



E-ISSN: 2278-4136  
P-ISSN: 2349-8234  
JPP 2018; 7(2): 2018-2020  
Received: 05-01-2018  
Accepted: 06-02-2018

**Yogesh Kumar Sai**  
Department of agri-business and rural management, IGKV, Raipur Department of Agriculture Economic, IGKV, Raipur, Chhattisgarh, India

**Banafar KNS**  
Department of agri-business and rural management, IGKV, Raipur Department of Agriculture Economic, IGKV, Raipur, Chhattisgarh, India

**Sahu T**  
Department of agri-business and rural management, IGKV, Raipur Department of Agriculture Economic, IGKV, Raipur, Chhattisgarh, India

**Chandravanshi V**  
Department of agri-business and rural management, IGKV, Raipur Department of Agriculture Economic, IGKV, Raipur, Chhattisgarh, India

**Correspondence**  
**Yogesh Kumar Sai**  
Department of agri-business and rural management, IGKV, Raipur Department of Agriculture Economic, IGKV, Raipur, Chhattisgarh, India

## Economic analysis of marigold in Surajpur district of Chhattisgarh

**Yogesh Kumar Sai, Banafar KNS, Sahu T and Chandravanshi V**

### Abstract

The present study was carried out in surajpur district of Chhattisgarh, with the objective to find out the study the cost and returns of Marigold cultivation and major constraints of marigold cultivation. Agriculture was the main occupation with 77.68 per cent with overall total cultivated area at 1.12 ha. / farm. Cost of cultivation showed an increasing trend from marginal to small farms for marigold crop. The overall cost of cultivation for marigold worked out as Rs. 84594 per ha. and it ranges from marginal farms Rs. 82344 per ha. to Rs. 85588 per ha. at small farms. The overall input-out ratio and B.C.Ratio was 1:2.18 and 1:1.19 for marigold crop. Overall, family labour income was Rs. 105317 per ha. Family labour income and farm business income was higher at small farms Rs. 105317 per ha. and Rs. 113377 per ha respectively. Overall, farm investment income was found to be Rs. 108618 per ha. The response of farmers about marigold production constraints namely High Price of fertilizers and insecticides, Lack of Labour, Attack by pest and diseases, Lack of scientific knowledge and training, Environment related problem, Instability in yield problem in farm production.

**Keywords:** cost of cultivation, cost concepts

### Introduction

Marigold, belonging to family Asteraceae, is an important and popular flower of India and ranks third in number after roses and chrysanthemum. It is the native of America. Marigold is a high value and labour intensive crop and it is cultivated by most of the farmers on small scale. The knowledge of cost of cultivation and returns from marigold cultivation is very useful for the cultivators to adjust and coordinate the available resources in a profitable manner. Most of the farmer's livelihood solely depends on the income from Marigold cultivation. The farmers in this area are having more than ten years of experience in marigold cultivation and in early days they were practiced only the conventional way of cultivation and also they don't have enough knowledge on the new advanced method of cultivation. Because of their lack of knowledge and awareness about modern management practices and inefficient and indiscriminant use of inputs they have faced the problem of reduction in productivity of Marigold. Marigold is not only grown as ornamental cut flowers and landscape plant but also as a source of natural carotenoid pigment for poultry feed. The area under marigold has increased from 1961.45 ha to 2145.70 ha in Chhattisgarh during the year of 2010-2011 and 2011-2012 (Anonymous NHM Chhattisgarh database).

The Government of India has identified floriculture as a sunrise industry and accorded it 100% export oriented status. Owing to steady increase in demand of flower floriculture has become one of the important Commercial trades in Agriculture. People usually use flowers in all their ceremonies like wedding, birthday, and marriage day greetings, religious offerings and sometimes in social, political, and historical occasions (Haque *et al.*, 2013) [1]. The universal usage has created a real trend of producing flower on a commercial basis to meet increasing demand in the market.

### Materials and Methods

The present study is based on an analysis of primary data at the Surajpur district of Chhattisgarh. The analysis of primary data is based on a survey of 48 marginal and 52 Small farms of surajpur district. Data collected for study pertaining to the period 2016-17. The study required primary as well as secondary data. Primary data was collected from selected Marigold growers through personal interview method with the help of pre-tested questionnaire. Collected data were tabulated according to need and purpose of study. Simple tabular analysis was made. To workout economics of marigold production, different cost concept such as cost 'A', cost 'B' and cost 'C' were used.

