

ANIMAL HUSBANDRY, DAIRYING AND FISHERIES DEPARTMENT

DAIRY DEVELOPMENT

POLICY NOTE 2018-2019

DEMAND No.8

K.T. RAJENTHRABHALAJI

MINISTER FOR MILK AND DAIRY DEVELOPMENT

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"With an objective of ushering in the Second White Revolution and encouraging husbandry activity is animal which а component of agriculture and instrument for improving rural economy and activity to provide self-employment for women.....my Government has given unprecedented importance and implemented many schemes for Dairy Development Department and Animal Husbandry Department".

Dr J Jayalalithaa Hon'ble Former Chief Minister (Speech on 23.09.2015)

"The Yardstick of a Nation's development is the growth of every individual. The victory of democracy lies in ensuring that the basic needs of an individual like finance, food, education, housing, health, profession and security In this sense, Tamil Nadu has achieved immeasurable growth".

Thiru Edappadi K.Palaniswami, Hon'ble Chief Minister

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DAIRY DEVELOPMENT DEPARTMENT DEMAND NO: 8 POLICY NOTE 2018-19

1. INTRODUCTION

The Department of Dairy Development in Tamil Nadu was set up in the year 1958. The Tamil Nadu Dairy Development Corporation Limited was formed in July 1972 to manage the activities such as milk procurement, processing and marketing of the milk and milk products.

Based on the "ANAND" pattern developed by Dr.Kurien, Tamil Nadu Co-operative Milk Producers Federation (TCMPF) was formed in February 1981 as an apex body of three tier cooperatives set up in Tamil Nadu and the District level milk producers unions were formed in the year 1982.

The foundation of the Milk Cooperative Movement lies in the conviction that our country's socio-economic development is intertwined with the development of rural India.

Tamil Nadu ranks among the top ten States with a daily milk production of 201 lakh litres per day (LLPD) and fourth among the State Cooperatives with a daily average procurement of 29.46 LLPD in 2017-18.

The per capita availability of milk in Tamil Nadu has increased from 169 gm/day in 1993-94 to 268 gm/day in 2017-2018. This is due to increase in population, the rise in per capita income, changing life style, food habits, and export opportunities contributed to the rise in the demand for milk and milk products.

To achieve the benefits of the **"Second White Revolution"**, TCMPF has taken various measures such as payment of attractive procurement price to milk producers, huge investment in dairy infrastructure at all levels starting from Primary Dairy Co-operative Societies, to State level Federation.

2. DAIRY DEVELOPMENT DEPARTMENT

2.1. Objectives:

- Facilitating the formation of Milk Producers Cooperative Societies in villages thereby safeguarding the milk producers from the clutches of middlemen
- Ensuring regular payment and remunerative prices to the milk producers based on the quality of milk with respect to fat and solid not fat (SNF) levels
- Working towards bringing the un-organized milk producers to the organized system in dairy sector

- Ensuring the availability of inputs such as cattle feed, green fodder and providing veterinary health care services to milch animals
- Ensuring availability of quality milk and milk products to the consumers at reasonable prices
- Striving for uplifting the rural economy in general and women empowerment in particular by way of enhancing their income levels

2.2. Strategies adopted to achieve the objectives:

The following strategies are undertaken to achieve the objectives of the Dairy Development Department:

- Facilitating the active performance of the Primary Societies and transforming the defunct societies as functional societies
- Developing necessary facilities at primary and union levels for the benefit of milk producers
- 3. Imparting skills among the target group
- Imparting extension education to the milk producers on milk testing process so as to strengthen the clean milk production at village level
- Planning and implementing various schemes of State and Central Government for achieving the best in milk production, processing and marketing
- 6. Increasing the handling capacity of district level dairies to meet out the requirements

- Establishing new parlours, sales points and developing the retail units
- Formation of new milk routes, consumer societies and increasing the sale of milk cards

2.3. Administrative Structure of the Department:

The head of the department is the Director of Milk Production and Dairy Development (DMPDD). The DMPDD is also functioning as the ex-officio Managing Director of Tamil Nadu Cooperative Milk Producers Federation (TCMPF) and as the Registrar of all the 3 tier milk co-operatives. The Director is vested with the powers of Registrar in discharging the statutory functions under the provisions of the Tamil Nadu Co-operative Societies Act, 1983 (TNCS Act) and Tamil Nadu Co-operative Societies Rules, 1988 (TNCS Rules). The Deputy Milk Commissioner at Head Office is assisting the Director of Milk Production and Dairy Development both in carrying out the administrative and statutory functions.

There are 29 circle Deputy Registrars (Dairying) functioning in the State who are carrying out the administrative and statutory functions at the district level as per the powers delegated by the TNCS Act, 1983 and TNCS Rules, 1988. The Department has cadre strength of 805 employees including field staff.

2.4. Milk Cooperative Societies

The management of the dairy cooperatives is vested with the Board of Directors, democratically elected from among the members of the society. The elections are conducted according to the provisions of Tamil Nadu Cooperative Societies Act, 1983 and Rules 1988, as and when the 5 year term of Board expires.

As the 5 year term of the existing Board expired during April 2018, election process initiated in 4 stages to constitute the new Board. The 1st stage of election was completed and new elected Board in 1,663 societies assumed charge on 09.04.2018 and further process was stopped based on court orders. The further process will be completed once the legal issues are resolved.

However, to manage the day to day affairs of the societies especially for making milk cost payment to the milk producers without any difficulty, the departmental officers were authorized to operate the bank accounts of the society jointly with the staff of the society.

Following are the three levels of Milk Producers Cooperative Societies in the State:

- a. Milk Producers Society at the village level (MPCS)
- b. Milk unions at the district level (DCMPU)
- c. Federation at State level (TCMPF / AAVIN)

3. MANAGEMENT OF COOPERATIVE SOCIETIES

3.1. PRIMARY MILK PRODUCERS CO-OPERATIVE SOCIETIES (MPCS)

The basic requirement to form a Primary Milk Producers Cooperative Society is at least 25 independent milk producers residing in the area of operation of the proposed society.

12,585 Primary There are Milk Co-operative Societies at village level, out of exclusive which 2,044 are Women Milk Producers Co-operative Societies. These primary milk co-operative societies procure around 35 lakh litre of milk per day from their members and after selling around 4.5 LLPD locally, the remaining quantum of milk is sent to the district unions and metro dairies.

The Primary Milk Producers Cooperative Societies are paid with remunerative prices based on the quality of milk procured from the farmers. The current procurement price for cow milk and buffalo milk is Rs.28 and Rs.35 per litre respectively. The societies are sharing the profit with the milk producers.

