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# A Study on the Economic Contribution of Milk Production in Tamil Nadu

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### Abstract

Animal cultivation and dairying assume an imperative job in the rural economy of India. It is a necessary subordinate to crop production. Dairy cooperatives and private dairies are assuming significant job to improve the milk production in various districts of India. Growth of milk production is formed by socio-economic, innovative, and institutional components, which act both on the demand and the inventory sides. The demand-related economic factors which impact milk production incorporate per capita income, populace growth, urbanization, cost of milk, and its substitutes, income-use versatility, and utilization pattern. The special trait of the Indian dairy industry is that heft of milk production in our nation is dealt with by little milk producers who are unskilled and insensible of economic parts of milk production brave is a safe path and eventual fate of our neural development and turned into a business endeavor. It can contribute generously to a farmer's income. His method for looking to the challenging has not been changed from auxiliary to business. This issue truly lessen the production possibilities of animals, particularly cross breeds as they sand progressively defenseless to ailments, hardships, and contingencies impossible to miss to the Indian atmosphere. Be that as it may, there is little proof accessible on how much the farmers and the country lose because of animal infections. The reproductive capacity the animal, a significant worry in its economic misfortunes to farmers' an incentive in dairy farming, is as often as possible identified with periparturient occasions as unwanted health identified with occasions during this period may result in tremendous economic misfortunes to farmers. Before the finish of development in dairy makes gigantic demands for vitality, protein is with the end goal that it happens at the most productive time of a lactating animal. Tamil Nadu is one of the states with a decent potential for milk production, and the private dairies are giving great and healthy rivalry. Dairy cooperatives and private dairies have not just given an organized system to milk marketing to the rural family units, yet also gave the essential specialized information sources like arrangement of manual semen injection, health administrations, and different data sources. Hence, the present study has been done to give an overview of the economic contribution of Milk Production in Tamil Nadu, and the study is completely based on the secondary sources of data collections.

Keywords: Economic Development, Growth Driver, Production Potential, Demand for Neural Development, Subsidiary Activity, and Socio-economic Conditions of Milk Producers.

# Introduction

During the most recent three decades, our Nation's milk producers have changed Indian dairying from stagnation to world administration. In India, dairying is recognized as an instrument for social and economic development. Dairy sector assumes a noteworthy job in supplementing family income and creating beneficial employment in the rural areas other than giving modest healthful food to a great many individuals. The growth of the dairy sector during the most recent three decades has been noteworthy. Indian dairying has made quick walks; however animal productivity stayed normal dairying expect incredible criticalness in giving employment to rural individuals just as a stable source of income to augment to their profit from primary undertaking they individual, i.e., crop cultivation. Dairy endeavor assumes a significant job in the rural economy of India.

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This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License It demonstrates income and employment not exclusively to the laborer's segments of the general public yet additionally to the farming network of the nation as a rule. It came back from little property that can be amplified by the proper blend of dairy endeavor with crop production. Around 80 percent of the milk marketed still goes through the traditional channels taking care of crude milk and traditional handled products. The much advertised cooperative dairy development has additionally neglected to asset the strength of the traditional milk marketing channels.

Liberalization of the dairy sector since 1991 has allowed formal, private processors to contend progressively prepared milk market. Like this, a few private milk handling firms have risen in the Indian milk market. Further, since the late 1990s the significant of supermarkets and retail chains has gifted in the Indian food market, which incorporates milk additionally in its ambit. The growing working class with expanding extending urbanization is probably going to best the demand for all the more officially prepared milk products, which the traditional markets, for the most part, don't provide food for. This will fuel the growth of an advanced formal and organized milk market. These rising patterns, while demonstrative of taking into account the extending purchaser base with growing health, have created worries on both the stock just as the demand side. Globally, one of the most controversial issues is that the ascent of present-day marketing chains could affect income balance. It is mandatory to address the economic contribution of milk production in Tamil Nadu.