Cost A1 = All actual expenses in cash and kind incurred in production by the producer. The items covered in costs on:

i) Hired human labour, ii) Hired bullock labour, iii) Owned bullock labour, iv) Home produced/purchased seed, v) Plant protection chemicals, vi) Home produced/purchased manure, vii) Fertilizers, viii) Depreciation on farm machinery, equipment and farm building, ix) Irrigation, x) Land revenue, land development tax and other taxes, xi) Interest on working capital, xii) Interest on crop loan and xiii) Miscellaneous expenses.

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

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

Cost B2 = Cost B1 + Rental value of owned land (net of land

revenue) and rent paid for leased-in land

Cost C1 = Cost B1 + Imputed value of family labour

Cost C2 = Cost B2 + Imputed value of family labour

Cost C3 = Cost C2 + 10 per cent Cost C2

## Results and Discussion

The economics of soybean crop is presented in table 1.1 It clearly shows that the cost of cultivation per hectare of soybean seed production. Over all, on an average the cost of cultivation per hectare of marigold was marginal Rs. 82344.48, small Rs. 85588.14 and overall Rs. 84594.04 per hectare.

**Table 1.1:** Input wise cost of cultivation of Marigold Flower. (Rs/ha)

S/No.	Particular	Marginal	Small	Overall
<b>Variable cost</b>				
1	Family Labour	7011.08	3765.1	4759.95
		(8.51)	(4.40)	(5.63)
2	Hired labor	20478	21491.6	21180.94
		(24.87)	(25.11)	(25.04)
	Total Labour Cost	27489.08	25256.7	25940.89
		(33.38)	(29.51)	(30.67)
3	Machine charges	5902.07	7084.27	6721.94
		(7.17)	(8.28)	(7.95)
4	Planting Material	18562.5	20062.6	19602.88
		(22.54)	(23.44)	(23.17)
5	Manures & Fertilizer	14600.3	15799.4	15431.9
		(17.73)	(18.46)	(18.24)
6	Plant protection	2877.11	3513.08	3318.16
		(3.49)	(4.10)	(3.92)
7	Irrigation	3665.51	3771.42	3738.96
		(4.45)	(4.41)	(4.42)
8	Interest on working capital	1542	1692.44	1646.33
		(1.87)	(1.98)	(1.95)
Total		74638.57	77179.91	76401.06
		(90.64)	(90.18)	(90.31)
<b>Fixed cost</b>				
1	Revenue	12	12	12
		(0.01)	(0.01)	(0.01)
2	Depreciation	112	125	121.02
		(0.14)	(0.15)	(0.14)
3	Rental value of land	7333.33	8000	7795.67
		(8.91)	(9.35)	(9.22)
4	Interest on fixed capital	248.58	271.23	264.29
		(0.30)	(0.32)	(0.31)
	Total	7705.91	8408.23	8192.98
		(9.36)	(9.82)	(9.69)
	Grand total	82344.48	85588.14	84594.04
		(100)	(100)	(100)

## 1. Cost concept at sample households

The cost and returns on the basis of cost concept in the production of Marigold is presented in Table 1.2 On an overall Cost-A1, Cost-A2

Cost-B1, Cost-B2, Cost-C1, Cost-C2, and Cost-C3 as Rs.

71774.13 per ha., Rs. 71774.13 per ha., Rs 72038.38 per ha., Rs. 79834.09 per ha., Rs.76798.37 per ha., Rs. 84594.04 per ha., and Rs. 93053.44 per ha. for marigold respectively, on the sample farms. All costs were comparatively higher at small farms followed by marginal farms.

**Table: 1.2:** Cost on the basis of cost concept at sample households (Rs./ha.)

Break up cost	Marginal	Small	Overall
Cost A1(All actual expenses)	67751.49	73551.81	71774.13
Cost A2=Cost A1+ Rent paid for leased in land	67751.49	73551.81	71774.13
Cost B= COST A1+Intrest on fixed capital + rental value of land	75333.41	81823.03	79834.06
Cost B1=Cost A1+ Interest on value of owned fixed capital	67999.72	73823.53	72038.38
Cost B2= Cost B1+ Rental value of owned land & Rent paid for leased in land	75333.4	81823.04	79834.09
Cost C = Cost B + imputed value of family Labor	82344.49	85588.13	84594.01
Cost C1=Cost B1 + imputed value of family labor	75011.15	77588.14	76798.37
Cost C2= Cost B2 + imputed value of family labor	82344.48	85588.14	84594.04
Cost C3= Cost C2 + 10% of Cost C2 on account of managerial function performed by farmer	90578.93	94146.95	93053.44

## 2. Yield, cost and return of Marigold at the sampled farms

The yield, value of output per hectare and cost of production per quintal of marigold on the sample farms have been worked out in table 1.3. It indicate that the overall yield per hectare of marigold was 84.16 quintal on the sample farms.

