

An economic analysis of cost and return structure of jasmine in Chitradurga district

■ S. KUMAR AND P.K. MANDANNA

Received : 07.09.2012; Revised : 07.02.2013; Accepted : 08.03.2013

ABSTRACT

The paper discusses the economic analysis of cost and return structure for jasmine in Chitradurga district. The jasmine crop is becoming increasingly popular among the farmers in the region. The cost analysis showed that different costs incurred by the jasmine growers in Chitradurga district indicated that the per acre establishment cost worked out to Rs.15438 and the average maintenance cost was Rs.28782 per acre per annum. Among the maintenance costs, expenditure on planting material cost and fertilizers was high. The average marketing cost incurred by the farmers was Rs. 11355. The expenditure on marketing started from 3rd year onwards as the crop starts yielding. Among the marketing costs, commission charge is the major cost component. The annual gross income realized by the jasmine farmers was Rs.88926 per acre. The farmer's net return was found to be Rs. 48788. per acre.

KEY WORDS : Economic analysis, Cost and return, Jasmine

How to cite this paper : Kumar, S. and Mandanna, P.K. (2013). An economic analysis of cost and return structure of jasmine in Chitradurga district. *Internat. J. Com. & Bus. Manage*, 6(1) : 51-54.

Jasmine (*Jasminum* spp.) belongs to the family *Oleaceae* and is one of the oldest fragrant flowers cultivated by man and were known to be cultivated in tropical and sub tropical regions throughout the globe. The products of jasmine are important natural raw materials in the perfume industry. Jasmine concrete is the most common of the jasmine extract products. It is used as such in making perfumed hair oil, preparation of absolute and handkerchief perfumes. In addition it is used toiletries, cosmetics, pharmaceuticals, food essences, chewing tobacco, dental preparations, confectionaries etc. Even different parts of the plants Such as, leaf, stem, bark, root, seed, and fruits are also used for medicinal purposes.

MEMBERS OF THE RESEARCH FORUM

Correspondence to:

S. KUMAR, Department of Agricultural Marketing, Co-operation and Business Management, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

Authors' affiliations:

P.K. MANDANNA, Department of Agricultural Marketing, Co-operation and Business Management, University of Agricultural Sciences, G.K.V.K., BENGALURU (KARNATAKA) INDIA

In India, Tamil Nadu, Karnataka, Bihar Gujarat, Andhra Pradesh, Maharashtra, Uttar Pradesh West Bengal are the major jasmine producing states with an estimated area of 12,000 hectares. Among the major growing states, Tamil Nadu stands first with area of 5,000 hectare and Karnataka stood second producing 24,581 tons in an area of 4,355 hectares during 2008-09 (Directorate of Horticulture, Government of Karnataka).The most commonly grown types are *Jasminum multiJlorum* (kakada), *J. sabac* (Dundumallige), *J. grandiflorum* (Jaji mallige) and *J. auriculatum* (Sooji Mallige).In Karnataka,Bangalore, Kolar, Tumkur, Mysore, Bellary, Mangalore, Chickmagalur, Chitradurga and Belgaum are the major growing districts.

Jasmine flowers are highly perishable and hence require careful handling and speedy disposal. Therefore the market remains localized. Location apart, perishability makes the flower trade complex and risky. In addition, the demand for flowers is not uniform and steady. Factors like location, season and socio-religious festivals affect the demand - supply relationship in the flower marketing. In times of gluts during rainy season when the demand for flowers suddenly falls,

more than 20 % of the produce remains unsold.

Thus, the entire production of flowers is confronted with various types of problems which calls for in depth study on cost and returns. Hence, this study was attempted to evaluate the investment in production of jasmine flower in Chitradurga district.

METHODOLOGY

Chitradurga is one of the major jasmine growing districts in Karnataka. The jasmine crop becoming increasingly popular among the farmers in this region. Therefore, Chitradurga district was purposively selected for the study. Based on the highest area under the jasmine crop in the year 2003-04, the talukas of Chitradurga district were arranged in an ascending order and the top three talukas were selected for the study. The talukas selected for the study were Molakalmur, Hosadurga and Challakere talukas. The selection of the study area was mainly based on the dominance of the crop in the talukas during the year 2003-04.

