

RESEARCH ARTICLE :

Costs, returns and profitability of chrysanthemum in Ahmednagar district of Maharashtra state

■ **S.B. TUPE, D.S. PERKE AND V.C. KORADE**

ARTICLE CHRONICLE :

Received :

10.07.2017;

Accepted :

23.07.2017

SUMMARY : Present study was designed to measure cost, returns and profitability of chrysanthemum in Ahmednagar district of Maharashtra. The information was collected from 120 samples of chrysanthemum from selected villages for year 2014-15. The data was collected by personal interview by using pre-tested interview schedule. The results revealed that the cost A was worked out as Rs. 90592.75 *i.e.* 42.63 per cent, cost B was Rs. 161484.4 *i.e.* 75.99 per cent of total share, whereas the cost C was Rs. 212508.4. Family labour showed the highest share of 24.01 per cent followed by hired human labour 10.83 per cent. Yield of Chrysanthemum flowers was 4059.44 kg for 1 hectare. Gross return from Chrysanthemum was Rs.365349.6, farm business income was Rs. 274756.85 and family labour income was Rs. 203865.2. Net profit was Rs. 152841.2. It was found that output- input ratio was higher in Chrysanthemum *i.e.* 1.72, profitability was more in Chrysanthemum, it means gross returns, farm business income, family labour income, net profit as well as benefit-cost ratio were higher in Chrysanthemum. Per kg cost of production was Rs. 52.34.

KEY WORDS :

Area, Production, Yield, Cost, Labour, Output-input, Profitability

How to cite this article : Tupe, S.B., Perke, D.S. and Korade, V.C. (2017). Costs, returns and profitability of Chrysanthemum in Ahmednagar district of Maharashtra state. *Agric. Update*, 12(TECHSEAR-2) : 389-392; DOI: 10.15740/HAS/AU/12.TECHSEAR(2)2017/389-392.

BACKGROUND AND OBJECTIVES

Chrysanthemum (*Dendranthema grandiflora*) is native to the northern hemisphere chiefly Europe and Asia. It has second ranks as commercial crop. Chrysanthemum is a very popular and commercial flower crop. Without flower social, cultural religious, functions was not done. Maharashtra is currently number one in the production, consumption and export of flowers. Area under Horticulture in Maharashtra was 23000 ha and production of loose flowers was 122000 MT and 44 lakh

number cut flowers. Due to the favourable climate, water, soil and available market have played important role in the prosperity and blooming of floriculture. The area under the Chrysanthemum flower crops in Maharashtra was 3000 ha, production was 13000 MT and productivity is 4.33 MT per ha. In Maharashtra the leading districts in floriculture production are Nasik, Ahmednagar, Thane, Pune, Satara, Sangli and Nagpur.

Ahmednagar district is specialized in cultivation of chrysanthemum and the major chrysanthemum growing district of

Author for correspondence :

S.B. TUPE

Department of
Agricultural Economics,
College of Agriculture,
Vasantrao Naik
Marathwada Krishi
Veedyapeeth, PARBHANI
(M.S.) INDIA
Email: saitupe.tpe03@gmail.com

See end of the article for
authors' affiliations

Maharashtra. The area under chrysanthemum in the Ahmednagar district was about 266 ha in 2008-09 and 288 ha in 2010-2011. They are usually yellow, cream or white coloured are used for garland, bouquets, veni, celebrations, festivals and other occasions. The varieties popularly grown as Raja, Zipri, Ratlam, Sonali tara etc.

RESOURCES AND METHODS

Multistage sampling procedure was used. Ahmednagar district and twenty villages from Ahmednagar and Parner tehsils were selected. The information pertaining to the objective was collected 120 samples of chrysanthemum growers from selected villages. The data was collected by personal interview by using pre tested interview schedule. Data pertaining to agricultural year 2014-15.

OBSERVATIONS AND ANALYSIS

The results obtained from the present study as well as discussions have been summarized under following heads:

Costs, returns and profitability of chrysanthemum farm :

Physical input of chrysanthemum production:

The data on the physical quantities of inputs such as human labour, bullock labour, manures, fertilizers, plant protection which influence the production were analysed.

In general, for cash crops like chrysanthemum, cultivators apply relatively more quantities of inputs. It could be interesting, to compare the quantities of these inputs used by the cultivators belonging to different size groups of holdings. Per hectare utilization of physical inputs in cultivation of chrysanthemum were worked out and presented in Table 1 at the overall level, chrysanthemum required hired human labour 115.10 man days. While family human labour was 255.12 days. This shows that the dependence of farms on hired labour was relatively very low in the chrysanthemum cultivation as compared to family labour. At the overall level, the per hectare bullock labour requirement was 10.05 pair days. The seedlings required for planting were 236 kg for 1 hectare farm of chrysanthemum. The machine power required 16.08 hours per hectare chrysanthemum cultivation. The fertilizers used 158.4 kg N, 100.45 kg P and 105.10 kg K. as per the recommended dose of fertilizer; it was observed that the fertilizers minimum use. Manures are very important and necessary after transplanting of chrysanthemum in open field. It gives good quality and quantity of flowers. Manures applied 154.10 qt per hectare for chrysanthemum cultivation. The irrigation given around 5 times because the crop was cultivated in rainy season, so not so much irrigation required in growing period. The plant protection required to overcome the problems like disease attack and pest attack. The plant protection was used 6 litre per hectare. The application of irrigation was higher in chrysanthemum crop *i.e.* 5

Table 1: Per hectare input utilization in chrysanthemum cultivation

Sr. No.	Particulars	Unit	Quantity
1.	Hired human labour	Days	115.10
2.	Family human labour	Days	255.12
3.	Bullock labour	Days	10.05
4.	Seedlings	Kg	236.00
5.	Machine charges	Hours	16.20
6.	Manure	Q	154.10
7.	Fertilizer		
	N	Kg	158.4
	P	Kg	100.45
	K	Kg	105.10
8.	Irrigation	No.	5
9.	Plant protection	Litre	6
	Output		
10.	Yield	Kg	4059.44

numbers around the cropping season. It needs timely irrigations. The yield of chrysanthemum flowers was 4059.44 kg for 1 hectare.

