

## **A STUDY OF COST STRUCTURE AND PRICING OF STRAWBERRY FARMING IN SELECTED VILLAGES OF MAHABALESHWER TALUKA (DIST – SATARA)**

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### **Abstract:**

*The study was conducted is strawberry farming of Mahabaleshwer with an objective estimating the production and pricing of strawberry farming in the Mahabaleshwer taluka of satara district. The study indicated that cost of production is highest as expenses of plant establishment the total cost of production as paper acre on the average was Rs 264534 in selected villages of strawberry farming, cost of planting was found major cost item for 39.83%, production cost, manures and fertilizers were found to another major cost item. The behaviors of prices suggest that there are various factors influencing the demand for strawberry. The price of strawberry based on various such as fresh influencing the demand for strawberry, industrial grade, price differently on the quality. In the present result shows that strawberry prices are highly fluctuating. Hence this study is important to all fields such as government, strawberry industries, and Strawberry farmers.*

### **INTRODUCTION**

Strawberry is one of the best fruit in many parts of the world. Indeed, people from all walks of life truly enjoy the venerable strawberry. In addition to being a delicious fruit, the strawberry also is a fruit that can be easy to cultivate and grown. Strawberry is important commodity of food and it is used for manufacturing of sweet jams, jellies, biscuits, ice-cream, short cake and angel food cake, as fruit leather they are also just with a sprinkling of sugar or splash of a cream, Post harvest handling marketing. Strawberry is highly perishable and hence a great deal of care in harvesting and handling as well as its marketing also requires to be organized carefully. Usually the fruit is picked late after soon, stored over night in a cool place and sent to market.. In this taluka out of 11812 hector, 10196 hector lands is under plantation. But the field for strawberry crop is 2500 acre. The feasibility and profitability of strawberry farming is always debated. In the subject of botany, agriculture science, biotechnology and biochemistry, studies have been conducted on strawberry crop. Even in economics commerce and management studies have been conducted on the topics related to food industries, jam factories and other factories and are useful for farmers.

### **STRAWBERRY FARMING IN MAHABALESHWER**

Mahabaleshwer is most eminent centre of strawberry cultivation in India, which started 90 years ago. Mahabaleshwer produces and processes strawberry for domestic and international market. The Mahabaleshwer is contributing 83%in the total production and market supply of strawberry in India, which is described as below in the table.

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**Table No- 1**  
**Strawberry Production / Trend**

<b>Year</b>	<b>Area in Acre</b>	<b>Production (M.T.)</b>
2005	1750	12500
2006	1825	13900
2007	2000	15000
2008	2100	16000
2009	2150	17000
2010	2300	22000
2011	2400	21000
2012	2500	18000

Source: Strawberry farmer's cooperative society Bhilar and Sahayadri krushi society

Table No. 1 highlights the strawberry cultivation acres and total production in Mahabaleshwer. Since 2005 to 2011-12 the strawberry cultivation area and strawberry production has been increased continuously, There is continuous growth in strawberry cultivation and production during the period of eight years.

#### **STATEMENT OF THE PROBLEMS**

The main problem for the strawberry farming is the availability of credit financing, apportionment of cost and price utilization in improper manner. it is also difficult to measure the financial performance of strawberry farmers . Because their maintaining no proper accounting record. The present study is confined to the study of cost structure and the pricing problems.

#### **SIGNIFICANCE OF THE STUDY**

The present study is mostly useful to the respective farmers in predicting proper cost and price of strawberry and helpful to keep account records whenever necessary. The farmers may use of this study for adopting proper methodology for an ascertainment of profitability. It is also helpful for strawberry industries and strawberry farming and for the government authorities for the purpose of policy formulation or policy intervention. farmers.

#### **OBJECTIVE OF THE STUDY**

The main objective the study is as follows.

- i)To study the origin and growth of strawberry farming in India as well as in the study area as particular.
- ii)To know the existing cost of production and pricing of Strawberry.
- iii)To study the planning controlling and decision making function of management in determining the cost and pricing of strawberry.

#### **HYPOTHESIS OF STUDY**

- i)The farmers are unaware about maintenance of accounting record.
- ii)The strawberry farming in Mahabaleshwer taluka is profitable fruit crop.

## METHODOLOGY

### 1) Data collection

The primary data has collected by using the structured questionnaires interviews and non participative observation. The present researcher proposes to use the cluster sampling to collect the required data. The informal discussion with the agriculture field office has also been carried. The present researcher has been collected the secondary data. By using secondary sources such as references book, research paper, articles, primary interview intimation questionnaires and other related matters and various websites.