The village-wise information relating to area under jasmine was obtained from the office of the Assistant Director of Horticulture of the respective talukas. The top three villages having the highest area under jasmine were selected from each taluka for the purpose of the study. From each of the villages, ten farmers were selected randomly. Thus relevant data from total of 90 farmers were collected for analysis.

ANALYSIS AND DISCUSSION

The study on different costs incurred by the jasmine

growers in Chitradurga presented in Table 1 indicates that establishment cost worked out to Rs.15438. per acre. The total establishment cost included both labour cost and material cost, which worked out to be Rs.2959. per acre Rs. 12479. per acre, respectively. Out of total establishment cost material cost, the major cost component accounting for 80.83 per cent of the establishment cost per acre of jasmine garden. Among the material costs, expenditure on planting material and farm yard manure was highest. Since the planting materials have to be brought from neighbouring districts and application of FYM to the tune of nine cart loads to achieve higher vegetative growth which results in more flowering. These results are in conformity with Ramesh Kumar(1989)

Labour cost accounted for 19. 11 per cent of total cost. of the total labour cost major cost component was application of manures and fertilizers which was found to be Rs. 516. per acre accounting for 3.34 per cent of total establishment cost.

The average maintenance cost was Rs. 28782 per acre which ranged between Rs. 19501 and Rs. 30513. per acre. Among the maintenance costs, expenditure on fertilizers was high, which worked out to be Rs.6306. per acre followed by plant protection chemicals which was found to be Rs.2663. per acre and farm yard manure Rs.2047. per acre. The increase in annual maintenance cost was due to combined effect of increase in cost of variables input as well as marketing cost. The results found are in accordance with the results found by Shedage and Borude (1992) and Subhramanyan (1986 a).

The average marketing cost incurred by the farmers was Rs. 11355. ranging between Rs.11284. and Rs.14934. The

Table 1 : Establishment cost of jasmine per acre

Establishment cost	UNIT(man days)	Amount(Rs)
Labour cost A		
Land preparation	9.53	475.44(3.07)
Trenching and pitting	8.20	410.22(2.65)
Application of manures and fertilizers	10.34	516.86(3.34)
Irrigation	6.48	310.55(2.01)
Filling pitts	5.05	252.41(1.63)
Gap filling	4.33	191.32(1.21)
Weeding	9.11	455.32(2.94)
Application of plant protection chemicals	13.72	347.30(2.24)
Total labour cost A		2959.42(19.11)
Material cost B		
Planting material	1373	4499.24(29.14)
Farm yard manure(cart load)	8.96	2688.00(17.44)
Fertilizer(kgs)	270	848.00(5.44)
Plant protection chemicals		1400.00(9.06)
Irrigation structures		3043.44(19.7)
Total material cost B		12479.24(80.83)
Total (A+B)		15438.66(100)

