

## MILK PRODUCTION AND MARKETING WITH SPECIAL REFERENCE TO MADURAI DISTRICT, TAMIL NADU

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### **Abstract**

*The dairy sector occupies an important place in the agricultural economy of India as milk is the second largest agricultural commodity in contributing to GNP, next only to rice. India is the world's largest milk producer, accounting for more than 13 per cent of world's total milk production. If it is the world largest consumers of dairy products that consumers almost 100 per cent of its own milk production. Dairy products are a major source of cheap and nutritious food to millions of people in India and the only acceptable source of animal protein for large vegetarian segment of Indian population, particularly among landless, small and marginal farmers and women. Milk has contributed immeasurably to health, nutrition and pleasure of mankind and thus it forms a vital part of the human diet in most societies throughout the world. Dairy products are tailored to suit the changing social and dietary habits of many people in different parts of the world. They have encouraged the dairy industries of many countries to take a new look at the range of dairy products.*

**Key words:** Agricultural, GNP, Dairy products, diet and nutritious.

### **Introduction**

Indian rural economy has been developed by large farmers, small farmers, marginal farmers and landless labourers. They are also involved in the production of milk. A scheme, called 'Operation Flood' was launched for the first time during 1970. It promoted the production of milk both in the organized and the unorganized dairy markets. It also related to the rapid increase in the creation of modern infra-structure for milk-processing. Dairying has become the most important subsidiary occupation and employment. For the development of the dairy industry in the country, improvement in the marketing of milk is critically important. One of the ways to achieve this is to increase the competition in the market and the role of milk producers in marketing. In many States, this has been done by establishing and encouraging formation of Milk Producers' Co-operatives. These institutional bodies operate in the rural areas to collect and handle milk supply from the producers and distribute the same to the city dwellers and consumers. These developments boost milk production. Its effective marketing and distribution assume a significant importance. For the process of economic development to become viable, it is necessary that the marketed surplus increases with increasing production volumes. And to achieve this goal, it is necessary to ascertain the determinants of marketed surplus of milk that would help policy makers in formulating policies for increasing the marketed surplus through establishment of efficient marketing systems. There is dearth of empirical evidence on the determinants of marketed surplus of milk. The increasing production of milk should lead to expansion of marketed surplus of milk. It calls for ascertaining the determinants associated with the increasing marketed surplus. This sort of study will help the planners while they frame the policy thereto.

**Block Wise Distribution of Cows And Buffaloes in Madurai District****Table 1 Block wise distribution of Cows and Buffaloes in Madurai District**

Name of the Block	Number of Cows	Number of Buffaloes	Total	Rank
Alanganallur	2012	640	2652	XI
Chellampatti	5605	87	5692	X
Kallikudi	1059	312	1371	XII
Kottampatti	11488	906	12394	V
Madurai East	28789	2783	31572	I
Madurai West	15408	1929	17337	IV
Melur	8270	635	8905	VIII
Sedapatti	14861	2878	17739	III
Thiruparamkundram	15970	1929	17899	II
Thirumangalam	1048	211	1259	XIII
T.Kallupatti	10131	592	10723	VI
Usilampatti	10596	53	10649	VII
Vadipatti	8592	261	8853	IX

In Madurai district, there are 13 blocks. The 13 blocks were ranked according to the total number of cow and buffalo population. The selection procedure of blocks and sample is given in the following Table 1.

**Source:** 18<sup>th</sup> Quinquennial Livestock, Office of the Assistant Director of Animal Husbandry, Madurai.

**Growth Performance of Milk Production in India**

Till the new economic policy was announced, National Dairy Development Board (NDDB) had a monopoly on the importance of dairy products and the construction of new processing capacity was subjected to industrial licensing. There was a boom in investment in new dairy processing capacity immediately after the liberalization of economy, particularly in the private sector. Availability of various incentives and tax concessions offered by the States to the private industry is the primary reason for rapid expansion of processing capacity in the private sector.

In 1991, as part of the economic reforms, the dairy sector was de-licensed. This effectively opened the industry to private entrepreneurs (including multinationals as the foreign companies were allowed to raise their equity holding to 51 per cent). The basic philosophy underlying de-licensing was encouraging the competition in procurement and marketing of milk, thus enhancing value for both producers' and consumers. It was also expected to spur increased in flow of capital and new technologies. De-licensing did have the indented effect of attracting private sector investments into the dairy industry. Within a year, over 100 new dairy processing plants were established in different parts of the country, most of which were designed to manufacture a range of high value added products. Therefore, it is necessary to study about growth performance of milk production in India during post reform period. The New Industrial Policy (NIP) also known as LPG is intended to bring about significant and far reaching changes in industries, trade, import liberalisation policy and foreign direct investment policy to make Indian industry more competitive and efficient to enhance economic growth. Naturally the question arises as to how production of milk in India has been enhanced after 1990-91. Growth rates are perhaps the most commonly used measure in economic profession. Therefore, the study makes an attempt to examine growth of milk production during post reforms period in India.