### 2. Sampling technique

Four villages from Mahabaleshwer taluka have been selected for the present study. These villages have been selected on the basis of strawberry cultivation. The four villages are first largest strawberry cultivators in this taluka. These villages are Bhilar, Panchgani, Bhose and Avkali.

**TABLE NO- 2.**  
**SELECTION OF THE SAMPLE**

Villages	Strawberry farmers	Sample	Percentage
Bhilar	384	38	10%
Panchgani	228	23	10%
Bhose	164	16	10%
Avkali	146	15	10%
<b>Total</b>	<b>922</b>	<b>92</b>	<b>10%</b>

The researcher has selected Ninety Two respondents from above mentioned villages, on the basis of maximum number of cultivators available in the total number of these villages. The sample has been selected 10 % of population on the basis of cluster sampling method.

### ANALYSIS AND INTERPRETATION OF DATA

After collecting the necessary data from selected farmers in four selected villages of Mahabaleshwer taluka of Satara district, the researcher has analyzed it with different tools and technique of cost structure and pricing of strawberry. The data has been collected from 92 farmers through structured interview.

#### Average Cost structure

The cost structure of strawberry farming has been analyzed on the basis of various cost of strawberry. The data has been collected on the field survey in selected villages. Following table describes the average cost structure of selected villages of strawberry cultivation

**Table 3**  
**Average cost structure of selected villages of strawberry**  
**(No of respondents 92)**

(Per acre)

Cost Items	Rs	Percentage of Cost
<b>Plantation Cost</b>		
Plantation	6285	2.37%
Mulching Paper	8000	3.02%
<b>Purchase</b>		
Purchases of Plant	105282	39.834%
<b>Production Cost</b>		
Weeding	-	
Fertilizers	28975	10.96%
Drip Irrigation	13675	5.17%
Medicine Charges	27560	11.60%
Wages of Labour (Harvesting & Other)	23135	8.75%
Other Expenditure	4406	1.85%
<b>Administrative Expenses</b>		
Corp Insurance	-	-
Telephone Expenses	-	-
Electricity Charges	2000	0.77%
<b>Selling &amp; Distribution</b>		
Transport Charges	13058	4.94%
Box Packaging exp	26480	10.02%
Cooling	-	
<b>Miscellaneous Expenses</b> (Tax, Commission, Other)	5434	2.05%
<b>Total Cost</b>	<b>261534</b>	<b>100%</b>
<b>Profit</b>	<b>104076</b>	<b>-</b>
<b>Total Sale (Production * price)</b>	<b>365553</b>	<b>-</b>

Source: field work

The above table no.3 shows that the average of 92 respondents from selected villages' reveals the cost structure for cultivation of strawberry. The total cost of cultivation of strawberry per acre is Rs. 261534. Strawberry farmers have invested maximum for plant of strawberry. And low for plantation and other cost. The average profit is per acre Rs.1, 07,450. By the increase in rate of input total prime cost of strawberry farming Rs 105282 production of cost Rs 100127, selling and distribution cost Rs 44598. Main component cost is plant of cost, fertilizers, irrigation and other expenses per acre. During the study period main component of cost of fertilizers, medicine charges and labor cost, water cost is on respectively

**PROFITABILITY OF STRAWBERRY FARMING:**

The following table is related about profitability statement of strawberry cultivation in selected villages.(per acre)

**Table 4**  
**Profitability Statement of Strawberry in selected Villages (Per Acre)**

Selected Villages	Average Production (Tones)	Average Cost	Average Price (K. g)	Average Income (Sales)in Rs	Profit
<b>Bhilar</b> (No. of Rasp- 38)	7.5 tones	241393	47.70	357782	116389
<b>Panchgani</b> (No. of res 23)	7.5 tones	275945	49.00	367520	91575
<b>Bhose</b> (No. of Res 16)	8.0 tones	270735	46.62	372970	102235
<b>Avkali</b> ( No of Res-15)	7.0 tones	258160	51.99	363940	105780
<b>Total Average</b>	<b>7.5</b>	<b>261534</b>	<b>49.00</b>	<b>365553</b>	<b>104076</b>

(Source: - Field work)

The above table no. 4 shows profitability statement of strawberry in selected villages. Taking into consideration average production, average cost, average price and average income in each village researcher have estimated the average profit of each village. In Bhilar village the profit is Rs. 1, 16, 389, in Panchgani Rs. 91,575, in Bhose is Rs 102,235, in Avkali Rs. 1, 05,780. On the basis of above observation it is found that strawberry farming is profitable crop.