Action taken on reviving the dormant societies:

There are 4171 Milk Producers Cooperative Societies which are in dormant position in Dairy Development Department. Efforts are being taken to revive 2130 dormant Milk Producers Cooperative Societies which are dormant within 2 years and to organise 2041 new Milk Producers Cooperative Societies in lieu of dormant societies which are dormant for more than 2 years.

Action has been taken to supply of cattle feed, mineral mixture and 2 milk cans for each

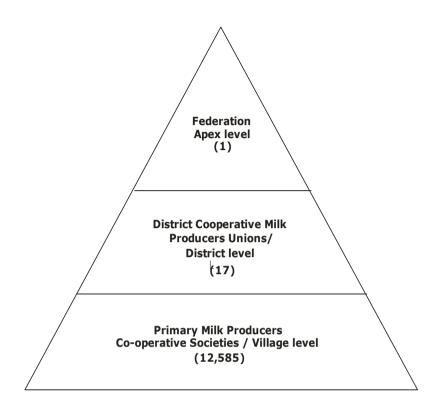
society at subsidized rate. It is also proposed to increase the number of milch animals by facilitating with banks to issue loans to the milk producers to purchase the milch animals with subsidy under Dairy Entrepreneur Development Scheme (DEDS) and other Governmental schemes.

Efforts have been taken to attract the milk producers who are now pouring milk to private parties, by ensuring instant payment of milk cost based on the quality of milk.

By implementing all the above measures, the Dairy Development Department is aiming to revive all the dormant Milk Producers Cooperative Societies in a phased manner, thereby increase milk production.

Three tier structure of dairy cooperatives

Tier-1 Village Level	25 members from a village can form a Primary Milk Producers Cooperative Society (MPCS). This is the base level of the 3 tier system which procures milk from the milk producing members and supply the milk to District Unions with which they are affiliated as members.
Tier-2 District Level	The District Cooperative Milk Producers Unions (DCMPU) are the intermediary Societies at District level and the village level MPCS functioning in the jurisdiction of the respective unions. The Unions procure surplus milk from the MPCS, process and market it to the consumers and send the surplus milk to Chennai Metro Dairies / Feeder Balancing Dairies for sale/conversion.
Tier-3 State Level	Tamil Nadu Cooperative apex Milk Producers Federation is the State level society wherein all the District Cooperative Milk Producers Unions are members. The Federation is marketing the milk and milk products in the brand name of " Aavin ".



Primary milk consumers co-operative societies

The Milk Consumer Cooperative Societies had been formed to ensure prompt and regular supply of hygienic and quality milk and milk products at a reasonable price to the consumers. They receive milk in sachets and milk products from Federation / District Cooperative Milk Producers Unions and supply it to the consumers.

There are 62 Milk Consumer Co-operative Societies are functioning across the State. In Chennai City and suburban areas alone, 49 Milk Consumers Cooperative Societies are selling nearly 3.17 lakh litre of milk per day.

3.2.DISTRICT COOPERATIVE MILK PRODUCERS UNIONS (DCMPU)

There are 17 District Cooperative Milk Producers Unions in Tamil Nadu covering all the revenue districts. The management of DCMPU has been vested with an elected Board, headed by its President. The administrative head of the DCMPU is the General Manager. The following is the approved cadre strength of DCMPU:

Table-1

Approved Cadre Strength in District Cooperative Milk Producers Unions

S.No	Name of the Post	Cadre Strength
1	General Manager	17
2	Deputy General Manager	23
3	Asst. General Manager	83
4	Manager	379
5	Deputy Manager	330
6	Extension Officer	302
7	Office Staff	533
8	Driver	255
9	Technical staff, Helpers	2,349
	Total	4,271

These District Unions procure milk from member MPCSs and transport it through milk collection route vehicles to the nearest Bulk Milk Cooler (BMC) / Chilling Centre / Dairy for further processing. The village level milk cooperative societies are formed by the Deputy Registrars (Dairying), and the District Unions jointly.

The District Unions, after meeting their local demand, send milk to the Federation dairies for processing and sale in Chennai. The surplus milk is being sent to Feeder Balancing Dairies (FBDs) at Madurai, Erode, Salem, Krishnagiri and Tiruvannamalai for conversion into Butter and Skimmed Milk Powder (SMP). The FBDs have produced, 20,927 MTs of SMP and 11,502 MTs of Butter during the year 2017-18.

3.2.1 Milk procurement

The average milk procurement during 2017-18 was 29.46 LLPD as against 28.50 LLPD during 2016-17 which is an increase of 3.37%. Further, about 33.01 lakh litres of milk procurement was achieved on 21.09.2017.

The details of milk procurement over the last few years are as follows:

Table-2

Milk Procurement by DCMPU

SI. No.	Year	Average milk procurement per day (in lakh litre)
1	2010-2011	20.67
2	2011-2012	21.40
3	2012-2013	24.36
4	2013-2014	23.22
5	2014-2015	23.68
6	2015-2016	28.97
7	2016-2017	28.50
8	2017-2018	29.46

Necessary action is being taken to increase the milk procurement to 30.50 LLPD.

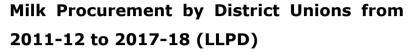




Table-3

District Union wise Milk Procurement (Average litre per day)(Annexure- I)

S.No	Name of the U	nion	2016-17	2017-18
1	Kancheepuram Thiruvallur	-	97,812	1,11,775
2	Villupuram		2,09,878	2,16,913
3	Vellore		3,05,089	3,21,662
4	Dharmapuri		1,78,698	1,90,177
5	Salem		4,97,708	5,29,493
6	Erode		2,99,428	2,91,956
7	Coimbatore		2,62,369	2,44,319
8	Nilgiris		14,223	12,861
9	Madurai		2,59,329	2,76,340
10	Dindigul		63,575	59,693
11	Tiruchirapalli		4,11,508	4,34,652
12	Thanjavur		52,466	56,868
13	Pudukottai		42,810	48,639
14	Sivagangai		61,435	57,513
15	Virudhunagar		16,663	17,547
16	Thiruneveli		69,193	69,456
17	Kanniyakumari		7,570	5,738
18		Total	28,49,755	29,45,602

3.2.2 Milk Sales

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 48000 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.

