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**Vedprakash Jaisawal**

Department of Agri-Business  
and Rural Management, College  
of Agriculture, Indira Gandhi  
Krishi Vishwavidyalaya, Raipur,  
Chhattisgarh, India

**Ajay Kumar Gauraha**

Department of Agri-Business  
and Rural Management, College  
of Agriculture, Indira Gandhi  
Krishi Vishwavidyalaya, Raipur,  
Chhattisgarh, India

**MR Chandrakar**

Department of Agricultural  
Economics, College of  
Agriculture, Indira Gandhi  
Krishi Vishwavidyalaya, Raipur,  
Chhattisgarh, India

**Rohit Kumar Sahu**

Department of Agricultural  
Economics, College of  
Agriculture, Indira Gandhi  
Krishi Vishwavidyalaya, Raipur,  
Chhattisgarh, India

**Corresponding Author:**

**Vedprakash Jaisawal**

Department of Agri-Business  
and Rural Management, College  
of Agriculture, Indira Gandhi  
Krishi Vishwavidyalaya, Raipur,  
Chhattisgarh, India

## A study on economics of value addition of flower in the periphery of Raipur city

**Vedprakash Jaisawal, Ajay Kumar Gauraha, MR Chandrakar and Rohit Kumar Sahu**

### Abstract

Floriculture is the branch of horticulture that deals with the cultivation of flowering and ornamental plants for sales or for use as raw materials in cosmetic industry. Floriculture is emerging a fastest growing sector in many countries, in India this sector blooming rapidly, many states of the India performing at its best, states like Kerala contributes 16.5%, Tamil Nadu contributes (13.3%), Karnataka (11.4%), Madhya Pradesh (11.1%) and Uttar Pradesh (7%). About Rs. 771.41 crores of floriculture products was exported in the year 2021-2022. Area under floriculture in Chhattisgarh was 13089 hectare. Out of that total production of flower was 229868 MT, out of which 170348 MT was cut flower and 59521 MT was loose flower. For the study Raipur city was selected. Data was collected from 30% of the total respondent's i.e 10 number of respondents. Both primary and secondary data was collected during the study. The study resulted that the economics of bouquet was found profitable in case of large bouquet and total variable cost incurred was found to be Rs. 500.06 per bouquet, net return was found to be Rs. 1504.94 and B:C ratio was found to be 1:3.01. In case of Marigold garland the total variable cost incurred in one large sized garland was found to be Rs. 49.60, net return was found to be 60.40 and B:C ratio was found to be 1:1.22, which revealed that the large size marigold garland was more profitable than the small one. Economics of wedding garland was revealed during the study and it was found that the Rose wedding garland was more profitable than the Mixed flower wedding garland in the study area. The total variable cost incurred in the Rose wedding garland was found to be Rs. 615.21, net return was found to be Rs. 919.79 and B:C ratio was found to be 1:1.50. However, in case of Mixed flower wedding garland the cost of making was found to be Rs. 469.71, net return was found to be 550.29 and B:C ratio was found to 1:1.17. The economics of car decoration of large package was found more profitable than the small and medium size package. The economics of car decoration of large package was found to be Rs. 2140.00, net return was Rs. 4735.00 and B:C ratio was found to be 1:2.21. Overall the profitability was found more on large package car decoration.

**Keywords:** Flower, bouquet, garland, car decoration, total variable cost, net return. B: C ratio

### Introduction

Floriculture provides tremendous scope and opportunities and has become a major ingredient of modern lifestyle. There has been a transition in the floriculture industry as a commercial business venture with high market value and real opportunities. India is blessed with a number of agro-climatic zones that are ideal for the development of delicate and sensitive floriculture goods. The floriculture industry made significant strides in the export market during the decade that followed liberalization. Production of commercial goods has dynamically shifted from food in this era. The Indian government has designated floriculture as a sunrise sector and given it the distinction of being entirely export-oriented.