Cost of production of chrysanthemum crop:

Most of the chrysanthemum grown under rainfed condition, planting was done in April-May. Per hectare costs and returns of chrysanthemum with respect to physical inputs and outputs were estimated and are

presented in Table 2.

The results revealed that cost-C was Rs. 212508.4 in which share of cost-A was 42.63 per cent. Among individual items of costs, rental value of land was predominant item with 28.63 per cent. In next order, family labour showed the highest share of 24.01 per cent followed by hired human labour 10.83 per cent, manures was 7.25 per cent, fertilizers 5.00 per cent, interest on fixed capital 5.74 per cent, machine

Table 2 : Per hectare cost of cultivation of chrysanthemum flower

Sr. No.	Item of cost	Amount	Per cent
1.	Hired human labour	23020	10.83
2.	Bullock labour	5025	2.36
3.	Machine labour	8100	3.81
4.	Manures	15410	7.25
5.	Seedlings	12480	5.87
6.	Irrigation	2250	1.06
7.	Fertilizers	10616	5.00
8.	Plant protection	1680	0.79
9.	Land revenue	50.12	0.02
10.	Depreciation on implements	3781.63	1.78
11.	Interest on working capital	8180	3.85
	Cost-A (1-11 items)	90592.75	42.63
12.	Rental value of land	60841.48	28.63
13.	Interest on fixed capital	10050.2	5.74
	Cost-B (Cost A+ 12, 13 items)	161484.43	75.99
14.	Family labour	51024	24.01
	Cost -C (Cost-B+ 14)	212508.43	100

Table 3 : Per hectare profitability of chrysanthemum cultivation

Sr. No.	Particular	Amount (Rs.ha ⁻¹)
1.	Gross return	365349.6
2.	Cost A	90592.75
3.	Cost B	161484.4
4.	Cost C	212508.4
5.	Farm business income (Gross return minus Cost A)	274756.85
6.	Family labour income (Gross return minus Cost B)	203865.2
7.	Net income (Gross return minus Cost C)	152841.2
8.	Benefit : Cost ratio	1.72
9.	Per kg cost of production (Cost C minus by produce value divided by main produce)	52.34

labour 3.81 per cent, seedlings 5.87 per cent, bullock labour 2.36 per cent. It was also observed that other items of expenditure *i.e.* irrigation 1.06 per cent, depreciation on implements 1.78 per cent, Plant protection about 0.79 per cent, interest on working capital 3.85 per cent, land revenue 0.02 per cent, and showed minor proportions. Thus, an average expenditure on Cost A was 42.63 per cent in chrysanthemum grower. The proportionate expenditure on Cost B was found 70.76 per cent. Cost A was worked out as Rs. 90592.75 *i.e.* 42.63 per cent, cost B was Rs. 161484.4 *i.e.* 75.99 per cent of total share, whereas the cost C was Rs. 212508.4.

Per hectare profitability of chrysanthemum production:

Per hectare returns of chrysanthemum production was calculated and presented in Table 3. The results revealed that, gross return from chrysanthemum was Rs. 365349.6. It was observed that farm business income was Rs. 274756.85 and family labour income was Rs. 203865.2 in chrysanthemum. Net profit was Rs. 152841.2. It was found that output-input ratio was higher in chrysanthemum *i.e.* 1.72. It was observed that profitability was more in chrysanthemum, it means gross returns, farm business income, family labour income, net profit as well as benefit-cost ratio were higher in chrysanthemum. Per kg cost of production was Rs. 52.34.

Conclusion:

– Per hectare total cost of chrysanthemum *i.e.* cost

C was Rs.212508.4 in which contribution of cost-A and cost-B were Rs.90592.75 and Rs.161484.4, respectively.

– Profit on cost A, cost B and cost C was Rs. 274756.85, Rs.203865.2, Rs.152841.2, respectively.

– The output-input ratio was 1.72 which indicates that chrysanthemum crop is highly profitable enterprise.

Authors' affiliations :

D.S. PERKE AND V.C. KORADE, Department of Agricultural Economics, College of Agriculture, Vasant Naik Marathwada Krishi Vedyapeeth, PARBHANI (M.S.) INDIA

REFERENCES

Acharya, T.K.T. and Patil, S.D. (1970). Economics of chrysanthemum cultivation in Ahmednagar district, Shetkari, 10.

Alagumani, T. (1997). Performance of flower crops *vis-à-vis* Field crops in Madurai district, Tamil Nadu, *Indian J. Agric. Econ.*, **52** (3) : 620-621.

Bahirat, J. B. and Jadhav, H.G. (2011). To study the cost, returns and profitability of rose production in Satara district, Maharashtra. *Asian J. Hort.*, **6**(2) : 313-315.

Singh, Kehar (2001). Economics of wild marigold production and distillation in Himachal Pradesh, *Indian J. Agric. Econ.*, **56** (1) : 116-128.

Subrahmanyam, K.V. (1986). Economics of production and marketing of Chrysanthemum flowers in Karnataka. *Indian J. Econ.*, **41** (3) : 286.

12th
Year
★★★★★ of Excellence ★★★★★