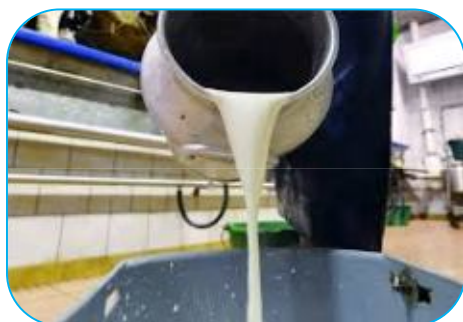




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A STUDY ON THE SCENARIO OF DAIRY CO – OPERATIVES IN TAMIL NADU

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ABSTRACT:

This study is an attempt to analyse the performance of Tamil Nadu Milk Co – operative Sector. In Tamil Nadu, the Milk Co – operative societies are running in three levels i.e Village level, District level and State level. There are seventeen unions in Tamil Nadu procuring milk from milk producers, selling the milk to customers and excess milk is utilized for Dairy products. To analyse the performance of the Societies, Percentages, Averages and Trends are used. The analysis shows that there is a high scope of milk and Dairy products in Tamil Nadu.

KEYWORDS: Procurement of Milk, Livestock sector, Trend Analysis and Milk Producers' Union.

INTRODUCTION:

Livestock sector plays a pivotal role in creating sustainable, gainful employment opportunities and supplement the income of small farmers and landless labourers. Moreover, it provides the much needed balanced nutritious food and improves the household's food security. The dairy industry is the sector with the highest degree of protection due to the economic vulnerable position of small milk producers. Milk - also known as white gold - can be used to make an enormous

variety of high quality products. The high cost of milk as raw material has necessitated a high-tech processing industry. The special nature of milk (perishable and bulky) lead to the necessity of strict and comprehensive quality regulation and high transport costs. The large dependence of milk producers on the dairy processing industry has resulted in a strong position held by the co-operatives in milk marketing and in the processing industry. Dairy industry is of crucial importance in India. 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 the landless, small and marginal farmers including women.

OBJECTIVES OF THE STUDY

1. To expose the Livestock wealth in Tamil Nadu;
2. To exhibit the structure of Milk Co – operatives in Tamil Nadu;
3. To disclose the Milk production by Milk Producers in Tamil Nadu;
4. To exhibit the Procurement and Sale of Milk by Milk Producers Union in Tamilnadu;

LIVESTOCK WEALTH IN TAMIL NADU

Livestock have remained an integral part of one's life since time immemorial. People are considering animal wealth as mobile assets as well as human companion. Products that are obtained through Livestock are useful for the economic upliftment of the people. In Tamil Nadu, local pure breeds of white cattle like Kangayam, Umblachery, Alambadi, Bargur and Pulikulam and Toda buffaloes are reared. Among these, Kangayam breed cattle are reared in Western districts viz., Tiruppur, Erode, Coimbatore and Karur, Umblachery breed cattle in Eastern districts viz., Thanjavur, Thiruvarur, Nagapattinam and Cuddalore, Alambadi breed cattle in Western districts viz., Dharmapuri, Erode and Salem, Pulikulam breed cattle in Southern district viz., Sivagangai, Madurai, Dindigul and Theni, Bargur breed cattle in Erode and Toda buffalo in the Nilgiris. Apart from these local breeds, exotic or crossbred high milk yielding breeds like Jersey in plains and Holstein Friesian in hills are reared by farmers. As per the 19th Livestock and Poultry Census, 24.6 lakh indigenous cattle, 63.54 lakh exotic or crossbred cattle, 7.8 lakh buffalo, 47.87 lakh sheep, 81.43 lakh goats and 1173.49 lakh poultry are in Tamil Nadu.

