income over Cost category A2	108248.78	115648.27	113378.57
3	Income over Cost category B1	107999.47	115376.62	113123.28
4	Income over Cost category B2	100666.48	107376.46	105337.65
5	Income over Cost category C1	100988.25	111611.35	108358.43
6	Income over Cost category C2	93655.65	103611.47	100587.36
7	Income over Cost category C3	85421. 45	95053. 47	92102.66

Challenges faced by Marigold Flower Growers

The major challenges faced by the flower growers especially marigold flower farmers are classified as follows: 1) Production Level Challenges 2) Climate related Challenges 3) Storage and Packing Challenges 4) Marketing and Transportation Challenges 5) Export Challenges.

- Production Level Challenges: Cultivation related problems, Planting problems, Watering problems, Fertilizer problems and Plucking problems.
- Climate related Challenges: Warm humid problems, Climate Change problems, Warmer Temperature problems, Poor rainfall problems, Wind related problems.
- Storage and Packing Challenges: Preserving related problems, insufficient Storage facility, Packing related problems, Collection related issues and other problems.
- Marketing and Transportation Challenges: Non-availability of adequate market facilities, Spaces for collection and storage goods, Transport vehicles rental related problems, Labour wage rate problems and Consumer Behaviour related to buying activities.
- Export Challenges: In Tamilnadu, the availability of export facilities are inadequate. There are no direct flights to international level of export markets. The exporters have to transport flowers through Airports of Tiruchy, Delhi, Mumbai or Chennai, where the available flights of connection to international level.

Conclusion

The average size of land holding of marigold flower growers was 1.12 ha.It calculated 0.72 ha for marginal level farmers and 1.51 ha for small land farmers. The overall total cropped area under cultivated flower was found to be 1.12 ha. The total cropped area for marginal level and small farmers observed to be 0.72 and 1.51 hectare, respectively. The cost of flower cultivation per hectare of marigold was calculated to be Rs.82344.48 and Rs.85588.14 for marginal size land holders and small size land holding farmers respectively. The average input-output ratio and benefit-cost ratio of marigold flower was calculated to be 1:2.18 and 1:1.19. The farmers having less quantity of marigold flower sold their produce to the commission agents at the rate of Rs.2200.00 per quital just after harvesting the marigold. This study has given a clear picture about the marketing problems faced by the marigold flower cultivators. The Government should provide the marketing facilities through the appropriate organizations to increase the marigold flower cultivation. Therefore government should take enough steps to reduce the marketing problems. The study revealed that the area and production of marigold flowers cultivation in Tamilnadu remains constant throughout of the study period but there is a fluctuation in the cultivation of marigold flowers.

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