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## Economics of pomegranate production in Ahmednagar district of Maharashtra

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### Abstract

Horticulture is better way for economic development. India stands second after china in production of fruits. Maharashtra state stood first in the production of pomegranate. Out of total production of pomegranate in India, Maharashtra shares about 70% production. Present study data collected from field Survey and CPMC scheme MPKV Rahuri in year 2016-2017. Random sampling design was adopted in selection of district, tahsils, villages and growers. In all 36 growers were selected for present study. The techniques like percentage, ratio and cost concept of cost A, cost B and cost C were apply for data analysis. Per hectare net profit was Rs.2,53,695/-on Pomegranate orchard farm. The benefit-cost ratio (B:C Ratio)1.1.82 in Pomegranate orchard farm. Per quintal cost of production was Rs.2196.52 in Pomegranate orchard.

**Keywords:** better way, pomegranate, net profit, cost-c, gross returns

### Introduction

Horticulture is better way for economic development. India stands second after china in production of fruits. Maharashtra state stood first in the production of pomegranate. Out of total production of pomegranate in India, Maharashtra shares about 70% production. The pomegranate is produced in drought prone area of Maharashtra state includes Solapur, Ahmednagar, Pune, Sangali, Dhule and Some part of Osmanabad Districts.

Pomegranate (*Punica granatum*) is mostly growing in drought prone area over India and also in Maharashtra for its rich source of vit. B-5 Pantothenic acid, vit. K, minerals like calcium, copper, potassium, manganese and also beneficial for daibeties patient. Pomegranate belongs to family Lythraceae. Commercially Bhagwa, Super Bhagwa, Ganesh cultivars growing in India as well as Maharashtra for its increasing demand and getting higher price and benefited to farmers. Present study was undertaken for some queries with aspects like cost, returns and profitability.

### Methodology

Random sampling design was apply in selection of districts, tehsils, village and pomegranate growers. At first stage Ahmednagar district was purposively selected on basis of availability of pomegranate orchards. At second stage, two Tahsils from Ahmednagar were selected on basis highest area under pomegranate cultivation as a sole fruit crop. The selected tehsils were Rahuri and Sangamner. At Third stage from each selected tehsils six village cluster was selected on availability of pomegranate orchards. At fourth stage separate list of pomegranate growers was taken from each village cluster and from that six of pomegranate growers were selected randomly. The cross sectional data collected from thirty six pomegranate growers in year 2016-2017. The cost concepts like Cost-A, Cost-B, and Cost-C were used to analyze data presently investing. Cost-A includes the items like hired human labour, machine labour, manure, fertilizers, plant protections, irrigation, land revenue, incidental expenditure, interest on working capital and depression of assets, Then Cost-B consists of Cost-A plus rental value of land and interest on fixed capital and amortized establishment cost. Cost-C includes Cost-B plus imputed value of family labour.

### Result and Discussion

Evaluation of cost item was as follows.

Human labour was charged at the rate for Male Rs. 363.32 and Rs.1154.85/day for female. bullock pair was charged at the rate of Rs. 1217.76 per day for one pair of bullocks.

**Table 1:** Per hectare physical inputs and outputs in pomegranate production

Sr. No.	Particular	Unit	Quantity
Input			
1	Hired Labour A) Male B) Female	Man day	66.90 68.31
2	Bullock labour	Pair day	0.08
3	Machine Labour	Hours	105.21
4	Manure	Qtls	119.44
5	Fertilizers A) Nitrogen B) Phosphorous C) Potassium	Kg	32.66 83.05 54.59
6	Family Labour A) Male B) Female	Man day	51.42 28.76
OUTPUT			
7	Main Produce	Qtls	88.76

Machine Power in case of owned machine was estimated as per the hired charges prevailed in village and in case of hired machine as per the actual amount paid was Rs. 86.83 per hour. Rate of Nitrogen, Phosphorus and Potassium in market was respectively Rs. 63.25/ kg N, Rs. 79.83 / Kg P, 54.59/ Kg K. Manure was considered as quintal per Rs. 303.52 / quintal. Family labour was charged at the rate for Male Rs. 283.41 and Rs. 159.32/day for female.

**The findings of present study has been summarize under following heads**

#### Physical input and output in Pomegranate production

Per hectare physical input and output in Pomegranate

production were estimated and presented in Table 1. The Per hectare use of hired labour was 66.90 man days of Male and 68.31 man days of Female The Per hectare use of family labour was 51.42 man days of Male and 28.76 man days of Female It was observed that utilization of hired labour was higher than family labour. Utilization bullock labour per hectare was 0.08 pair days. On contrary machine labour was used in as 105.21 hours on the pomegranate orchard. On an average, utilization of manures per hectare was found 119.44 quintals. Average use of nitrogen 32.66 Kg, Phosphorous 83.05 Kg, Potassium 54.59 kg per hectare respectively.

**Table 2:** Per hectare cost of cultivation of Pomegranate Production

	Particular	Unit	Quantity	Rate (Rs.)	Value (Rs.)	Per cent
1	Hired labour A) Male B) Female	Man days	66.90 68.31	363.32 154.85	24371.48 10577.43	8.00 3.42
2	Bullock labour	Pair days	0.08	1217.76	93.22	0.03
3	Machine powers	Hours	105.21	86.83	9134.73	2.95
4	Manures	Qtls	119,44	303.52	36251.97	11.73
5	Fertilizers A) Nitrogen B) Phosphorous C) Potassium	Kg	32.66 83.05 54.59	63.25 79.83 54.59	2065.49 6629.89 2703.13	0.66 2.14 0.87
6	Irrigation Charges				20784.60	6.72
7	Biofertilizers / Micronutrient				3391.69	1.09
8	Plant Protection Charges				34075.59	11.02
9	Incidental Charges				2431.44	0.78
10	Repairs on farm implements				3432.39	1.11
11	Raw Material				1732.28	0.56
12	Weedicide				959.32	0.31
13	Working Capital(1+12)				160687.14	52.00
14	Int. on Working Capital				9641.23	3.12
15	Depre. On Farm /Implements				7158.06	2.31
16	Land reve. & other charges				114.69	0.03
17	Cost-A (13 to 16)				177601.12	57.47
18	Rental value of land				76984.12	24.91
19	Int. on fixed capital				24908.97	8.06
20	Amortization cost				10335.00	3.34
21	Cost-B (17 to 20)				289829.22	93.80
22	Family labors A) Male B) Female	Man days	51.42 28.76	283.41 159.31	14573.49 4582.15	4.71 1.48
23	Cost-C (21 + 22)				308984.86	100
24	Outputs A) Main Produce B) By Produce	Qtls	140.67 -	4000 -	562680 -	
25	Per quintal Cost (24/23)				2196.52	
26	Benefit : Cost Ratio				1.82	

It is seen from table that, per hectare cost of cultivation of pomegranate (i.e. Cost C) was worked out to Rs. 308984.86(100 %). Among the different items of costs, rental

value of land was Rs.76984.12 (24.91 %) which was highest as compared to remaining items of costs. The other important items of cost were manures Rs.36251.97(11.73 %), plant

protection cost were Rs.34075.59(11.02%), hired male labour cost were Rs.24371.48 (8.00 %) and irrigation charges cost were Rs.20784.60 (6.72%). The cost incurred in respect of land renew and other taxes and depreciation were negligible in cost of cultivation. In total cost of cultivation, cost A was Rs.177601.12 (57.47%) and cost B Rs.289829.22 (93.80%). The Benefit: Cost ratio 1.82 in pomegranate production and per quintal cost of production was Rs.2196.52.

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