Livestock Wealth in Tamil Nadu

Species	Population in India (in lakh Nos.)	Population in Tamil Nadu (in lakh Nos.)	% of population available in Tamil Nadu
Cattle	1909.04	88.14	4.62
Buffalo	1087.02	7.81	0.72
Sheep	650.69	47.87	7.36
Goat	1351.73	81.43	6.02
Pigs	102.94	1.84	1.79
Others	9.44	0.14	3.74
Total Livestock	5110.86	227.23	4.44
Total Poultry	7292.09	1173.49	16.09

Source: Dairying in Tamil Nadu, A Statistical Profile

Comparison of the livestock and poultry population in Tamil Nadu with respect to the livestock and poultry population in India are presented in the above table. Tamil Nadu ranks 2nd in respect of Poultry, 4th in Sheep, 7th in Goats, 13th in Cattle and 14th in Buffalo population in the country. Others include Horses, Ponies and Donkeys

STRUCTURE OF DAIRY DEVELOPMENT DEPARTMENT

The Dairy Development Department formed in the year 1958, is headed by the Commissioner for Milk Production and Dairy Development whose office is located at Madhavaram Milk Colony, Chennai. The Commissioner is also the Functional Registrar of all the Dairy Co-operatives across the State. In this capacity, various statutory functions like registration of societies, revival of dormant societies, inspection of societies, settlement of disputes, conduct of elections for constitution of Boards, and issue of directions to societies in the interest of public are exercised by the Commissioner for Milk Production and Dairy Development Department under the relevant provisions of the Tamil Nadu Co-operative Societies Act, 1983 and Tamil Nadu Cooperative Societies Rules, 1988. The Deputy Milk Commissioner (Cooperation) at the state level and 25 Deputy Registrars (Dairying) at the district level assist the Commissioner for Milk Production and Dairy Development in discharging the above legal responsibilities.

THREE TIER STRUCTURES OF MILK COOPERATIVES

Tier-1-Village level: Primary Dairy Cooperatives are formed at village level as "Anand Model". It forms the base level of the 3 tier system which has direct contact with milk producers at villages.

Tier-2-District level: District level Milk Producers Cooperative Union (DCMPU) comprises of all the village level Primary Dairy Cooperatives in a district. It procures surplus milk from the societies, processes it and sells it to milk consumers.

Tier-3- State level: The Tamil Nadu Cooperative Milk Producers Federation (TCMPF) is the apex level society in which all the District Unions are members. Federation is arranging for marketing of own liquid milk and products produced by all DCMPUs in the brand name of "Aavin"

Milk production and trade mainly operate as a cottage industry in the rural areas. A majority of those involved in this activity are women, for whom it provides employment and helps to supplement their family income. Traditionally, dairying and pasturing activities were done to meet the domestic requirement. Urbanisation has increased the demand for milk in urban areas and this necessitated procuring, processing and distribution of milk in a scientific manner. Further, to eliminate the middlemen and to protect the interest of the producers in the villages, Milk Producers' Cooperative Societies (MPCS) have been formed. This has assured a remunerative price, market support to the producers and improved the rural economy, besides catering to the needs of the consumers. India is one of the largest milk and milk products producing countries in the world. The Dairy Development Programmes are implemented in Tamil Nadu through a network of milk cooperatives organized on 'Anand Pattern' model. The institutional framework has a three tier structure viz., societies at village level, unions at district level and federation of unions at the apex (State) level. The milk procurement by the 17 District Cooperative Milk Producers' Unions (DCMPU) affiliated to the Tamil Nadu Cooperative Milk Producers' Federation (TCMPF) has steadily increased during the Eleventh Five Year Plan period. The main objective of milk cooperatives is to procure milk at a reasonable price and make it available to the consumers throughout the year at nominal cost. The dairy cooperatives are keen to meet the growing liquid milk demand in the State and keep the prices under control. The dairy development activities have grown at a faster rate in western region than other regions. The dairy cooperative sector in the State has benefited by Government of India (GOI) schemes such as 'Intensive Dairy Development Programme', 'Strengthening Infrastructure for Quality and Clean Milk Production', 'Assistance to Cooperatives' and 'National Agriculture Development Programme'. Funds are also availed from the State Government. In the recent years, private dairy operators play a key role in the dairy sector. They actually take care of the farm level production management to increase the productivity of animal, land, water and labour by scientific and partial mechanisation. The inputs like selection of animal, shelter, fodder, veterinary services, procurement of milk, training to farmers and financial tie ups with banks are provided by the private dairy operators. Also, they extend insurance arrangements followed by prompt and regular payment which have created an increasing trend in the dairy sector. At processing units, the value addition at plants is taken care by advanced technologies.

