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Economics of manufacturing indigenous dairy product at producer level in Yavatmal district

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Abstract

Dahi, Paneer and Pedha are some of the most important traditional products widely consumed in India. Economic analysis of this product is necessary to optimize the cost of each component used to manufacture the indigenous dairy product. It helps the product to keep its presence in the competitive market. As a result the consumer will benefit of this optimum price. Therefore, cost of the product was calculated at the milk producer's level. The production cost of Dahi, Paneer and Pedha is Rs.52.69, Rs.283.27 and Rs. 264.59 per Kg, respectively.

Keywords: Dahi, paneer, pedha, cost

Introduction

Today India is the largest producer of milk, with a share of 23% of the total milk production worldwide. Milk production has been growing at an average rate of 5.68 percent per annum. The per capita availability has increased considerably from 289 gm. in 2011-12 to 406 gm. in 2019-20. There is rising consumption of milk and milk products in urban and rural India. The rapid change in lifestyle vis-a-vis food habits and their more significant influence will divert of more expenditure towards milk and milk products. Dahi, Paneer and Pedha are the well-known traditional product being used by all classes of society. Therefore, it is necessary to calculate the cost of Dahi, Paneer and Pedha to fix the prices of the product that will help to maintain the equilibrium between producer and consumer interest.

Materials and Method

The present study was conducted in the Yavatmal district of Maharashtra. The primary data was collected by actual observation and interviewing milk producers and processors of Pusad and Darwhataluka for the year 2020-21. The total 80 samples were selected by purposive sampling. Data on milk inflow, its utilization pattern and output of product was taken. The expenditure incurred on quantity of raw material, labour required, expenses on refrigeration, packaging, energy and depreciation on equipment's and building. Actual observations were taken on quantity of different ingredients required and their price of the item's used for processing of dairy product. To work out the cost of production of Dahi, Paneer and Pedha, the tabular analysis technique were used to workout different cost component of Dahi, Paneer and Pedha.

Result and Discussion

Table 1: Component wise cost of dahi

Sr. No.	Cost component	Total Cost (Rs.)	Fixed Cost (Rs.)	Variable Cost (Rs.)	Total Cost per unit (Rs./kg)	% Cost
1	Raw material	1260000	0	1260000	42	79.71
2	Labor	123667	48667	75000	4.12	7.82
3	Refrigeration & Electricity	32285	14285	18000	1.08	2.04
4	Water	4316	0	4316	0.14	0.27
5	Steam	72209	11905	60304	2.41	4.57
6	Packaging	45000	0	45000	1.50	2.85
7	Depreciation on building	1200	1200	0	0.04	0.08
8	Miscellanies	42038	0	42038	1.40	2.66
9	Total Cost	1580715	76057	1504658	52.69	100.00
10	Per unit cost (Rs./liter)	52.69		Total production in a year = 30000 kg		

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Table 2: Component wise cost of paneer

Sr. No.	Cost component	Total Cost (Rs.)	Fixed Cost (Rs.)	Variable Cost (Rs.)	Total Cost per unit (Rs./kg)	% Cost
1	Raw material	1792944	0	1792944	249.02	87.91
2	Labour	95328	14866	80462	13.24	4.68
3	Refrigeration & Electricity	12672	5285	7387	1.76	0.62
4	Water	2088	0	2088	0.29	0.10
5	Steam	86256	32057	54199	11.98	4.23
6	Packaging	28800	0	28800	4.00	1.41
7	Depreciation on building	720	720	0	0.10	0.04
8	Miscellanies	20276	0	20736	2.88	1.02
9	Total Cost	2039544	52928	1986616	283.27	100.00
10	Per unit cost (Rs./Kg)	283.27		Total production in a year = 7200kg		

Table 3: component wise cost of Pedha

Sr. No.	Cost component	Total Cost (Rs.)	Fixed Cost (Rs.)	Variable Cost (Rs.)	Total Cost per unit (Rs./kg)	% Cost
1	Raw material	2860200	0	2860200	190.68	72.07
2	Labour	198667	48667	150000	13.24	5.01
3	Refrigeration & Electricity	26428	14285	14400	1.76	0.67
4	Water	4316	0	4316	0.29	0.11
5	Steam	666057	42057	624000	44.40	16.78
6	Packaging	150000	0	150000	10.00	3.78
7	Depreciation on building	15000	15000	0	1.00	0.38
8	Miscellanies	48178	0	48178	3.21	1.21
9	Total Cost	3968846	120009	3851094	264.59	100.00
	Per unit cost (Rs./Kg)	264.59		Total production in a year = 15000 kg		

From the Table 1 it was found that the cost of Dahi was Rs.52.69 per kg. It was further found that the cost raw material contributes highest (79.71 %), followed by labour (7.82), Steam (4.57%), Packaging (2.85%) respectively.

Table 2 showed that the cost of Paneer was Rs.283.27/kg. It was further found that the cost raw material contributes

highest (87.91 %), followed by labour (4.68), Steam (4.23%), Packaging (1.41%) respectively.

From the Table 1 it was revealed that the cost of pedha was Rs.264.59 per lit. It was further found that the cost raw material contributes highest (72.07 %), followed by Steam (16.78%), labour (5.01), Packaging (3.78%) respectively

Table 4: Economics of Dahi, Paneer, Pedha

Sr. No.	Product	Selling Price (Rs./kg)	Cost (Rs./kg)	Profit (Rs./kg)	Percent of per kg profit to per kg cost
1	Dahi	60	52.69	7.31	14
2	Paneer	360	283.27	76.73	27
3	Pedha	350	264.59	85.41	32

Conclusion

Manufacturing of traditional Indian dairy products like Dahi, Paneer and Pedha is a profit making business and can generate lot of employment opportunities in rural India. The cost of milk product manufacturing can be reduced by increasing the quantity of production. The manufacturing of pedha is most profitable product followed by dahi and paneer respectively.

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