The overall cost of cultivation per ha was Rs. 84594.04. Net return was Rs. 100557.99. Family labour income was Rs. 105317.94. Farm business income was Rs. 113377.87 and Farm investment income was Rs. 108618.

**Table 1.3:** Yield, cost and return of Marigold on the sample farm (Rs./ha.)

S. No	Particulars	Marginal Farmers	Small Farmers	Overall
1	Average yield (qt.)	80	86	84.16
2	Average price (Rs/kg.)	22	22	22
3	Cost of Cultivation(Cost C)	82344.48	85588.14	84594.04
4	Cost of production/qt.	1029.30	995.21	1005.16
5	Gross return	176000	189200	185152
6	Net return	93655.51	103611.87	100557.99
7	Family labor income (Gross income-Cost B)	100666.95	107376.97	105317.94
8	Farm business income=Gross income-Cost A1	108248.51	115648.19	113377.87
9	Farm investment income= Net income + rental value of own land + interest on fixed capital	101237.4	111883.1	108618
10	Input output ratio	1:2.13	1:2.21	1:2.18
11.	B.C. Ratio	1:1.14	1:1.21	1:1.19

## 3. Income over different cost at sampled farms

The incomes over different costs were also worked out (Table 1.4). The overall per hectare income over Cost-A1, Cost-A2, Cost-B1, Cost-B2, Cost-C1, Cost-C2 and Cost-C3 calculated

was Rs. 113377.87, Rs. 113377.87, Rs.113113.58, Rs. 105317.91, Rs. 108353.63, Rs. 100557.96 and Rs.92098.56 respectively.

**Table 1.4:** Income over different cost at sampled farms (Rs./ha.)

S.N	Income over Different Cost	Marginal	Small	Overall
1	Income over Cost A1	108248.51	115648.19	113377.87
2	Income over Cost A2	108248.51	115648.19	113377.87
3	Income over Cost B1	107999.93	115376.96	113113.58
4	Income over Cost B2	100666.6	107376.96	105317.91
5	Income over Cost C1	100988.85	111611.86	108353.63
6	Income over Cost C2	93655.52	103611.86	100557.96
7	Income over Cost C3	85421.07	95053.05	92098.56

## Conclusions

- The average size of holding of marigold growers was 1.12 ha. It calculated 0.72 ha for marginal farmers and 1.51 ha for small farmers.
- The overall total cropped area was found to be 1.12 ha. The total cropped area for marginal and small farmers was observed to be 0.72 and 1.51 ha, respectively.
- The cost of cultivation per hectare of marigold was calculated to be Rs. 82344.48 and Rs. 85588.14 for marginal and small farmers respectively. The cost of cultivation per hectare showed rising trend with the rise in farmer's size.
- The average input-output ratio and B.C. Ratio of marigold was calculated to be 1:2.18 and 1:1.19.
- The farmers having less quantity of marigold sold their produce to the commission agents at the rate of Rs.2200.00 per quintal just after harvesting the marigold.

## References

- Haque MA, Miah MM, Hossain S, Alam M. Economics of marigold cultivation in some selected areas of Bangladesh. Bangladesh Journal of Agricultural Research. 2013; 37(4):711-720
- Hussain A, Khan A, Jehanzeb. The Marketing and Cost-Benefit analysis Of Floriculture In The Rural areas of Peshawar: A Case Study of Bazid Khel, City University Research Journal City University Research Journal. 2015; 5(5):01

- Dhilon A, Khatkar RK, Kumar A. Marketing Costs and Price Spread for Marigold Flower in Haryana. Agricultural Marketing. 2005; 48(1):9-12.
- Sharma MK. Economic Analysis of Commercial Flower Cultivation In Sirmaur District of Himachal Pradesh. Agricultural Economics Project report, Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya Palampur. 2014, 85-102
- Singh AK, Singh MK, Singh RJ. The Economics of marigold flowers in Eastern Uttar Pradesh The Journal of Rural and Agricultural Research. 2013; 13(2):75-78.