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## COST – VOLUME – PROFIT ANALYSIS OF CUSTARD APPLE – A STUDY WITH TRIBAL PEOPLE IN KRISHNAGIRI

### Article Particulars

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### Abstract

*An attempt has been made to analyse the income of tribal people from custard apple cultivation with help of Cost – Volume – Profit analysis in Krishnagiri Taluk. The study was based on primary data of fifty farmers, and collected from four panchayaths namely Anjur, Jegadevi, Sendarapalli and Varatanapalli. The selected custard apple growers were classified into two groups such as small and medium. Simple tabular analysis and marginal costing technique were used to work out the cost of cultivation of custard apple. At overall basis per hectare cost cultivation (variable cost) and cost of establishment (fixed cost) were Rs. 24,746 and Rs.39,611 respectively. The study revealed that the profit was Rs.11,318. The selling price of custard apple was worked out to Rs.155.03 per qtl. The profit from sale of custard apple mainly goes to growers, which use it for their socio-economic development activities.*

*It has very sweet taste. It is a well-balanced diet.*

### Keywords:

- Selling price
- Variable cost
- Fixed cost
- Profit
- P/V ratio
- Break Even Point

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### Introduction

Custard apple is also known as *sithaphal*, *sugar apple* and *sarifa*. Its botanical name is *Annona squamosa* and belongs to the family *Annonaceae*. It is a common cultivated crop in India, China, Philippines, Taiwan, Australia and Cuba. The fruit has commercial importance in Egypt and Central Africa. It is recently become very popular in certain regions of India, especially Tamil Nadu, Orissa, Assam, Rajasthan and

Gujarat area under custard apple cultivated to be more than 40000 hectare. In Krishnagiri Taluk, custard apple is cultivated an about 7300 acres in Anjur, Jegadevi, Sendarapalli and Veratanapalli Panchayaths. This article reveals that the cost incurred for production and marketing of custard apple and the profit of cultivation.

### **Statement of the Problem**

In Krishnagiri Taluk, cultivation of custard apple is the main source of income for the numerous tribal families. So the researchers has to analyses the income level of the people whose involved in custard apple cultivation.

### **Objectives of the Study**

The following are the objectives of the study.

1. To study the production level of custard apple.
2. To analyses the cost incurred for the custard apple cultivation.
3. To measure the tribal people income level in Krishnagiri Taluk.

### **Methodology**

1. Study area - Krishnagiri Taluk
2. Sample size - 50 Growers (Small – 25, Medium – 25)
3. Data type - Primary data
4. Sampling design - Simple random sampling
5. Tools - a. Percentage analysis
6. Cost-Volume - Profit analysis  
(Marginal Cost Statement)

### **Operational Concepts**

#### **Cost – Volume – Profit analysis**

Cost – Volume – profit analysis helps to measure the effect of changes in volume (sales), cost, price and profit of business.

#### **Variable Cost**

The cost which is increase or decrease proportion to the output and sales. It includes direct material, direct wages, and direct expenses. Variable costs are also called “productive cost or marginal cost”.

#### **Fixed Cost**

It is the total of all those cost which are termed “period costs or time costs”. It do not depend on the volume of production and sales.

#### **Profit – Volume Ratio**

This is the ratio of contribution to sales. A high P/V ratio indicates high profitability and low P/V ratio indicates low profitability.

### Break Even Point (BEP)

Break even analysis is a relationship between costs and revenue in relation to sales volume. BEP is also called "No profit, No loss point".

### Cost – Volume – Profit Analysis of Custard Apple

The cost of production and marketing of custard apple has been computed under marginal cost concepts for small and medium farmers.

Under the cost concepts, costs were classified into Cost – A and Cost B for variable cost and fixed cost respectively and profit also were summarized below.