Table-4

District Union-wise Milk Sales

S.	Name of the	Avg. Milk Sales Litre Per Day		
No.	District Union	2016-17	2017-18	
1	Kancheepuram - Thiruvallur	12,576	18,653	
2	Villupuram	21,329	21,643	
3	Vellore	69,173	72,039	
4	Dharmapuri	24,953	27,343	
5	Salem	1,89,922	1,95,938	
6	Erode	66,114	65,608	
7	Coimbatore	1,42,015	1,52,050	
8	Nilgiris	16,493	16,486	
9	Madurai	1,56,317	1,62,727	
10	Dindigul	10,757	14,559	
11	Trichy	1,17,873	1,17,830	
12	Thanjavur	22,440	26,054	
13	Pudukkottai	11,616	13,127	
14	Sivagangai	28,952	33,518	
15	Virudhunagar	5,127	5,381	
16	Thiruneveli	41,926	42,359	
17	Kanniyakumari	15,348	15,638	
	TOTAL	9,52,931	10,00,953	

4. TAMIL NADU COOPERATIVE MILK PRODUCERS FEDERATION LIMITED (TCMPF)

TCMPF is the apex body in the 3 tier system of Dairy Co-operative. It was established on 01.02.1981 and took over all the commercial activities such as milk procurement, processing, packing and marketing of milk and milk products from the Tamil Nadu Dairv Development Corporation which was till then handling the above functions. The Headquarters of the TCMPF is located at Aavin Illam, Madhavaram Milk Colony, Chennai and overall management of the Federation vests with the elected Board of Directors of the Federation. The present Board assumed charge on 17.07.2013. The day to day administration of the Federation is looked after by the Managing Director.

The Federation lifts milk from various District Unions and markets the milk in Chennai Metro fulfilling the demand of milk consumers. The Federation provides necessary technical support to the Unions, including marketing assistance. There are three milk dairies at Madhavaram, Ambattur and Sholinganallur, one milk product dairy at Ambattur and one dairy cum powder plant at Tiruvannamalai functioning under the control of the Federation. The approved cadre strength of the TCMPF is furnished below:

Table-5 TCMPF Administration Cadre Strength

S. No	Name of the Post	Cadre Strength
1	Managing Director	1
2	Joint Managing Director	1
3	Chief Vigilance Officer	1
4	General Manager	9
5	Deputy General Manager	24
6	Assistant General Manager	60
7	Manager	108
8	Deputy Manager	173
9	Executive	448
10	Driver	234
11	Technical Staff & Helper	1,031
	TOTAL	2,090

4.1. DAIRIES RUN BY TCMPF LTD

4.1.1. Madhavaram Dairy

The Madhavaram Dairy is the oldest dairy established in Tamil Nadu to handle 50,000 litres of milk per day under Colombo Plan in 1962 with the assistance of New Zealand Government.

The handling capacity has been increased to 5 LLPD by strengthening the infrastructure at a cost of Rs.7 crore in the last six years.

Further, Madhavaram Dairy distributes milk to consumers of North Chennai through 47 hired route vehicles, 23 private agency vehicles and 3 Federation milk routes.

This Dairy has been certified with IS/ISO 9001:2008, IS 15000:1998 (HACCP) and IS/ISO 14001:2004(EMS). The milk cold room facilities

will be strengthened, during 2018-19 to ensure the quality of the milk.

4.1.2. Ambattur Dairy

The Ambattur Dairy was installed with a capacity of 2 LLPD in the year 1976. The handling capacity has been increased to 5 LLPD by strengthening of infrastructure at a cost of Rs. 7.5 crore in the last six years to meet out the increased demand of consumers of Central Chennai.

Further, Ambattur Dairy supplies milk to consumers of Central Chennai through 45 hired route vehicles, 33 private agency vehicles, 5 milk Consumer Co-operative Society (MCCS) milk routes and 7 Federation milk routes.

This Dairy has been certified with ISO 9001:2008, IS 15000:1998 (HACCP) and IS/ISO 14001:2004(EMS). The milk cold room facilities will be strengthened during the current year.

The expansion works of effluent treatment plant capacity from 4 LLPD to 7 LLPD has been completed.

4.1.3. Sholinganallur Dairy

The Sholinganallur Dairy, the first automated dairy in South India was set up in 1996, with an installed capacity of 4 LLPD. The plant was initially designed for bulk milk despatch in milk tankers to the tune of 3.50 LLPD for milk vending booths and 50,000 litre as sachet milk. Subsequently, to cater to the changing market scenario and demand, bulk despatch was switched over to sachet milk in a phased manner and the dairy is now handling 4.50 lakh litre of milk per day.

During the last seven (2011-18) years, the handling capacity of this dairy has been increased to 6 LLPD by strengthening the infrastructure at the cost of Rs.10 crore to meet the increased demand of South Chennai and its peripheral consumers.

Further, Sholinganallur Dairy supplies milk to consumers of South Chennai through 40 hired route vehicles, 44 private agency vehicles, 4 milk Consumer Co-operative Society (MCCS) milk routes and 5 Federation milk routes.

Further, installation of Concentrated Solar Thermal System (CST) for generating steam of 1,000 – 1,100 kg per day at a cost of Rs.100 lakh replacing usage of furnace oil to the tune of 100 – 110 litres per day has resulted in savings of Rs.12 lakh per annum. This Dairy is certified with IS/ISO 9001:2008, IS 15000:1998 (HACCP) and IS/ISO 14001: 2004(EMS).

The expansion works of effluent treatment plant capacity from 4.5 LLPD to 7 LLPD is under progress.

4.1.4. Tiruvannamalai Dairy Cum Powder Plant (DCCP)

A Dairy Cum Powder Plant with a handling capacity of 2 lakh litre of milk per day and powder plant capacity of 20 MT per day was established on 11.11.2014 at Ammapalayam Village in Tiruvannamalai district as a unit of TCMPF at a total cost of Rs.72.60 crore by availing financial assistance from NABARD.

An additional godown at a cost of Rs.476.50 lakh for storage of 250 MT of butter, 500 MT of Milk powder has been constructed recently along with conveyor arrangement for loading and unloading of SMP. This Dairy has been certified with ISO 22000:2005 (FSMS). In the year 2017-18 ghee manufacturing has been started in this dairy.

4.1.5. Ambattur Products Dairy

The Products Dairy at Ambattur supplies wide range of Milk Products and its by-products to the consumers in the Greater Chennai.

The Products Dairy also ensures availability of fresh and quality products at all the outlets in the Market.

The quality of the products and by-products is assured by means of adopting ISO (International Standards Organization), FSSAI (Food Safety and Standards Authority of India), HACCP (Hazard Analysis and Critical Control Point) procedures.

The erstwhile Products Dairy functioning since 1976 at Ayanavaram, was shifted to Ambattur in 2003 and a new product dairy at Ambattur was established at a cost of Rs.23.46 crore. This new plant has the capacity to

manufacture 15,000 litre of Ice cream and 1000 kg of Paneer per day.

In the same premises, 40,000 litre per day capacity fermented products unit (curd, buttermilk, lassi, etc) was established at a cost of Rs.9.18 crore, and commissioned by the Honorable Chief Minister on 21.09.2016.

At present, 60 numbers of milk products in 117 variants are being produced at Ambattur Products dairy and supplied to retail outlets through 28 contract vehicles and 5 refrigerated vehicles. Ice cream and few other milk products are also distributed through 3 refrigerated vehicles to all districts in the State.