# **Research Objectives**

The present study aimed with the following objectives:

- 1. To know about Dairy Development in India.
- To analyze the details of milk production in India.
- To study the economic scenario of milk production in the State Development Tamil Nadu.
- To narrate the constraints to the expansion of milk production in Tamil Nadu.

### **Reviews of Related Literature**

Umamageswari et al. (2017) have analyzed that the cost of milk production is a significant economic marker in evaluating the farm family unit productivity in milk production just as the reason for value obsession. The study was under taken to break down the cost and returns of milk production in Coimbatore and Tiruppur regions of Tamil Nadu. The study gathered information from 90 milk producers secured by the cooperative system and 90 milk producers secured by private dairy. The respondents were arranged further into 5 gatherings (landless, peripheral, little, medium, and enormous farmers) given the land size. The study found that the milk producers secured by private dairy acknowledged marginally higher benefits when contrasted with farmers of cooperative dairy because of the way that milch animals were better minded and nourished by the farmers of private dairy, which brought about higher milk productivity. Feed cost had the most elevated offer in production cost (65.62 % in crossbred; 68.55 % in both nearby bovine and wild ox). The cost per liter of crossbred milk production was higher on account of enormous farmers (18.28) when contrasted with the minor farmers (17.24). Though, it extended between 31.36 (little) to 33.09 (huge) on account of nearby dairy animals while on account of bison, it extended between 24.71 (negligible) to 28.71 (landless).

**P, Venkatesh, and V, Sangeetha (2011)** led a study to analyze the cost structure and resource use productivity of dairy farms in the Madurai region of Tamil Nadu. The dairy farmers were chosen by utilizing a multi arrange irregular testing strategy. Unthinkable examination and Cobb-Douglas production work were utilized in this study. All out costs per lactation per animal assessed were of the request for Rs. 12776.09, Rs 11791.20, and Rs. 12079.28 and returns per rupee of investment 0.78, 1.08, and 0.95 individually on little, enormous, and pooled farms.

Muniandy (2016) has directed a study, and the study was attempted in Coimbatore and Tiruppur areas of Tamil Nadu territory of India with the target of evaluating specialized proficiency in milk production regarding diverse milch animals. The essential information on socioeconomic qualities

of milk production, use brought about on feeds and grain, attributed work compensation of family individuals, various costs, and procurement cost were gathered from 180 milk producers from the study area. Stochastic wilderness production work examination was utilized to appraise the specialized proficiency in milk production. The mean specialized effectiveness in milk production was assessed to be 86.32 percent for crossbred, 77.41 percent for neighborhood cows, and 84.49 percent for bison. The education level of farmers had a positive effect on comes back from milk production of crossbred cows while age contrarily and fundamentally impacted the specialized effectiveness in crossbred and nearby dairy animal farms; land holding size had the negative and noteworthy impact. If there should be an occurrence of the crowd size it was discovered that the evaluations for nearby cows were negative and critical.

# Importance of the Study

The Dairy Industry as a significant associated sector continues to give extra income to the lakhs of individuals who rely upon dairy-related exercises. Dairy Development Department is progressing in the direction of the goal of accomplishing the "Second White Revolution" in Tamil Nadu State and is likewise working always to expand the milk production of Tamil Nadu, which is a healthfully rich food to meet the everyday needs of individuals. The "Anand" pattern of milk co-operatives spearheaded by the "Milk Man of India," Dr. Verghese Kurien, has been effectively implemented in Tamil Nadu, with the arrangement of the 3 level structures at various levels, for example, Federation at zenith level, District Unions at center level and MPCS at field level under the brand name "Aavin." Alvin has received present-day logical practices to guarantee clean milk production, milk handling, and manufacturing of milk products and esteem included by-products. Alvin is carefully following food security gauges to meet the demand for clean milk. Dairy Development Department assumes a fundamental job in the economic development of farmers, and the equivalent is accomplished by implementing different schemes of State and Central Government. The dairy co-operatives are

working with the target of accomplishing permanent income to town level milk producers through clean milk production and quality milk marketing. So it is become increasingly critical to study the Tamil Nadu's Milk production and its economic contribution.