Table 2 : Cost of cultivation of jasmine

Variable cost	2year	3year	4year	5year	6year	7year	8year	9year	10year	11year	12year	Average
Weeding	1128	1235	1395	1463	1475	1449	1503	1513	1550	1559	1601	1442.818
Pruning	228.7	263.9	271.1	291.1	295.1	301.1	312.9	302.5	316.5	315.5	320.1	292.5909
Earthingup	1651	1711	1756	1853	1859	1923	1954	1967	1973	1975	1977	1872.636
Appof manure	438.7	446.7	450.5	445.3	471.8	482.2	487.7	485.3	490	496.5	496.5	472.0182
App of ppc	348.9	375	359.2	363.6	376.5	356.5	360.5	366.6	374.4	379.5	384.5	367.7545
Irrigation	1087	1121	1222	1448	1510	1524	1541	1564	1571	1583	1599	1433.636
Harvesing	0	1749	1919	2427	2437	2453	2464	2202	2010	1956	1489	1918.727
Fym	1640	1742	1755	1921	1986	2040	2100	2123	2200	2508	2507	2047.455
Fertilizer	3560	5277	6503	6489	6571	5601	6501	6647	6700	6714	6810	6306.636
Ppc	2419	2411	2537	2574	2274	2601	2810	2855	3000	2869	2908	2663.445
Total I	12501.3	17331.6	18167.8	19276	19255.4	19730.9	20034.1	20065.4	20184.9	20355.5	20092.1	18817.73
Fixed cost												
Rental value of land	7000	7000	7000	7200	7200	7500	7500	7500	7500	7500	7800	7343
Amortized establishment cost		2621.3	2621.3	2621.3	2621.3	2621.3	2621.3	2621.3	2621.3	2621.3	2621.3	2621.3
Total II	7000	9621.3	9621.3	9821.3	9821.3	10121.3	10121.3	10121.3	10121.3	10121.3	10421.3	9964.3
Maintenance cost	19501.3	26952.9	27789.1	29097.3	29076.7	29852.2	30153.4	30186.7	30306.2	30476.8	30513.4	28782
Marketing cost												
Commission charges		8889.5	9662.5	10822	11015.25	11560.22	11595	11208.5	10246.12	6957	5863.205	8892.662
Transportation cost	0	2300	2500	2800	3000	3200	3250	2800	2500	2100	1800	2386.364
Packing cost	0	94.55	99.32	84.78	85.28	89.52	89	90.05	85	65	60	76.631.82
Total III		11284.05	12261.82	13706.78	14100.53	14849.74	14934	14099	12831.22	9122	7723.205	11355.66
Yield per kg	0	2300	2500	2800	2850	2991	3000	2900	2651	1800	1517	2300.818
Total cost	19501.3	40050.92	42804.08	43177.23	44701.94	45089.4	44285.7	43137.32	39598.8	38236.61	40137.69	40137.69
Gross return	0	838895	96625	108220	110152.5	115602.2	115950	112685	102461.2	69570	58632.05	88926.62
Net return	0	48844.08	53820.92	65022.77	65450.56	70512.8	71664.3	68947.68	62862.4	31333.4	18494.36	48788.93

expenditure on marketing started from 3rd year onwards as the crop starts yielding. Among the marketing costs, commission charge was the major cost component. Other marketing cost components were transportation cost and expenditure on packaging material. The commission charge at 10 per cent was the major cost component of the marketing cost. This commission being collected from producer seller was against the provisions of Karnataka agriculture produce marketing (regulation act of 1966) these results were in line with 'Subrahmanyam (1988 and 1989). The annual gross income realized by the jasmine farmers was Rs.88926 per acre ranging between Rs. 88895 and Rs.115950 per acre. The farmer's net return was found to be Rs. 48788. per acre.

REFERENCES

- Annual Report (2003). Directorate of Horticulture, Lalbagh, Government of Karnataka, pp. 25-29.
- District Statistics - At a glance (2002). *Annual report*, Directorate of Economics and Statistics, Government of Karnataka.
- Ramesh Kumar, S.C.(1989). Economics of production and investment in jasmine flowers in Madurai district of Tamil Nadu. M.Sc. (Ag.) Thesis, University of Agricultural Sciences, Bangalore, KARNATAKA (INDIA).
- Shedage, M.N. and Borude, S.G. (1992). Economic analysis of flower production in Thane district of Maharashtra. *South Indian Hort.*, **40**(4): 218-223.
- Subrahmanyam, K.V. (1986 a). Economics of Production and marketing of chrysanthemum flowers in Karnataka. *Indian J. Hort.*, **43**(3&4): 281-286.
- Subrahmanyam, K.V. (1986 b). Profitable lime cultivation in Andhra Pradesh. *Indian Hort.*, **31**(4): 3-6.
- Subrahmanyam, K.V. (1988). Flower marketing in Karnataka. *Krishipet*, **15**(1): 6-10.
- Subrahmanyam, K.V. (1989). Economics of cultivation of horticultural crops in South India. *Technical Bulletin*, No.7. Indian Institute of Horticultural Research, Bangalore.
- Suryaprakash, S., Venkataram, J.V. and Ramanna, R. (1979). A comparative study of price spread of selected agricultural commodities in Karnataka. *Indian Mktg.*, **24**(4): 142-147.

WEBLIOGRAPHY

APEDA, www.apeda.com