Three more refrigerated vehicles have been added to the fleet at a cost of Rs.81.00 lakh and the same was flagged off by the Honourable Minister of Dairy Development on 19.05.2017 for the transportation of ice cream items to the District unions. On 19.04.2017, Aavin introduced curd in ½ kg sachet for the benefits of Metro consumers. Subsequently, 1 kg premium curd and Rasgulla were introduced in the market on 27.06.2017. Grape duet, Mango cone, Strawberry cone and two in one bar ice cream items were introduced on 08.09.2017.

Following new variants have been introduced on 20.04.2018:

- 1. Paneer $\frac{1}{2}$ kg and 1kg pack
- 2. Premium curd in 400gm cup
- 3. Chocolate Ripple ice cream 500ml
- 4. Strawberry Ripple ice cream 500ml
- 5. Sugar free kulfi 70ml
- 6. Sugar free ice cream 100ml (Vanilla)

It is proposed to produce new chocolate varieties, Cookies, tin packed Rasgulla and Gulabjamun and long shelf life khoa to cater to the needs of consumers. Trial production is being carried out for developing the following new products:

- 1. Diet yoghurt in various flavour and Sugar free Yoghurt
- 2. Kulfi in various flavour and Sugar free Kulfi
- 3. Whey Drink in various flavour

An aggressive marketing campaign has enabled the Federation to meet the Ice cream sales target of 10,000 litres per day from an average despatch of 6,000 LPD.

Sweets	Ice cream variety	Fermented Products	Coagulated products and others
Sugared Khoa Dates Khoa Mysorepa Long life Gulabjamun Milk Peda	Ice cream cups, family packs (Bricks, bowls) Cassata Ball Ice cream Chocobar Mango Duet Pineapple Duet Grape duet Two in one bar Strawberry cone Mango cone Choco feast Chocolate cone Vanilla cone Classic Cone Kulfi Bar Ice Candies Premium ice cream in scoops Ice candies (6 variants)	Yoghurt Curd sachets Spl.Curd in cups Lassi in sachets Butter milk in sachets Bucket curd Probiotic Curd Probiotic Lassi	Paneer Others Unsugared Khoa Milk chocolate Nutties Chocolate Flavoured milk

Range of Aavin Milk Products

4.2. Service institutions run by TCMPF

Nucleus Jersey and Stud Farm (NJ&SF), Udhagamandalam

The Nucleus Jersey and Stud Farm was established in 1973. It consists of two divisions' viz. bull mother farm and stud farm. Stud farm is located in an area of 37.72 acres of land leased from the Forest department and the Bull Mother Farm is located in an extent of 46.33 acres of Revenue land.

Bull Mother Farm

The Bull Mother Farm maintains high pedigreed Cows of Jersey breed, to produce genetically superior Jersey breeding bulls for production of quality frozen semen for breeding purposes. In the same location in Kakkathope, cultivation of Oats, Maize & Kikuyu grass is also undertaken for fodder requirement of the farms.

Stud Farm

The stud farm maintains pure Jersev, crossbred Jersey, pure Holstein Friesian and cross Bred Holstein Friesian bulls for frozen semen production and Frozen semen is being supplied to all the District Cooperative Milk Producers Unions (DCMPU) in the State which in turn distribute it to the artificial insemination under their control for artificial centres insemination of the cows belonging to the members of the milk Producers co-operative societies. Presently, there are around 132 bulls at the stud farm, of which 97 are under semen collection. Eleven imported bulls of which ten pure Jersey and one pure Holstein Friesian are also being maintained in the farm. The farm produces around 16.00 lakh doses of frozen semen straws per year on an average. During 2018-19, it has been proposed to produce around 19.00 lakh doses of frozen semen straws.

Buffalo Frozen Semen Station (BFSS), Erode

This unit undertakes the task of distribution of Frozen Semen Straws (white cattle) produced at NJ&SF, Ooty to all milk unions based on their requirements. The present off take by unions is around 1.70 lakh per month. This Unit also distributes 6000 Nos. of Buffalo Frozen Semen Straws to unions. Rearing of breeding bull calves produced through Progeny Testing Programme (PTP) is also being carried out in this Unit.

In 2017-18, 20 acres of land have been brought under fodder cultivation at Pudukudi Farm in Thanjavur District to supply fodder to the stud farm.

Dairy Herd Improvement Programme Actions (DIPA), Erode

One DIPA unit is functioning at Erode. The activities of DIPA unit are:

Progeny Testing Programme (PTP)

In order to select superior cross bred bulls for breeding milch animals, progeny testing programme is being implemented by the Federation with the financial assistance of the Government of India in Salem, Erode, Dharmapuri, Coimbatore, Trichy, Madurai and Thiruneveli DCMPUs.

Field Performance Recording Programme (FPRP)

The field performance recording programme(FPRP), is done to identify jersey cross bred cows with good milk yield and to get superior jersey cross bred bull calf by inseminating the elite cows with proven bull semen.The milk yields of the Jersey crossbred cows in the field are continuously recorded and elite cows are selected based on the milk yield. These elite cows will be inseminated with proven bull semen to produce superior cross bred bull calves. The bull calves will be supplied to the stud farm for semen production.

The FPRP is being implemented by the Federation in 8 District Unions viz. Salem, Dharmapuri, Erode, Coimbatore, Trichy, Madurai, Dindigul and Thiruneveli with the financial assistance of the Government of India. Under this programme so far 352 bull calves have been provided for frozen semen production to the four frozen semen stations under cooperative sector and Animal Husbandry Department.

4.3. UNITS RUN BY TCMPF AND DISTRICT UNIONS

Feeder Balancing Dairies (FBDs)

There are five Feeder Balancing Dairies functioning in Tamil Nadu viz Erode, Salem, Krishnagiri, Madurai and Tiruvannamalai. The purpose of establishing Feeder Balancing Dairies was to convert the surplus milk into Skim Milk Powder and Butter. The total skim milk drying capacity of all FBD is 90 MT per day (Erode-40 MT, Salem-10 MT, Dharmapuri -10 MT, Madurai-10 MT and Tiruvannamalai-20MT). The Federation further proposes to establish additional Powder plants in the needy areas.

Cattle Feed Plant - Erode

Nutrition plays a key role in animal productivity and fertility. Erode Milk Union is operating a cattle feed plant since 1982 with a production capacity of 100 MT per day. This was expanded to manufacture 150 MT cattle feed per day at a cost of Rs.20.36 crore and inaugurated on 18.03.2017 by the Hon'ble Chief Minister of Tamil Nadu. During the year 2017-18, Erode cattle feed plant has produced 37,736 MTs of cattle feed which is 66 % higher than the

22,695 MTs produced in 2016-17. The off-take of cattle feed supplied through Aavin has increased 18 times over the last seven years.