Table 2 Volume of Milk Production in India

Period	Production
1950-1951	17.0
1960-1961	20.0
1970-1971	22.0
1980-1981	31.6
1989-1990	51.4
2000-2001	80.6
2004-2005	92.48
2010-2011	116.2

(In million tonnes)

From the following Table 2, it is clear that milk production in India has been continuously increasing over time.

*Source:* Department of Animal Husbandry & Dairying, Ministry of Agriculture, Government of India.

Table 3 Growth of Milk Production in India

Period	Production
1951-1961	1.64
1961-1974	1.15
1974-1981	4.51
1981-1991	5.48
1991-2001	4.11
2001-2010	3.77

(In per cent per annum)

*Table 3 shows that the growth rate of milk production in India.*

*Source:* Department of Animal Husbandry & Dairying, Ministry of Agriculture, Government of India

### Performance of Milk Production in Tamil Nadu

#### *Dairy Development in Tamil Nadu*

Milk co-operative societies were organized in Tamil Nadu by the State Co-operative Department in 1920. India's first co-operative dairy with processing and marketing facilities was established at Ayyanavaram in Madras city in 1927. This was followed by the establishment of milk co-operatives in Coimbatore, Madurai, Trichy, Tanjore, Ooty, Cuddalore and other parts of Tamil Nadu. The Dairy Development Department was established in 1958. It embarked upon a large scale dairy development activity. With the aid from New Zealand and under Colombo plan, a cattle colony at Madhavaram and also a dairy to process 50000 liters of milk per day were established in 1963. Later another dairy to handle 50000 liters of milk per day was established in Madurai in 1967 with the assistance from the United Nations International Children's Emergency Fund (UNICEF). Further, a large number of chilling centers was also established and organized in the marketing of milk in Chennai and Madurai cities. The commercial activities of the State Dairy Development Department were taken over by the Tamil Nadu Dairy Development Corporation in 1972. The corporation's activities grew in volume and in variety during these years of its operation and it became a major change agent under the Operation Flood-I programme. In Tamil Nadu, Co-operative dairying has also paved the way for the economic emancipation of women in the villages. Dairies are operated and managed by women themselves. In Thanneerpandal Village in Erode District the concept of 'Micro-Dairies' has been introduced to make dairying accessible to small and marginal farmers. The impact of dairy development in the rural economy of Tamil Nadu is great and wonderful. The dairy co-operatives are the main springs for this rural development.

#### **District-wise Growth of Milk Production in Tamil Nadu**

The following Table 4 gives the average annual compound growth rate of milk production in aggregate Tamil Nadu and 27 districts during the period 2001-2010.

Table 4 District wise Trends in Production of Milk in Tamil Nadu during 2001-2010

District	Regression coefficients		R <sup>2</sup>	CGR (per cent per annum)
	a	b		
Tamil Nadu	8.4307* (284.27)	0.0283* (5.3766)	0.85	2.87
Kanchipuram	5.4885 (54.33)	-0.05698* (30.32)	0.59	-5.54
Thiruvallur	5.3093* (60.86)	-0.02459 (-1.671)	0.28	-2.56
Cuddalore	5.3119* (71.153)	-0.00625 (0.47101)	0.30	-0.62
Villupuram	5.477* (57.184)	0.02559 (1.502)	0.24	2.59
Vellore	5.6430* (101.699)	0.01683 (1.707)	0.29	1.69
Thiruvannamalai	5.1925* (139.55)	0.009369 (1.399)	0.20	0.94
Salem	5.1616* (388.81)	0.13436* (7.3249)	0.88	14.28
Nammakkal	5.3141* (84.953)	0.02282** (2.052)	0.38	2.31
Dharmapuri	5.1994* (55.2679)	0.020563 (1.239)	0.17	2.07
Coimbatore	5.5107* (70.2209)	0.030409* (2.934)	0.40	3.09
Erode	5.7522* (62.899)	0.000308 (0.01902)	0.1	0.03
Tiruchirappalli	5.1427* (46.7567)	0.03390 (1.7348)	0.30	3.45
Karur	4.6238* (46.7657)	0.0000369 (0.0253)	0.1	0.003
Perambalare	4.74109* (54.33)	0.042494* (4.7961)	0.76	4.34
Pudukottai	5.04038* (84.826)	-0.03719* (-3.5219)	0.63	-3.65
Thanjavur	5.0627* (28.9303)	0.025143 (0.8785)	0.1	2.55
Thiruvarur	4.61299*(39.91755)	0.005524* (2.6903)	0.50	5.68
Nagapattinam	4.7689* (111.4847)	0.02398 (3.1556)	0.59	2.43
Madurai	5.3803* (54.046)	-0.03815 (-2.1564)	0.39	-3.74
Theni	5.03849* (61.2262)	-0.07697* (-5.2634)	0.79	-7.41
Dindigul	5.2878* (71.4279)	-0.01968* (3.1564)	0.59	2.43
Ramanathapuram	4.6309* (57.766)	-0.06344 (-1.49314)	0.24	-1.95
Virudhunagar	4.2868* (35.2734)	0.115899* (5.3662)	0.78	12.28
Sivakangai	4.39462* (56.675)	0.00383 (0.2784)	0.1	0.38
Tirunelveli	4.91755* (36.239)	0.092071* (3.8181)	0.67	9.64
Thoothukudi	4.6665* (64.3856)	-0.00252 (-0.1957)	0.1	0.25
Kanniyakumari	4.45143* (24.3212)	0.034117 (1.0489)	0.3	3.47