MILK PRODUCTION IN TAMILNADU

The total milk production in Tamil Nadu has increased at an average annual growth rate of 4.2 per cent during last decade and touched 7 million tonnes in 2013-14, accounting for 5.3 per cent of the country's milk production. Cow milk accounted for 90 per cent of milk production and balance was buffalo milk. Within the cow milk basket, the share of crossbred milk to total milk production has increased from 23 per cent in 1992-93 to 80 per cent in 2012-13. Tiruvannamalai district has the highest crossbred cattle milk production followed by Salem and Vellore districts. Higher production of milk has improved the per capita availability of milk in the state from 169 grams/day in 1993-94 to 262 grams/day in 2012-13. In order to support milk production, the government is implementing free cattle distribution scheme since 2011 and often managing fodder depots. On behalf of Tamil Nadu Coop. Milk Producers' Federation Ltd, the government determines producers price and consumers price of milk. While there is little improvement in productivity of buffaloes during last two decades, the productivity of crossbred animals has gone up considerably from 4.87 kgs per day to 6.81 kgs per day. Today India is home to the largest cattle population in the world and is number one in milk production in the world with a total milk production of 138 Million Tonnes annually. What is true for India holds true for Tamil Nadu which produced a record 70 lakh Metric Tonnes of milk in 2012-13. In Tamil Nadu, milk group

contributes more than 43% share in value of output from Livestock sector. Milk has additional advantage in terms of being a reasonably steady and daily source of income to rural households.

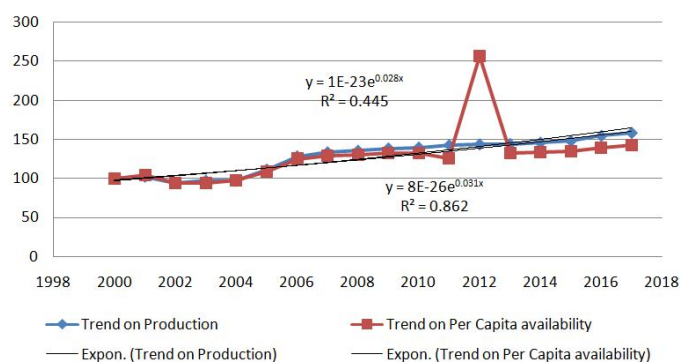
Milk Production in Tamilnadu

Year	Production (in 000 tonnes)	Trend on Production	Per capita availability (gms per day)	Trend on Per Capita availability
2000-01	4910	100	211	100
2001-02	4988	102	219	104
2002-03	4622	94	198	94
2003-04	4752	97	198	94
2004-05	4784	97	204	97
2005-06	5474	111	231	109
2006-07	6277	128	263	125
2007-08	6540	133	272	129
2008-09	6651	135	274	130
2009-10	6787	138	278	132
2010-11	6831	139	278	132
2011-12	6968	142	265	126
2012-13	7005	143	541	256
2013-14	7049	144	280	133
2014-15	7132	145	282	134
2015-16	7244	148	283	134
2016-17	7556	154	294	139
2017-18	7742	158	300	142
Average	6295	128	271	128
R	0.94		0.55	

Source: Department of Animal Husbandry, Dairying and Fisheries, Ministry of Agriculture, Government of India