The Ministry of Commerce, Agricultural and Processed Food Products Export Development Authority (APEDA) and the Ministry of Agriculture National Horticulture Board have both launched numerous developmental programs under the direction of the Indian government, National Horticulture Board (NHB). Many state governments have also started their own programs to help the millions of small and major producers with technical and financial support. The NHB/Ministry of Agriculture has a number of programs to support this industry, such as a subsidy programs to support the expansion of new floriculture businesses. Determining the potential and underdeveloped areas in flower production and exports requires analyzing the performance of Indian floriculture. (<https://apeda.gov.in/apedawebwebsite/>)

According to the National Horticulture Board's National Horticulture Database, India's floriculture production area in 2020–21 was 322 thousand hectares, producing 828 thousand tonnes of cut flowers and 2152 thousand tonnes of loose flowers. Several states now practice

commercial floriculture, with Kerala (16.5%), Tamil Nadu (13.3%), Karnataka (11.4%), Madhya Pradesh (11.1%), and Uttar Pradesh (7%) surpassing other producing states like Andhra Pradesh, West Bengal, Mizoram, Gujarat, Orissa, Jharkhand, Haryana, Assam, and Chhattisgarh in terms of area. (<https://nhb.gov.in/>).

In Chhattisgarh the total area under floriculture was 13089 ha. Out of that the total production under flower was 229868 MT followed by 170348 MT in Cut flower and 59521 MT in loose flower. The productivity of was 1756 MT in Chhattisgarh. (Horticulture and Farm Forestry Nawa Raipur Atal Nagar). Major flowers like marigolds, gladioli, roses, gillardias, chrysanthemums, and orchids can be grown quite successfully without much attention. (<http://agriportal.cg.nic.in/horticulture/HortiEn/Default.aspx>). Total flower area in Raipur district was 376 ha. having total production of 1514 MT. The total production of loose flower in Raipur district comprises 1174 MT whereas production of cut flower was 340 MT. In Raipur district the maximum area under of flower fall under marigold which consists 150 hectares of total land. (Horticulture and Farm Forestry, Nawa Raipur Atal Nagar).

## Materials and Methods

### Sampling Framework

Chhattisgarh comprises 33 districts out of that Raipur district was selected purposively. Periphery of Raipur city of Raipur district was selected purposively for the study. Total of 33 wholesaler-cum-retailers were find out during the study in the

periphery of Raipur city, out of which about 30% of the total respondents i.e. 10 were was interviewed for the study.

### Collection of Data

Primary data for the study was collected from the flower wholesalers-cum-retailers with the help of well-prepared questionnaire and schedule. Secondary data was collected from the official website of government, research paper and district horticulture department

### Analytical tools

The raw data that was collected from the respondent were analysed by using the tool of simple average and percentage method.

## Results and Discussion

### Cost and returns of value added flowers

#### Economics of Bouquet (Bookey)

Economics of bouquet (Bookey) is presented in the table 1. It was found that the large size bouquet was the most profitable as compared to the small and medium sized bouquet, which shows that the value addition of flower was more potential than loose and cut flowers. On making of bouquet, the total cost incurred on small, medium and large size was found to be Rs. 84.03, Rs. 151.71 and Rs. 500.06 respectively. Net return from small, medium and large sized bouquet was found to be Rs. 67.97, Rs. 230.29 and Rs. 1504.94 respectively. B: C ratio of small, medium and large size bouquet was found to 1:0.81, 1:1.52 and 1:3.01 respectively.

**Table 1:** Economics of Bouquet (Bookey) Rs/bouquet

S. No.	Particulars	Small	Medium	Large
1	<b>Raw materials</b>			
a	Rose (Rs 8 - 15 /piece)	29.30 (34.86)	76.70 (50.56)	326.00 (65.19)
b	Chrysanthemum (Rs 3-5 /Piece)	11.00 (13.09)	16.88 (11.13)	60.00 (12.00)
c	Gladiolus (Rs 6-8 /piece)	17.83 (21.22)	17.33 (11.42)	50.56 (10.12)
d	Jute paper / Tissue paper (Rs 3-5 /Piece)	4.30 (5.12)	6.20 (4.09)	18.30 (3.66)
e	Ribbon (Rs 1-2 /Piece)	1.50 (1.78)	3.20 (2.11)	4.30 (0.85)
2	Labour charge @ per bouquet	14.10 (16.78)	18.40 (12.13)	21.70 (4.34)
3	Miscellaneous (Artificial Fragrance, Rose water, Artificial colour)	6.00 (7.15)	13.00 (8.56)	19.20 (3.84)
4	Total variable cost	84.03 (100)	151.71 (100)	500.06 (100)
5	Gross return	152.00	382.00	2005.00
6	Net return	67.97	230.29	1504.94
7	B:C Ratio	1:0.81	1:1.52	1:3.01

**Note:** Figures in parentheses shows the percentage to total variable cost.

### Economics of Marigold garland

Garlands are the most important value added product in flower business; it is used for the greeting in occasions, decoration of houses and decoration of stage etc. So, the economics of marigold garland is presented in the table 2 and table 3. Large size marigold garland was found more

profitable than the small size marigold garland. The total cost incurred in the small and large size marigold garland was found to be Rs. 30.05 and Rs. 49.60. Net return obtained from small and large size marigold garland was found to be Rs. 17.45 and Rs. 60.40. B: C ratio of small and large size marigold garland was found to be Rs. 1:0.58 and 1:1.22.