**Source:** Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India, 2011

**Note:** 1. Figures in bracket indicates t values 2. \* Indicates 5 percent level of significance

#### Marketing of Milk in Madurai District

In earlier days, co-operative societies (Aavin) played a monopoly role in the marketing of milk in Madurai District. The monopoly power of co-operative societies has changed due to poor procurement of milk because; it was unable to meet the increasing demand for milk. Before the entry of corporate bodies, the consumers had to wait in queues for long hours to buy milk and sometimes return without milk. The entry of corporate bodies into the scenario of milk marketing has brought in a series of changes. There are more than branded milk producers in Madurai district namely Aavin, Arokya, Seva, KC, Vijay, Sakthi, SNP, Amirtha, Cavins, Matha, Raaj, Akshya and others (milk vendors).

#### Variety of Milk

Table 5 Variety of Milk

Variety	Fat	Solid Not Fat (SNF)
Standardized Milk	4.5	8.5
Premium Milk	4.5	9.0
Super thick Milk	5.0	9.0
Tonned Milk	3.0	8.5
Double Tonned Milk	1.5	9.0

There are five varieties of milk in the sphere of milk marketing by the different enterprises. These varieties are made by Aavin in the State of Tamil Nadu. These varieties are employed just to create product

differentiation and price variations accordingly. These varieties are designated: Standardized milk, premium milk, super thick milk, toned milk and double toned milk. In other words, this exercise is done by altering the fat content.

#### **Channels of Marketing of Milk**

The increase in demand for milk in the urban areas and concentration of milk production in the rural areas have made a large number of co-operatives and private milk marketing agencies enter the business of procurement, processing and marketing of milk.

The channels of marketing are in different forms. The various channels of marketing of milk in Madurai district are given below:

1. Producer - Consumers
2. Producer - Milk Vendors - Consumers
3. Producer - Co-operative societies - Consumers
4. Producer - Co-operative societies - Madurai District Co-operative milk producers union - Agents - Consumers
5. Producer - Corporate bodies - Agents - Consumers.

#### **Marketing Efficiency**

The cost involved moving goods from the producer to the consumer and the quantum of service provided to the consumers is directly related to the marketing efficiency. It ceases to be efficient-marketing, when the cost is low. The cost reduction will improve the efficiency of marketing and at the same time the quality of service will not be reduced to the consumers. The determinants of marketing efficiency are pricing or economic efficiency and operational or technical efficiency. Pricing or economic efficiency is concerned with improving the operations of pricing aspects and competition in the market. Operational or technical efficiency means that the output of goods and services is given and focused on reducing the cost of providing them.

#### **Suggestions to Improve in Milk Production and Marketing**

Growth of milk production in the following districts Kanchipuram, Thiruvallur, Cuddalore, Pudukottai, Madurai, Theni and Ramanathapuram has been found to be negative. It is suggested that there is a need to improve milk production in those districts either by offering incentives or by providing credit facilities to the milk producers. The marginal value productivity has been found greater than unity for all inputs in the case of both cow and buffalo. This indicates over utilisation of these inputs in the study area. The department of animal husbandry has to organise awareness programmes relating to the requirement of inputs level to the milk producers in the study area. In other words, it is suggested that employment of these resources should be decreased till the ratio becomes unity. Madurai district is having a very good atmosphere for the trade of milk sweets. Therefore, government should take necessary steps for creating favourable environment for making milk sweets to the producers in the study area. It will create additional employment in the industrially backward district of Madurai. Development of efficient milk collecting centres with proper cooling facilities and transportation networks at farmers level by co-operative and private dairy plants, would help strengthen the linkages between

dairy farmers and dairy industry. The dairy plants should utilise the full plant capacity to reduce costs on processing and manufacturing of their products.

#### Conclusion

The study has done its best to highlight the pros and cons of milk production and marketing. The proper use of advanced technology has far-reaching effects. The attention of the authorities and agricultural exports to drawn in to the labyrinthine plight and whirlpool struggles is the farmers, staring at the barrel of abject poverty in the absence of redemption. The farmer needs to be provided with better alternative avenues of employment and earnings. They should be actively lifted out of centuries of uneven struggle against marauding poverty and despondency leading to even suicides. Ways and means should be found to maintain a steady increased production and marketed surplus. The study has gone into emerging trends in the marketing of milk. The suggestions offered at the end of the thesis could go a long way to show an outlet for the gradual uplift of the financial plight of the small and marginal farmers. Success in farming will provide the necessary boost to the agricultural industry that can contribute to the vast changes in the length and breadth of the rural India. If proper efforts are undertaken to bring into practice, some of the breaking grounds hinted at by the present researcher and the motivation behind its writing would have been amply rewarded.

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