# **Dairy Development in India**

India positions first among the world's milkproducing Nations since 1998 and has the biggest cow-like populace in the World. Milk production in India during the period 1950-51 to 2017-18 has expanded from 17 million tons to 176.4 million tons when contrasted with 165.4 million tons during 2016-17, recording a growth of 6.65 %. FAO revealed 1.46% expansion in world milk Production from 800.2 million tons in 2016 to 811.9 million tons in 2017. The per capita accessibility of milk in the nation, which was 130 grams for every day during 1950-51, has expanded to 374 grams for every day in 2017-18 as against the world assessed normal utilization of 294 grams for each day during 2017. This speaks to continued growth in the accessibility of milk and milk products for our growing populace. Dairying has become a significant secondary source of income for many rural families and has accepted the most significant job in giving employment and income-producing openings, especially for minor and women farmers. The greater part of the milk is produced by animals raised by little, minimal farmers and landless works. Of the all-out milk production in India, 48 % milk is either devoured at the producer level or offered to non-producers in the rural area. The parity 52 % of the milk is a marketable surplus accessible for sale to shoppers in urban areas. Out of marketable surplus, it is assessed that 40 % of the milk sold is dealt with by the organized sector (for example, 20% each by C-operative and Private Dairies) and the staying 60 % by the unorganized sector.

About 16.6 million farmers have been brought under the ambit of around 1,85,903 town level Dairy Corporative Societies (DCS) up to March 2018. Regardless of the droop in the world market and better procurement costs by dairy cooperatives alongside a decline in procurement volume by major private players prompted increment in milk assortment by

the dairy cooperatives by about 11%. The dairy cooperatives have acquired every day normal of milk about 475.6 Lakh Kg per Day (LKgPD) during 2017-18 when contrasted with 428.7 lakh kg obtained during 2016-17. The sale of fluid milk came to 349.6 Lakh Liter per Day (LLPD) during 2017-18, recording a growth of 6% when contrasted with 331 LLPD marketed during 2016-17. Women individuals from the DCS are additionally being urged to expect influential positions. As on 31.03.2018, the complete number of women in dairy cooperatives the nation over was 4.9 million (in 32,092 women) DCS, which is 29.5% of all-out farmers.

Government of India is attempting endeavors for reinforcing infrastructure for the production of value milk, procurement, preparing and marketing of milk and milk products through after Dairy Development Schemes:

- National Programme for Dairy Development (NPDD)
- 2. National Dairy Plan (Phase-I)
- Dairy Entrepreneurship Development Scheme (DEDS)
- 4. Support to Dairy Cooperatives
- 5. Dairy Processing and Infrastructure Development Fund (DIDF)

### Milk Production in Tamil Nadu

Milk cooperatives have assumed a key job in

the growth of the dairy sector in the nation. As the cooperative milk movement took root and spread the nation over, India changed from a milk shortage country to the biggest producer of milk on the planet. During 2017-18, India produced 176.30 Million Tons (4699 lakh liters for each day) of milk, which is 18.5% of the world production. Tamil Nadu positions among the best ten milk producing conditions of the nation with an everyday production of 206 lakh liters for every day. The state has a dynamic milk cooperative sector with milk producers' cooperative social orders spread crosswise over alcove and corner of the state. There are 12,585 milk producers' cooperative social orders having 20.30 lakh milk farmers as members.

The normal milk procurement through 19 District Co-operative Milk Producers Unions during the year 2018-19 remained at 33.23 LLPD. On 29.10.2018, procurement remained at a record-breaking significant level of 37.03 lakh liters. The milk production in Tamil Nadu principally comprises of bovine and wild ox milk. The IMARC Group's most recent report's investigation infers that dairy animals' milk rules the all-out milk production, representing around 85% of the all-out offer. As per the report, the Tamil Nadu dairy market is additionally expected to grow at a CAGR of almost XX% during 2019-2024, arriving at a volume of XX Billion Liters by 2024.