**Table 2:** Economics of Marigold garland (Small) (One garland)

S. No.	Particulars	Cost in Rupees
1	Raw materials @200gm	24.00 (79.86)
2	Labour charge @ per garland	2.29 (7.62)
3	Miscellaneous charge (Thread, Leaves, Artificial Pearl)	3.76 (12.52)
4	Total variable cost	30.05 (100)
5	Gross return	47.50
6	Net return	17.45
7	B:C Ratio	1:0.58

**Note:** Figures in parentheses shows the percentage to total variable cost.

**Table 3:** Economics of Marigold garland (Large) (One garland)

S. No.	Particulars	Cost in Rupees
1	Raw materials @350gm	42.00 (84.68)
2	Labour charge @per garland	3.43 (6.92)
3	Miscellaneous charge (Thread, Leaves, Artificial Pearl)	4.17 (8.40)
4	Total variable cost	49.60 (100)
5	Gross return	110.00
6	Net return	60.40
7	B:C Ratio	1:1.22

**Note:** Figures in parentheses shows the percentage to total variable cost.

### Economics of Wedding garland

Economics of wedding garland were categorized into two parts i.e. rose wedding garland and mixed flower wedding garland and both was presented in table 4 and table 5. In case of rose wedding garland, the total cost was found to be Rs. 615.21 and net return was found to be Rs. 919.79 and B:C ratio was found to be 1:1.50. In case of mixed flower wedding garland the total cost was found to be Rs. 469.71 and net return was found to be Rs. 550.29 and B:C ratio was found to be 1:1.17. On comparing both the wedding garland it was found that the rose garland was more profitable than the mixed flower wedding garland and it was due always higher demand of rose flower in the study area.

**Table 4:** Economics of Rose wedding garland (One garland)

S. No.	Particulars	Cost in Rupees
1	Raw Materials @ 46 piece	460.00 (74.78)
2	Labour Charge @ per garland	11.71 (1.90)
3	Miscellaneous charge (Thread, Artificial Pearl, Scent, Packaging)	143.50 (23.32)
4	Total variable cost	615.21 (100)
5	Gross return	1535.00
6	Net return	919.79
7	B:C	1:1.50

**Note:** Figures in parentheses shows the percentage to total variable cost.

**Table 5:** Economics of Mixed flower wedding garland (One garland)

S. No.	Particulars	Cost in Rupees
1	Raw Materials (Chrysanthemum @ 44 piece and Rose @ 18 piece)	356.00 (75.79)
2	Labour Charge @ per garland	11.71 (2.49)
3	Miscellaneous charge (Thread, Artificial Pearl, Scent, Packaging)	102.00 (21.72)
4	Total variable cost	469.71 (100)
5	Gross return	1020.00
6	Net return	550.29
7	B:C	1:1.17

**Note:** Figures in parentheses shows the percentage to total variable cost.

### Economics of Car decoration

For the car decoration three types of package was offered by the wholesaler-cum-retailer. Most profitable packages were large size package. It was observed that the car decoration of large sized package was most profitable than the bouquet (Bookey), marigold garland and wedding garland. So, the economics of car decoration was presented in the table 4.6, 4.7 and 4.8 respectively. Total cost of small, medium and large sized package was found to be Rs. 728.00, Rs. 1234.00

and Rs. 2140.00 respectively. Net return of small, medium and large sized package was found to be Rs. 982.00, Rs. 2261.00 and Rs. 4735.00 respectively. B:C ratio of small, medium and large sized package was found to be 1:1.35, 1:1.83 and 1:2.21 respectively.