#### **PRICE ANALYSIS OF STRAWBERRY**

The price for any commodity has a vital significance in mixed economy. The research based on the observation including interviews with cultivators in local market, and strawberry grower's societies, the behavior suggest that there are various factors influencing the demand for strawberry, the price of strawberry is based on various factors such as fresh strawberry, industrial grade and class three strawberries, Hence priced differently on the quality.

#### **Prices of fresh strawberry**

The following table describes the farmer's monthly prices of fresh strawberry.

**Table 5.**  
**Monthly Grower Prices of Fresh Strawberry (At producer end)**  
**(Price in per kg)**

Year	Dec	Jan	Feb	March	April	May	June	average
2008-09	200	120	100	60	50	40	45	87.85
2009-10	180	140	120	60	40	45	50	90.11
2010-11	190	125	90	65	40	40	45	82.14
2011-12	200	150	100	60	45	40	50	92.14

(Source: strawberry grower's co-op society)

The above table no 5. Show the monthly prices of strawberry received by the growers. During the year 2008-09 strawberry prices had been received in average by the growers, as Rs.87.85% per kg for fresh strawberry. During the year 2009-10, Rs 90.11 received in average, 82.14 in 2010-11 and Rs 92.14 in 2011-12. Above observation reveals the fluctuating prices of strawberry.

#### Strawberry prices of Industrial grade

The following table describes the farmers strawberry monthly prices of industrial grade.

**Table 6**  
**Monthly growers prices industrial Grade (At producer end)**  
**(Price in Rs.)**

Year	Dec	Jan	Feb	March	April	May	June	average
2008-09	32	25	25	20	20	30	25	25.25
2009-10	27	25	20	20	32	30	30	26.28
2010-11	25	27	25	20	25	30	20	24.35
2011-12	30	25	20	20	25	27	25	24.28

(Source: strawberry grower societies and field work)

The above table no.6 shows that the industrial grade strawberry has been priced at low price .The average price of strawberry received by farmers. During 2008-09 is 25.28 and during 2009-10, Rs 26.28, 2010-2011, is 24.58 and during 2011-12 is 24. Hence the above observation reflects the fluctuating prices of strawberry.

#### TESTING OF HYPOTHESIS

##### Hypothesis no.1

The farmers are unaware about maintenance of accounting record.

Ho	H1	Test	Critical value	Under Ho	Result
P=1/2	P<1/2	Z	Z 0.05=1.64	Z o= -1	Reject - Ho

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**Hypothesis no.2**

The strawberry farming in Mahabaleshwer taluka is profitable fruit crop.

Ho	H1	Test	Critical value	Under Ho	Result
P=1/2	P<1/2	Z	Z 0.05=1.64	Z o= -1	Reject - Ho

**SUGGESTIONS:**

1. The farmers should come together and form a cooperative marketing organization so that transportation and packing costs can be reduced.
2. The state government should provide minimum support price to the strawberry this would eliminate the risk of price fluctuation and it would facilitate stability in the market which is beneficial to the producer.
3. Strawberry cultivation in the Mahabaleshwer taluka is profitable and therefore area under strawberry cultivation must be increased.
4. The strawberry farmers should maintain the proper books of account and other financial record to enable them to know the profit and loss from strawberry farming.

**CONCLUSION:**

There are various broad cost element of strawberry cultivation. Prime cost plantation cost, production cost, selling and distribution cost. Most of the farmers in Mahabaleshwer village strawberry cultivation up to 2 acres under strawberry crop very few members more than 4 to 6 acres under strawberry crop.

The strawberry per acre production cost of strawberry was estimated and it was found to be per acre averagely cost Rs 261534 in selected villages. Cost of planting was found to be major cost item for 39.83% Percent of goods production cost manures and fertilizer were found to be another major cost item. Labors charges, transportation cost, box packaging and there expenditure to be the most important cost items. Strawberry is profitable crop because calculated and it was found that farmers start earning profit from the year as the production cost is high in initial years whereas volume production is high. The prices of strawberry are not fixed by the process of perfect competitions. Strawberry prices decided are strawberry factory and APMC price considering agriculture price cost and prices commission recommendation and state government advice. The ultimate price is residual price in nature .the quality of strawberry there are divided by three quality of strawberry as on class 1, class 2, class 3. In the present study result shows that strawberry prices are fluctuating.

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