Table 1 Milk Production by State from India (in lakh liters per year)

	2013-14	2014-15	2015-16	2016-17	2017-18
India	137685	146314	155491	165404	176347
Tamil Nadu	7049	7132	7244	7556	7742

Source: Official Report from National Dairy Development Board

Table 2 Milk Production Scenario of Tamil Nadu

Unorganized Sector Household Retention		Organized Sector (Private Dairies)	Organized Sector (Co-operative Ambit)	
105 (51%)	25 (12%)	38 (18.50)%	38 (18.50%)	

Source: Official Release from Government of Tamil Nadu, 2019

Tamil Nadu is one of the bleeding edge States in milk production with a day by day milk production of 206 lakh liters, out of this, 25 Lakh liters for per day (LLPD) is held for family unit utilization. About 51% of all out milk production, for example, 105 LLPD, is obtained through the unorganized sector

and 37%; for example, 76 LLPD is secured through organized sector like Dairy co-operatives and private sector dairies. The portion of co-operatives in generally milk production in the State is around 18.50% for example 38 LLPD. Under the dairy co-operative ambit, there are 12,585 town level essential

Milk Producers Co-Operative Societies (MPCS) having 20.30 lakh, individuals. Tamil Nadu stands fourth among the State dairy co-operatives with an everyday normal milk procurement of 33.23 lakh liters.

### Milk Procurement and Sales

Milk is obtained from the farmer individuals by the MPCS and tried for quality and amount. The gathered milk is shipped to the close by chilling focuses or Bulk Milk Coolers. The milk is chilled and sent to dairies for further preparing. Over a time of eight years, the normal milk procurement had expanded by 61% from 20.67 LLPD in 2010-2011 to 33.23 LLPD in 2018-2019. There is an expansion of 13% in milk procurement during 2018-2019 when contrasted with 2017-2018. Further, a recordbreaking, most noteworthy procurement of 37.03 lakh liters of milk procurement was accomplished on 29.10.2018. The milk procurement throughout the most recent five years:

Table 3 Average Milk Procurement over the Last Five Years (in lakh liters per day)

Year	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
in lakh litres per day	23.68	28.97	28.50	29.46	33.23

Source: Official Release from Government of Tamil Nadu, 2019

\*Steps are being taken to build the normal milk procurement to 34.00 LLPD in 2019-2020\*.

Milk acquired from the farmers is handled, sanitized, homogenized, and stuffed in 200ml, 500ml, 1000ml sachet to supply to the nearby customers. During 2018-2019, the normal locale milk sale was 10.42 LLPD as against 10.00 LLPD in 2017-2018, which is an expansion of 4.2%. To build the sales further, new marketing zones have been made in 11 focuses, and normal marketing augmentation endeavors are being taken up.

\*It is intended to increment milk sales in the District Unions to 12 LLPD during the year 2019-2020\*.

# Economic Scenario of Milk Production in the State Development Tamil Nadu

India currently has undeniably the world's greatest dairy industry regarding milk production; a year ago, India produced near 146.31 million tons of milk, half more than the US, and three fold the amount of as the much-proclaimed new growth champ, China. Suitably, India likewise produces the greatest index or reference book of any world dairy industry. The dairy sector in India has indicated momentous development in the previous decade, and India has now become one of the biggest producers of milk and worth included milk products on the planet. Tamil Nadu is the significant production area of Dairy Products in India.

### **Exports of Milk and Milk Products across India**

After effectively making invasion into the Singapore markets with the ultra-high temperature (UHT) milk in November a year ago, Aavin is currently looking at fares of dairy products to 15 additional nations. The nations which the Aavin dairy products will rush toward are: Malaysia, Britain, UAE, Hongkong, Qatar, Bahrain, Kuwait, Saudi Arabia, Sri Lanka, Oman, Africa, Vietnam, China, Cambodia, and Mauritius.