As against the estimated quantity of 72000 MTs, a quantity of 81,531 MTs cattle feed has been supplied in 2017-18. There is an increase in supply by 34.16% when compared to last year. This will facilitate increase in quantity and quality of milk.

Table-6 Cattle feed supply details (in MTs) (Annexure – II)

YEAR	TOTAL QUANTITY SUPPLIED (IN MTs)
2010 - 11	4,612
2011 - 12	15,046
2012 - 13	31,093
2013 - 14	53,292
2014 - 15	51,702
2015 - 16	58,652
2016 - 17	60,770
2017 - 18	81,531

In order to increase the cattle feed supply to members, it has been proposed to purchase cattle feed from other sources.

It is aimed to increase the supply of cattle feed to 1,00,000 MTs in 2018-19.

Mineral Mixture Plant

Mineral mixture plays a vital role in fertility, milk quality and general health of milch cows. There are four mineral mixture plants functioning at Villupuram, Tiruchirapalli, Thiruneveli and Erode. During 2017-18, the Mineral Mixture supply was 1843 MT. It is proposed to increase the supply of Mineral Mixture to 2500 MT in 2018-19. One more Mineral mixture plant will be constructed in Dharmapuri union at a cost of Rs.50.00 lakh. This will ensure adequate supply of mineral mixture to the animals belong to the milk producers.

Table-7 Mineral Mixture supply details 2011 – 18 (in MTs) (Annexure-III)

YEAR	TOTAL QUANTITY SUPPLIED (IN MTs)			
2011 - 12	171.60			
2012 - 13	131.10			
2013 - 14	390.67			
2014 - 15	244.42			
2015 - 16	966.08			
2016 - 17	1,314.73			
2017 - 18	1,843.79			

The establishment of a new mineral mixture plant with a capacity of 12 MTs per day at Dharmapuri union is under progress.

4.4. COORDINATION WITH VARIOUS DEPARTMENTS

(a) Animal Husbandry Department

Foot and Mouth Disease (FMD) vaccination is carried out twice a year (March

and September) in coordination with AnimalHusbandry Department covering around17.00 lakh animals under co-operative ambit.

Various components like fodder seeds, azolla, hydroponics, chaff cutters are supplied to milk producers by Animal husbandry department under State Fodder Development Scheme (SFDS).

(b) Tamil Nadu Livestock Development Agency (TNLDA)

Uunder National Programme for Bovine Breeding (NPBB), infrastructure equipments like liquid nitrogen containers, frozen semen containers, AI gun etc. are supplied through TNLDA to milk societies for carrying out artificial insemination. In addition, training is also being imparted to veterinarians and village level workers. Insurance coverage is provided to the milch animals of milk producers at subsidized premium through TNLDA under National Livestock Mission (NLM) of Government of India.

In coordination with TNLDA the farmers are being oriented on best animal management practices, clean milk production concept, calf rearing, ration balancing programme and fodder development including growing of azolla & hydroponics system.

(C) Tamil Nadu Veterinary Animal Sciences University (TANUVAS)

The skill development & extension education is imparted to the milk producers on latest techniques & advancement through experts in close collaboration with University Training & Research Centres (UTRC) of TANUVAS.

5. DAIRY DEVELOPMENT ACTIVITIES UNDERTAKEN UNDER STATE / CENTRAL SCHEMES

5.1 National programme on dairy development (NPDD)

component The NPDD of National bovine breeding dairy programme on and development (NPBBDD) scheme has been designed to develop infrastructure at the grass root level by providing financial and technical assistance for dairy development. NPDD is focusing on creating infrastructure related to production, procurement, processing and marketing of milk by district unions / federation and also extension activities including training of farmers.

Under NPDD, a sum of Rs.40.16 crore has been sanctioned for 3 projects in the Federation and the district unions of Trichy and Madurai for the year 2014-15 to 2016-17. A new processing plant with a capacity to process one lakh litres per day was established in Padalur in Perambalur district. A new milk condensing plant with a capacity to condense one lakh litre per day was also installed in Madurai dairy recently.

The Central Government has released Rs.17.74 crore out of the total grant amount Rs.18.08 crore under the NPDD scheme.

In the year 2017-18, an amount of Rs.2324.40 lakh have been sanctioned under NPDD scheme with a grant-in aid of Rs.1574.40 lakh. Rs.1180.00 lakh had been released so far.

The following are the components sanctioned under NPDD for the year 2017-18:

504 units of automatic milk collection units each at a cost of Rs. 1.25 lakh and 216 data

processing milk collection Units each at a cost Rs.0.90 lakh have been sanctioned for installing milk testing facilities at farmers' door steps.

To improve the chilling facilities at the village level 92 units of 500 litres capacity BMCs, 86 units of 1000 litres capacity, 22 units of 2000 litres capacity BMCs, 4 units of 3000 litres capacity and 6 units of 5000 litres capacity BMCs have been sanctioned with 50% grant in aid.

The machineries procurement activities are in progress and to be purchased and installed before September 2018. The Chilling capacity of the existing BMCs will be increased from 15.19 LLPD to 19.12 LLPD with an increase of 3.93 LLPD chilling capacity during the year 2018-19.

- 5.2. Infrastructure developed under National Agriculture Development Programme (NADP) during the last six years
- 1. Established milk cold room facility for storing three lakh litre of milk
- Created butter deep freezer facilities to store
 894 MT capacity in Erode, Salem and
 Coimbatore
- Installed 25 high speed and 11 normal speed milk packing machines with thermal printing technology
- 4. Established a new product dairy at Ambattur for manufacturing 15,000 litres of ice cream per day and 1,000 Kg. of paneer per day
- 5. Installed Milk sterilizer and 200 ml packing machines for UHT plant at Salem

- 6. Purchased 48 road milk tankers to strengthen own milk transportation facility
- 7. Installed aseptic filling machine with a capacity to pack 6000 no of 1000 ml UHT milk tetrapacs per hour at Salem dairy
- 8. Door step veterinary health services scheme is being implemented from 2011 onwards by engaging 155 Veterinarians. Through this scheme, animal health services are provided at the doorsteps of the milk producers in the 17 unions, thus ensuring loyalty of the members and also improving milk production by way of better animal health care
- 9. Facilities in Salem union were strengthened with additional facilities for processing, packing, storage for butter and UHT milk. 5 nos. of milk sale outlets and the dairy refrigeration system were provided for strengthening the systems under the control of Nilgiris union. Infrastructure

was strengthened for revamping of dairy capacities in DCMPU Ltd of Virudhunagar, Dharmapuri and Thiruneveli. (Annexure – IV)

5.3 Infrastructure developed by availing funds under NABARD RIDF during the last six years

State Government has given the much needed impetus to the dairy cooperative industry by providing grant assistance under NABARD's Rural Infrastructure Development Fund (RIDF). During 2014-15 to 2016-17 a sum of Rs.158.67 crore was sanctioned.