**Table 6:** Economics of Car decoration (Small package)

S. No	Particulars	Cost in Rupees
1	Raw materials	
A	Rose @ Rs 8*20	160.00 (21.98)
B	Velvet / Artificial flower @Rs 8*20	60.00 (8.24)
C	Other flowers @ Rs 5*7 (Chrysanthemum and Gladiolus)	35.00 (4.80)
D	Small bouquets (1 unit)	134.00 (18.41)
E	Fancy cloth @ Rs 13.75 *8meter	110.00 (15.12)
2	Labour charge @ Rs 100*2	200.00 (27.48)
3	Miscellaneous (Tape, Fern, Foam)	29.00 (3.98)
4	Total variable cost	728.00 (100)
5	Gross return	1710.00
6	Net return	982.00
7	B:C Ratio	1:1.35

**Note:** Figures in parentheses shows the percentage to total variable cost.

**Table 7:** Economics of Car decoration (Medium package)

S. No.	Particulars	Cost in Rupees
1	Raw materials	
a	Rose @ Rs 8 * 32	252.50 (20.46)
b	Velvet/ Artificial flower @ Rs 3*35	105.00 (8.50)
c	Other flower@ Rs 5*20 (Chrysanthemum and Gladiolus)	100.00 (8.10)
d	Bouquet (1 unit)	300.00 (24.32)
e	Fancy cloth @ Rs 13.75*10 meter	137.50 (11.14)
2	Labour @ Rs 2*150	300.00 (24.32)
3	Miscellaneous (Tape, Fern, Foam)	39.00 (3.16)
4	Total variable cost	1234.00 (100)
5	Gross return	3495.00
6	Net return	2261.00
7	B:C Ratio	1:1.83

**Note:** Figures in parentheses shows the percentage to total variable cost.

**Table 8:** Economics of Car decoration (Large package)

S. No.	Particulars	Cost in Rupees
1	Raw materials	
a	Rose @ Rs 8 * 90	720.00 (33.64)
b	Velvet/ Artificial flower @ Rs 3*12	35.00 (1.63)
c	Other flower @ Rs 5*60 (Chrysanthemum and Gladiolus)	300.00 (14.02)
d	Large bouquet (1 unit)	480.00 (22.43)
e	Fancy cloth @ Rs 13.75*12 meter	165.00 (7.72)
2	Labour @ Rs 200 *2	400.00 (18.70)
3	Miscellaneous (Tape, Fern, Foam)	40.00 (1.86)
4	Total variable cost	2140.00 (100)
5	Gross return	6875.00
6	Net return	4735.00
7	B:C Ratio	1:2.21

**Note:** Figures in parentheses shows the percentage to total variable cost.

### Conclusion

A study was conducted in the Raipur district of Chhattisgarh and periphery of Raipur city was selected for the study on the basis of availability of data. From the study it was found that the cost and return of value added flower i.e. Bouquet was

found to be Rs 84.03, Rs 151.71 and Rs 500.06 respectively. Net return from small, medium and large sized bouquet was found to be Rs 67.97, Rs 230.29 and Rs 1504.94 respectively. B:C ratio of small, medium and large size bouquet was found to be 1:0.81, 1:1.52 and 1:3.01 respectively. The total cost incurred in the small and large size marigold garland was found to be Rs 30.05 and Rs 49.60. Net return obtained from small and large size marigold garland was found to be Rs 17.45 and Rs 60.40. B:C ratio of small and large size marigold garland was found to be Rs 1:0.58 and 1:1.22. In case of rose wedding garland, the total cost was found to be Rs 615.21 and net return was found to be Rs 919.79 and B:C ratio was found to be 1:1.50. In case of mixed flower wedding garland the total cost was found to be Rs 469.71 and net return was found to be Rs 550.29 and B:C ratio was found to be 1:1.17. Total cost of small, medium and large sized package for car decoration was found to be Rs 728.00, Rs 1234.00 and Rs 2140.00 respectively. Net return of small, medium and large sized package was found to be Rs 982.00, Rs 2261.00 and Rs 4735.00 respectively. B:C ratio of small, medium and large sized package was found to be 1:1.35, 1:1.83 and 1:2.21 respectively, it was observed that decorating cars were extremely profitable and following suggestions were given to the respondents and that are; To enhance the overall marketing system, a storage facility should be offered at the main and submarket yards. Regulated the price imbalance in marketing in the season of highest production of flower. Supply chain should be made in such a way that the availability of flower get easier. Government should establish cold storage facilities to preserve flowers due to very high volatility in demand/high price fluctuation.

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