Tamil Nadu milk cooperatives play a major role in the development dairy within the state. The milk cooperatives of Tamil Nadu, with the help from the government and National Dairy Development Board (NDDB), have played substantial roles in taking the state to the current position. Besides, NDDB also undertakes methodical approach and appropriate strategy for the upliftment of Tamil Nadu milk cooperatives. The above table gives an account of the growing trend of milk production and the per capita availability of milk in Tamilnadu. The data collected from the period of 2000-01 to 2017-18 signifies the growth from 4910 thousand tones to 7742 thousand tones have resulted an average growth rate of 28 percent. The trend is steady and positive over the years. The Per capita availability is also steadily increasing from 211 gms per day to 300 gms per day. The trend is positive with an average growth rate of 28 percent. The correlation is 0.94 for milk production and 0.55 for per capita availability which shows a perfect positive relationship in the form of steady increase over the years under study. The exponential growth rate calculated through the chart shows a growth rate of 3.1 percent for milk production and 2.8 percent for per capita availability of milk in Tamilnadu. The explained variance (R^2) is 44.5 percent for milk production and 86.2 percent for per capita availability of milk in Tamilnadu. Hence it is ascertained that the growth rate is evident in case of milk production from the analysis. The following chart clearly illustrates the same.

Trend on Milk Production in Tamilnadu



Milk procurement in District Cooperative Milk Producers Unions

The average milk procurement during 2014-15 was 23.68 LLPD. Average milk procurement for first seven months of 2014-15 was only 22.12 LLPD. After procurement price increase with effect from 1.11.2014, there has been a significant increase in the quantity of milk procured by District unions. During the year 2015, the average milk procurement was 25.79 LLPD and the milk procurement by the District Cooperative Milk Producers' Unions reached the highest level of 30.94 Lakh Litre. The details of milk procurement over last few years are as follows:

District wise Union Procurement of Milk

Year	Average milk procurement per day (in lakh litres)	Trend on Milk Procurement
2010-2011	20.67	100
2011-2012	21.40	104
2012-2013	24.36	118
2013-2014	23.22	112
2014-2015	23.68	115
2015-2016	28.97	140
2016-2017	28.50	138
2017-2018	29.46	143
Average	25.03	121
R	0.93	

Source: Directorate of Animal Husbandry and Veterinary Services, Govt. of Tamil Nadu

It is noted from the above table that the demand and supply of milk in the form of procurement and sales of district milk cooperative union have slight variation denoting the average procurement as **25.03** lakh litres. The trend analysis shows an average growth rate of 21 percent for procurement over the years under the study while the correlation is positive and high for the progress of procurement from the year 2010-2011 to 2017-2018 is 0.93. Hence it is inferred that there is a steady demand for the milk

District Union wise Milk Procurement (Average litres per day)

No	Name of the Union	2016-17	2017-18	Incremental change	Incremental %
1	Kancheepuram - Thiruvallur	97,812	1,11,775	13,963	14.28
2	Villupuram	2,09,878	2,16,913	7,035	3.35
3	Vellore	3,05,089	3,21,662	16,573	5.43
4	Dharmapuri	1,78,698	1,90,177	11,479	6.42
5	Salem	4,97,708	5,29,493	31,785	6.39
6	Erode	2,99,428	2,91,956	-7,472	-2.50
7	Coimbatore	2,62,369	2,44,319	-18,050	-6.88
8	Nilgiris	14,223	12,861	-1,362	-9.58
9	Madurai	2,59,329	2,76,340	17,011	6.56
10	Dindigul	63,575	59,693	-3,882	-6.11
11	Tiruchirapalli	4,11,508	4,34,652	23,144	5.62
12	Thanjavur	52,466	56,868	4,402	8.39
13	Pudukottai	42,810	48,639	5,829	13.62
14	Sivagangai	61,435	57,513	-3,922	-6.38
15	Virudhunagar	16,663	17,547	884	5.31
16	Thirunelveli	69,193	69,456	263	0.38
17	Kanniyakumari	7,570	5,738	-1,832	-24.20
	Total	28,49,755	29,45,602	95,847	3.36

Source: Directorate of Animal Husbandry and Veterinary Services, Govt. of Tamil Nadu