In the year 2017-18, Rs.2101.60 lakh was sanctioned to strengthen infrastructure facilities in Dindigul, Sivagangai, Pudukkottai Kancheepuram–Thiruvallur, Thanjavur and Vellore district unions.

During the year 2018-19 additional fund will be availed under RIDF scheme to strengthen marketing, value addition and storage facilities in dairy.

5.4 National Dairy Plan-I (2011-12)

National Dairy Plan – (Phase-I) is implemented in Tamil Nadu since 2011-12 with the objective of helping to increase the productivity of milch animals, thereby increase milk production to meet the rapidly growing demand for milk and also to help provide rural milk producers with greater access to the organized milk processing sector.

5.4.1. Progeny Testing Programme

Under National Dairy Plan, progeny testing programme is being implemented in crossbred jersey cows, at a total outlay of Rs.39.28 crore. The scheme was implemented from 2012-13 in five district unions, viz. Vellore, Villupuram, Erode, Salem and Trichy and it has been envisaged to produce 254 high genetic merit (HGM) bulls under the scheme by 2018-19. Based on the performance of the daughters on various parameters like milk yield, milk quality, lactation period etc. the bulls are ranked, and best bulls are used for producing proven semen for increased milk production.

5.4.2. Strengthening of Semen Station, NJ&SF, Ooty

Under national dairy plan, the semen station at Nucleus Jersey and Stud Farm, Ooty was strengthened with a grant of Rs.1311.12 lakh. Under this project, there was a provision for construction of guarantine station at Erode, and calf rearing station at Pudukudi and civil works for strengthening of NJ&SF, Ooty apart from certain facilities at pre-guarantine station, Attur. In addition, various lab items, farm equipments have also been procured under this apart from information and program communication technology (ICT) related items.

5.4.3 Village Based Milk Procurement System (VBMPS)

Under National Dairy Plan I, village based milk procurement system (VBMPS) programme was implemented in six milk unions viz., Salem, Coimbatore, Erode, Vellore, Trichy and Kancheepuram-Thiruvallur at a total project cost of Rs.2451.82 lakh commencing from 2014-15. The activities will be carried out this year also

Under this scheme 45 Nos. of BMCs, 559 Nos. of AMCUs / DPMCUs and 1789 Nos. of cans, training to society staff, society board members and milk producers is also undertaken. Two more supplementary VBMPS projects have been approved for Salem and Vellore unions for establishing BMCs in the year 2017-18.

Through implementation of this project, in addition to clean milk production there will also be an increase in quality of raw milk.

5.4.4. Ration Balancing Programme (RBP)

Under National Dairy Plan I, Ration Balancing Programme (RBP) was implemented in eleven milk unions viz., Salem, Coimbatore, Erode, Villupuram, Vellore, Trichy, Madurai, Dindigul, Dharmapuri, Thiruneveli and Kancheepuram Thiruvallur at a total project cost of Rs.1957.00 lakh commencing from 2014-15. In 2018-19 also the same activities will be implemented.

The programme is aimed at reducing the feeding cost by preparing least cost formula with the locally available feed material. This programme has resulted in reduction in cost of feeding by Rs.1 to Rs.3 per litre and increase of 300-500 ml milk production per animal.

5.5. Integrated Dairy Management System (IDMS)

The project has been envisioned to integrate the activities of village level milk

Producers cooperative societies, district cooperative milk Producers unions and TCMPF through computerized networking systems at a cost of Rs.46.55 crore. The Government of India had sanctioned a sum of Rs.18.34 crore as grant-in-aid. This project would improve the operational efficiency and ensure timely delivery of service to milk producers, consumers and suppliers etc. This project is expected to be completed by September 2018.

6. MAJOR INFRASTRUCTURE & TECHNOLOGY UPGRADATION PROJECTS

6.1.Ultra High Temperature (UHT) Processing Plant in Sholinganallur Dairy

A new UHT milk plant with aseptic packing unit to process and pack 1.0 lakh litres of milk per day is in progress in Sholinganallur dairy at a cost of Rs.35.98 crore. The unique feature of the project is that through this process of packing the milk can be stored for 90 days at normal room temperature. This project is expected to be completed by July, 2018. This project aims attracting the high end consumers and meets the export requirements thereby expanding Aavin's market share.

6.2. Enhancement of storage facilities for Butter and Milk Powder

In order to be self reliant in storage capacity and to ensure uninterrupted supply, 1,725 MT storage capacity for storing SMP in the dairies of Madurai, Tiruvannamalai, Trichy and Coimbatore at a cost of Rs.4.74 crore and 1,120 MT of storage capacity for butter was created in the dairies of Thiruneveli, Madurai, Tiruvannamalai and Trichy at a cost of Rs.10.51 crore.

6.3. Customer facilitation centre cum Corporate Office building at Nandanam

The foundation stone for the customer facilitation centre cum corporate office building at Nandanam was laid by beloved Amma on 15.7.2015. The construction work of nine floor building work with an extent of 1,13,000 square feet has been entrusted to Tamil Nadu Police Housing Corporation and the work is expected to be completed by July, 2018.

6.4. Hi-Tech parlours

In order to enhance the visibility and the brand image of Aavin, hi-tech parlours with facilities such as children play area, parking area and air conditioned seating arrangements have been created in Chennai metro and in District Headquarters. 16 Hi-tech parlours have been established in Chennai metro at a cost of Rs.10 crore and 31 Hi-tech parlours in districts at a cost of Rs.11.63 crore.

6.5. Usage of non-conventional energy in Dairies

To promote green initiatives, Aavin has taken steps to introduce non-conventional energy in dairying infrastructure and 8 dairies, 4 chilling centres and 100 bulk milk coolers have been provided with solar water heaters to produce 1.11 lakh litres of hot water (80°C) per day.

One concentrated Solar Thermal System (CST) project is under progress in Madurai dairy and same will be commissioned by July, 2018.

6.6. New Ice Cream Plant at Madurai dairy complex

It has been proposed to establish 20,000 litres per day capacity ice cream plant in Madurai dairy complex at a cost of Rs.40 crore. This ice cream plant can be expanded up to 30,000 LPD. The work of construction of the building and infrastructure has been entrusted to National Dairy Development Board (NDDB), Anand on turnkey basis and is expected to be completed by December, 2018.

6.7. New Ultra High Temperature (UHT) flavoured milk plant at Madurai.

It has been proposed to establish new Ultra high temperature (UHT) flavoured milk processing plant in Madurai District Co-operative Milk Producers union at a cost of Rs.40 crore which includes aseptic processing plant, aseptic packing machineries and warehouse. This plant will have the capacity to produce and pack 25,000 LPD of flavoured milk under UHT process. The flavoured milk can be kept in quality condition for 90 days. The project is expected to be completed by January, 2019.