# **Domestic Markets in the State**

The essential for achievement in marketing is to guarantee the accessibility of products in places frequented by a huge number of individuals. Keeping this in see, Aavin products are being sold in significant stores and super markets like Big Bazaar, Reliance Fresh, and so on. Further endeavors are on to convince comparable arrangement stores arranged in Metro. Understanding the prominence of free home conveyance of products, Aavin has entered on a tie-up with online organizations like Big Basket and Grofers. Alvin is thinking about the naming of super stockiest/conveying and sending operators (C&F) for its fermented products like curd, buttermilk, lassi, yogurt, paneer, and so forth. The quantity of FROs in the Chennai Metro and its rural areas will be expanded to fortify the inventory arrange. Three portable parlors have been propelled for the sale of milk products. It has been wanted to

open an increasingly number of Aavin outlets in universities, schools and so forth. A selective Aavin online business stage will be developed through which the business inquiries, mass requests will be acquired.

- 1. Aavin attempts to sell milk and milk products at most sensible costs to its clients.
- Having brands go about as a value control component for controlling the market cost of milk and milk products.
- 3. Aavin has taken up vivacious marketing exercises to develop its retailer base in the State. Appropriately it is wanted to enlist progressively a number of retailers for selling Aavin milk and milk products widely.
- 4. It has been proposed to devise another advertisement and publicity arrangement for Aavin milk and milk products in different media and social sites to pull in a younger age.
- A point by point market study will be attempted to distinguish buyer inclination of milk products dependent on which new scope of products will be presented in the market.
- 6. Marketing work force is prepared on customer conduct, shopper mindfulness, buyer fulfillment to serve the purchaser in a superior manner.
- Dairy visits are allowed for School/College understudies with a mean to instill the integrity of Aavin.
- Professional promoting specialists have been delegated to propose the idea and structure for the advertisement of Aavin milk and milk products.
- Attractive regular offers and limits on milk and milk products will be given to advance the sale of Aavin products.

# Constraints to the Expansion of Milk Production in Tamil Nadu

The major limiting factors to increasing State milk production are:

### Adherence to the Smallholder Model

It is recommended that the smallholder model must be kept up to reduce rural neediness. While bigger, progressively productive dairy operations are endured by government authorities, they are seen with some suspicion as a result of their apparent impact on rural employment and income dispersion. In any case, bigger farms are additionally required, if demand grows quickly and India wishes to stay independent in milk production.

# **Building Dairy Management Skills**

Significant testing to growing Indian milk production is improving bovine/bison management aptitude for the huge number of dairy farmers in Tamil Nadu. Many of these farmers are women who endure a lower education rate then the male populace, making preparing troublesome.

# **Crop Residual/by Product Ration**

Opportunities to extend milk yields by improving the nature of crop residuals and by-products are constrained. Besides, the demand for food grains to encourage India's huge and growing populace limits the accessibility of grain for dairy animals and, to a great extent, blocks uprooting gain crops with green scavenge crops.

### Conclusion

In spite of the considerable number of issues it faces, the dairy sector holds high guarantee as a reliable source of occupation for by far most of the rural poor. Progression of world trade in dairy products under the new trade system of the WTO presents new difficulties and has opened up new fare open doors for the dairy industry. The dairy sector in India, particularly Tamil Nadu needs to upgrade its aggressive economic advantage in dairy products as far as both quality and cost and its believability in universal markets. The role of government ought to be too immediate, arrange, and direct the exercises of different organizations occupied with dairy development; to build up and keep up a level playing field for all partners; and to make and keep up an amiable socio-economic, institutional, and political environment for smallholder dairy development. A complete dairy development approach must be defined. Such a strategy ought to be a fundamental part of the national development approach and due thought ought to be given to its immediate and backhanded impacts on other sub-sectors of the economy and the other way around. All the abovementioned recommendations will make ready for more milk production with better comes back to milk producers and growth and development of the dairy sector everywhere throughout the country and the Tamil Nadu specifically.

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