It is noted from the above table that Kancheepuram - Thiruvallur union ranks first with the difference of (13,963, 14.28%), Pudukottai (5,829, 13.62%), Thanjavur (4,402, 8.39%), Madurai (17,011, 6.56%), Dharmapuri (11,479, 6.42%), Salem (31,785, 6.39%), Tiruchirapalli (23,144, 5.62%), Vellore (16,573, 5.43%), Virudhunagar (884, 5.31%) and so on. The negative trend is shown in the districts like Erode, Coimbatore, Nilgiris, Dindigul, Sivagangai and Kanniyakumari. However the overall change is witnessed as (95,847, 3.36%)

MILK SALES IN TAMILNADU

The average milk sales during 2017-18 was 10.0 LLPD as against 9.52 LLPD in 2016-17 which is an increase in growth rate of 4.5%. To increase the sales further, more concentrated marketing efforts are being taken up. New marketing zones have also been created in 11 centres and it is planned to increase milk sales in the District Unions to 10.50 LLPD during the year 2018-19. An increase of 48,000 litres of milk per day was achieved in the year 2017-18 comparing with 2016-17. The details of district wise milk sales comparing with 2016-17 sales is given in the table.

District Union wise Milk Sales

No	Name of the District Union	Avg. Milk Sales Litre Per Day		Incremental	
		2016-17	2017-18	Change	%
1	Dindigul	10,757	14,559	3,802	35.34
2	Thanjavur	22,440	26,054	3,614	16.11
3	Sivagangai	28,952	33,518	4,566	15.77
4	Pudukkottai	11,616	13,127	1,511	13.01
5	Dharmapuri	24,953	27,343	2,390	9.58
6	Coimbatore	142015	152050	10,035	7.07
7	Virudhunagar	5,127	5,381	254	4.95
8	Vellore	69,173	72,039	2,866	4.14
9	Madurai	156317	162727	6,410	4.10
10	Salem	189922	195938	6,016	3.17
11	Kanniyakumari	15,348	15,638	290	1.89
12	Villupuram	21,329	21,643	314	1.47
13	Thiruneveli	41,926	42,359	433	1.03
14	Trichy	117873	117830	-43	-0.04
15	Nilgiris	16,493	16,486	-7	-0.04
16	Erode	66,114	65,608	-506	-0.77
17	Kancheepuram -Thiruvallur	97,812	18,653	-79,159	-80.93
	Total	952931	1000953	48,022	5.04

Source: Policy Note, Department of Animal Husbandry and Dairy Farming, Tamilnadu

As per data, it is noted that the change in the milk sales is dominated by Dindigul District Union (3802, 35.34%), Thanjavur (3,614, 16.11%), Sivagangai (4,566, 15.77%), Pudukkottai (1,511, 13.01%), Dharmapuri (2,390, 9.58%), Coimbatore (10,035, 7.07%) and so on. The sales potentiality is negative in the district unions of Trichy, Nilgiris, Erode and Kancheepuram -Thiruvallur. Totally, the change is 48,022 Litre per Day that makes 5.04 percentage.

It is ascertained from the study that both in number of unions and the membership, Kancheepuram - Tiruvallur union and Coimbatore union perform well with positive improvement over the year 2013-14 during the year 2014-15. Milk procurement all over the state of Tamilnadu is uneven with the highest performance of Kancheepuram - Tiruvallur union (46.43%) and Sivagangai (42.42%) districts. The change in the sales performance is high in case of Kanyakumari union and is low in Virudhunagar during the period under study. The change in the sales performance is high in case of Kanyakumari union and is low in Virudhunagar during the period under study. The relationship between the milk procurement and milk sales is calculated as 0.85 which is positive and high. Hence it is suggested that the excess milk procured can be utilized by the unions in which shortage arise and also steps can be taken to convert the surplus milk as milk by products. It is known from the analysis

that though there are enough potentialities available for export of dairy products, the state has scarcity of feed resources and fewer amenities for animal welfare and health aspect. The above analysis clearly indicates the scope and development of dairy marketing in India and Tamilnadu showing positive strides in case of milk production as well as per capita availability.

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