7. SERVICES OFFERED TO MILK PRODUCERS BY COOPERATIVE

The main objective of the milk cooperatives is to protect the interest of the milk producers. To achieve these objectives the following services are provided to the milk producers.

7.1. Input Services to Milk Producers

Doorstep animal health coverage services are being provided to the milk producers to treat sick animals. Emergency health care has also been provided. Timely artificial insemination is essential for yielding one calf per year. Hence for the benefit of milk producers artificial insemination is carried out in the milch animals at the door step of the producers through Union veterinarians and trained village level workers. During the year 2017-18, 20.34 lakh artificial inseminations were carried out. Periodical animal health camps are conducted in villages for mass de-worming and to treat infertility cases.

In order to motivate the milk producers in the use of cattle feed, a subsidy of Rs.2.00 to Rs.4.00 per kg cattle feed is being provided. mixture is Mineral also supplied to the milk producers with the subsidv of Rs.15.00-Rs.25.00 per kg. Livestock insurance coverage is also provided with subsidy. Green fodder and fodder slips are being given to the milk producers by cultivating fodder in union's land and at Pudukudi farm, Thanjavur.

Under National Livestock Mission (NLM) skill development component block level skill training was conducted for 15,000 milk producers in 300 blocks covering clean milk production practices and scientific feeding by use of chaff cutters, silage making, azolla cultivation, in addition to fodder development activities.

7.2. Supply of subsidized Cattle Feed and Mineral mixture

Cattle feed and mineral mixture is being supplied by the unions with a subsidy of Rs.2/to 4/- per Kg and Rs.15/- to 25/- per kg, respectively from the Union fund.

A sum of Rs.17.80 crore have been spent towards subsidy for the supply of 76,205 MTs of cattle feed and Rs. 94.88 lakh towards the subsidy for the supply of 391 MTs of mineral mixture in 2017–18.

7.3. Fodder cultivation

The area under fodder cultivation in unions and Pudukudi in Thanjavur union is 67.81 acres.

During the year 2017-18, fodder cultivation was done in 20 acres of land at Pudukudi, Thanjavur District to meet out the demand of animals available at Pudukudi & Nucleus Jersey Farm (NJF), Ooty and nearby unions namely, Trichy, Thanjavur, Pudukottai and Sivagangai.

It is also proposed to utilize all the land available in the federation/unions/ societies for fodder cultivation during the year 2018-19, in order to meet out the fodder requirement.

7.4. The Restructured Peraringnar Anna Co-operative Milk Producers Welfare Fund

The Restructured Peraringnar Anna Cooperative Milk Producers Welfare Fund was created, to enhance the loyalty of the milk producers of the primary milk cooperative societies and to assist them in times of their distress. The producer member contributes Rs.1 per month to the fund and a matching contribution of Rs.1 is made by the society concerned and the District Union.

The scheme was inaugurated by the Honourable Chief Minister of Tamil Nadu on 15.07.2015. So far, a sum of Rs.1.44 crore has been disbursed benefitting 82 milk producers.

To get the full quantum of financial assistance from this fund, the milk pouring member should have poured a minimum of 120 litres of milk in 180 days in the preceding one year, prior to the date of accident.

G.O.Ms.No.306 Animal In Husbandry, Dairying & Fisheries (MP-I) Department, Dated.20.11.2013 orders have been issued enhancing the assistance to the member Milk Producers producers of Cooperative Societies who contributed for the fund, according to which a sum of Rs.1.75 lakh will be released to the milk producer who met with a fatal accident or lost more than one organ and a sum of Rs.75,000 in case of loss of one organ. Children of such families are also given financial

assistance of Rs.10,000/- for education and marriage purposes. However, there is no increase on the rate of contribution by the society, Union and beneficiary.

7.5. Payment of incentive to milk producers by co-operative unions

The profit earned by the district unions is being shared with the milk producers by way of incentive. Depending upon the surplus generated by the particular district union, this incentive amount normally ranges from 60 paisa per litre to Rs.1.60 per litre. A sum of Rs.162.79 crore has been paid as incentive to 3,48,019 milk producers during 2011-17.

7.6. Payment of bonus to milk producers by Primary dairy cooperative societies

Whenever the society earns profit, 50% of profit is 'ploughed back' to the member milk producers as provided in the by-laws of Milk Producers Cooperative Societies (MPCS) by way of dividend on share capital, patronage rebate and bonus for the value of milk supplied by them to the society.

A sum of Rs.131.50 crore has been paid as bonus, dividend and patronage rebate during 2017-18, by which 2.85 lakh members were benefitted.

7.7. Installation of Bulk Milk Coolers

Bulk Milk Coolers (BMC) at the village level aims at maintaining the initial quality of milk by avoiding transportation to chilling centres / dairies and also improving the keeping quality. So far, 341 BMCs with chilling capacity of 15.19 lakh litres per day have been installed. It is now envisaged to install 500 litres / 1000 litres capacity BMCs to cover the MPCS procuring 500 LPD over a period of five years. It has been proposed to increase the chilling capacity from 15.19 LLPD to 19.12 LLPD by installing 218 BMC under NPDD & VBMPS.

8. MARKETING OF MILK AND MILK PRODUCTS

8.1 Domestic Marketing:

- Aavin is committed to offer pure & hygienically produced milk and milk products to the consumers
- Aavin strives to provide milk and milk products at most reasonable prices to the consumers and control the price of milk and milk products in the market
- 3. Aavin aims to sustain and augment the market share of Aavin milk and milk products
- 4. Aavin strives to ensure the availability of milk and milk products by undertaking aggressive marketing efforts and improving the retailer base for milk and milk products. A large number of networks of retailers would be engaged continuously

- Appropriate advertisement policy has been evolved to be effected through print media, electronic media and social websites to appeal to all age groups especially younger generation
- Aavin plans to undertake market study to identify the specific needs of the consumers and to launch an entire range of by products
- Professional advertising consultants have been appointed to suggest the concept and design for the advertisements
- In order to serve customers better, it has been proposed to train all Marketing officers and staff on consumer behavior
- Continuous dairy visits have been arranged for school / college students to impress upon them about goodness of Aavin

8.2 Milk Sales in Chennai Metro

The Federation is marketing Aavin milk in Chennai Metro and its suburban areas. Aavin is the largest selling brand in Chennai Metro. On an average 11.91 lakh litre of milk is being marketed per day in Chennai Metro.