### Cost – A (Variable Cost)

**Table 1 Cultivation Cost of Custard Apple**

(Rs.Per Acre)

S.No	Cost Components	Growers			Percentage
		Small	Medium	Over All	
1	<b>Variable costs:</b> Manure and fertilizer	5378	8214	7686	31.06
2	Plant protection chemicals	100	150	148	0.60
3	Farm power	450	450	450	1.82
4	Transportation	200	300	268	1.08
5	Labour	5346	6872	5643	22.80
6	Irrigation	1438	2026	1762	7.12
7	Weeding	855	1265	1080	4.36
8	Application of manure and fertilizer	350	1000	600	2.42
9	Training and pruning	1435	2048	1865	7.54
10	Harvesting	2487	2843	2654	10.73
11	Grading and packing	455	825	610	2.47
12	Other labour involvement	100	200	-	-
13	Repairs and maintenance	-	250	-	-
14	Interest on fixed cost 5%	1784	2135	1980	8.00
	<b>Total</b>	<b>20378</b>	<b>28578</b>	<b>24746</b>	<b>100.00</b>

**Source:** Computed data

Table – 1 reveals that the aggregate of Cost - A is the highest to medium growers due to more amounts spent for purchase of manure and fertilizer and labour charges. Normally, medium growers Cost – A expenses are higher than the cost of small growers.

**Cost – B (Fixed cost)****Table 2 Establishment Cost of Custard Apple****(Rs. Per Acre)**

S.No	Cost Components	Growers			Percentage
		Small	Medium	Over All	
	<b>Fixed costs:</b>				
1	Cost of land	8369	11748	10758	27.16
2	Land tax	79	79	79	0.20
3	Cost of fencing	6978	7958	7154	18.06
4	Machines and Instruments	4700	5000	4805	12.13
5	Planting material	5007	5634	5407	13.65
6	Other fixed cost	1986	2429	2226	5.62
7	Interest on capital	8564	9845	9182	23.18
	<b>Total</b>	<b>35683</b>	<b>42693</b>	<b>39611</b>	<b>100.00</b>

**Source:** Computed data

It could be observed from Table – 2, that the cost of land (27.16 per cent) is the highest in the fixed cost followed by interest on capital (23.18 per cent), cost of fencing (18.06 per cent) and cost of planting the material (13.65 per cent). Other fixed cost almost lowest compare with other cost both small and medium growers. Land tax is common rate for all type of growers.

**Profit****Table 3 Income Statement of Custard Apple (Marginal Costing)**

S.No	Particulars	Amount (Rs. Per Acre)
1	Sales	75675
2	<b>Less:</b> Variable Cost (Cost – A)	24746
3	Contribution	50929
4	<b>Less:</b> Fixed Cost (Cost – B)	39611
5	<b>Profit</b>	11318

**Source:** Computed data**Calculation of Sales****Profit** = Sales – Variable Cost – Fixed Cost**11318** = 75675 – 24746 – 39611**Profit Volume Ratio** =  $\frac{\text{Contribution}}{\text{Sales}} \times 100$

$$= \frac{50929}{75675} \times 100$$

$$= 67.30\%$$

**Break Even Point**

$$= \frac{\text{Fixed cost}}{\text{PV ratio}} \times 100$$

$$= \frac{39611}{67.30} \times 100$$

$$= \text{Rs. 58,857}$$

### Findings of the Study

The following are the major findings of the study:

1. Majority of the tribal peoples are engaged custard apple cultivation.
2. 7300 Kilogram fruits were cultivated per Acre in Krishnagiri Taluk.
3. Fixed costs are more than the variable cost both in production and marketing.
4. Profit for the production of custard apple Rs.1550.03 (Rs. 15.55 per Kg) per quintal.
5. Income from custard apple is the main source of tribal families.

### Conclusion

The cultivated custard apple in Krishnagiri Taluk is mainly sent to Andhra Pradesh, Karnataka and Maharashtra. The income from sale of fruits mainly goes to growers (Tribal people), which use it for their development activities. According to Mr.A.Pandian, a farmer, "past three years has reduced the average yield gradually. The total harvest that was 25000 Kilogram during the main season has now come down to 7300 Kilogram following depletion of ground water levels, because the income level also reduced.

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