Chennai Metro Sales (In LLPD)

SI. No	Subject	2016-17	2017-18	% of growth
1	Metro Mill Sales	11.39	11.91	4.50

Aavin has planned to increase the sales to 12.75 LLPD during the year 2018-19

Table-8 Selling Price of Milk

S. No Type of Milk	Type of Milk	Sachet colour	Specification		Rate per 500 ml pack (in Rs.)	
			FAT %	SNF%	Card	MRP
1	Double Toned Milk	Magenta	1.5	9.0	16.50	17.00
2	Toned Milk	Blue	3.0	8.5	17.00	18.50
3	Standardized Milk	Green	4.5	8.5	19.50	20.50
4	Full Cream Milk	Orange	6.0	9.0	21.50	22.50

8.3. Marketing network

The "Aavin" range of products is very popular among the consumers in the Chennai Metro and its suburban areas. The Federation has a well knit network to ensure that milk and milk products reach large number of consumers.

Table-9

Marketing Network

S.No.	Infrastructure	2013- 14	2014- 15	2015- 16	2016- 17	2017- 18
1	Distribution Routes	113	117	119	132	148
2	Zonal Offices	16	16	16	16	27
3	Milk Depots	470	470	433	437	441
4	Delivery Points	311	311	361	376	485
5	Parlours	93	93	114	147	221
6	Milk Whole Sale Distributors	47	71	71	83	84
7	Milk Consumers' Cooperative Societies	49	49	49	49	49
8	Franchise Retail Outlets	184	202	451	556	594
9	Products Distribution Routes	14	16	25	33	37

8.4. Product marketing

The success of marketing lies with making available the products in outlets where footfalls are abounded. At present the major sale is happening in modern retail format stores namely malls, hypermarkets, supermarkets and other departmental stores since the public movement in those places is ascertained to be huge. Banking on this concept, Aavin is ensuring the availability of its products in Big Bazaar, Reliance Fresh, Reliance Metro, D'Mart, Spar Hyper Market in Forum Mall, Grace Supermarket chain, Margin Free Super Market in metro. Efforts are on to rope in more such format stores in the metro areas for selling Aavin products.

The consumers prefer to get their products home delivered at free of cost. In view of this, more number of online products delivering companies are in operation and many such companies in the metro are home delivering a plethora of products. Utilizing the services of these companies in Aavin will be reaching more consumers in the metro in future. Realising this importance, tie-up with modern home delivering online companies like Big Basket and Grofers are now engaged in home delivering Aavin products. It has been planned to appoint super stockist for fermented products and ice creams to cover all super markets, departmental stores, regular grocery shops, institutions and caterers etc in Chennai metro and its suburbs and thereby increase the sales.

It is proposed to increase the number of Franchise Retail Outlets (FRO) in Chennai metro and its suburbs by extensive field work. These retailers will be encouraged by arranging working capital finance through banks.

It has been proposed to introduce mobile parlours and organize push cart sales in crowded places for increasing the product sales. It has been planned to open exclusive Aavin ice cream shops in Chennai metro and in more number of Aavin outlets in colleges, schools etc.

It has been planned to introduce an exclusive Aavin e-commerce platform through

which the business enquiries, bulk orders may be obtained. The online platform may also be utilized by the consumers for placing online door delivery orders for Aavin.

8.5. Product marketing in upcountry

Owing to the large volume of ghee, butter and SMP being consumed in northern & eastern part of the country, the federation had operated branches till 2007-08 all over the country but all operations ceased from 2008 due to continuous milk shortage all over the country for several years. Now, faced with plenty of supplies, it is appropriate to ensure visibility of Aavin. Hence Whole Sale dealers (WSD) are being appointed in every state.

WSDs have been appointed in various states namely Rajasthan, Delhi, North Eastern States, Bihar, Madhya Pradesh, Gujarat, Uttarakhand, Haryana, Andaman & Nicobar, Odisha, Uttarpradesh, Telangana, Andhra Pradesh, and West Bengal. The process is on to appoint WSDs in all other states. As of now, products sales have been started in 3 states.

Targets are being fixed every month for the WSDs and their performance is monitored.

The sale of SMP in consumer packs (i.e., in one kg packs) has commenced recently in Kolkata and sales is encouraging. The sale is expected to commence in other states shortly and this venture is expected to create a sizeable and consistent market for SMP disposal in the coming months.

Manufacturing of Dairy Whitener & Whole Milk Powder is being planned for producing value added products and marketing in eastern part of India where there is a vast scope for these products. Supply of UHT milk and milk in flexi packs to the right markets is being planned. Export of SMP, butter, ghee and UHT milk is consideration.

8.6. Export marketing of Aavin products

The export of milk products commenced Ultra High with the launch of one litre Temperature (UHT) milk at Singapore on 25.11.2017. Efforts are being made to ensure that Aavin milk products are made available in large number of countries during this year. The market potential for Aavin milk products in other countries will be ascertained by arranging high level visits to various countries, participating in dairy and other food processing fairs and events bv putting up stalls, distributing abroad corporate and product brochures and conducting buyers/importers meets. Export process will be commenced soon in the countries where the market potential is available. The quality of products and packaging will be ensured to make our products on par with global standards. An exclusive wing has been created in the Federation to focus on exports of milk and milk products. All these measures are expected to help Aavin propagate the brand name of Aavin at the global level.

8.7. Future marketing strategies

- Professionally qualified persons are to be engaged on contract basis to study the prevailing market conditions and to suggest immediate action to increase sales
- New agents/retail outlets are to be appointed for effective coverage of the market and to increase the sales
- Advertisement and sales promotional activities to be geared up to develop brand loyalty and in turn sales

- Opening of parlours at educational institutions to improve awareness among the youngsters and to increase the sales
- Appointment of super stockist to cover all super markets, departmental stores, institutions and caterers in Chennai metro and suburbs
- 6. Increasing the number of franchise retail outlets (FROs) in Chennai metro and suburbs
- 7. Introduction of mobile parlours and cart sales in crowded places
- Tie-up with modern home delivery on line companies like Big Basket and Grofers for home delivery of Aavin products
- Ensuring availability of Aavin products in Big Bazaar, Reliance Fresh, Reliance Metro directly by Federation

- 10. Appointment of whole sale dealers in every State
- Sale of skimmed milk powder (SMP) in consumer packs in Kolkata
- 12. Supply of dairy whitener and whole milk powder in Eastern States

8.8. Consumer Care and Support Cell

Federation The operating is 24X7 consumer care and support cell equipped with a number 1800-425-3300 at the toll free Marketing office, Nandanam since 04.09.2003. The consumers can contact the consumer care and support cell for getting their grievances redressed early. During the year 2017-18, totally 594 complaints were received and rectified.In 2017-18 meetings were conducted with the consumers, resident association representatives, FROs and whole sale distributors to get suggestions for improving the sale performance and actions were taken accordingly to improve marketing development activities.

9.QUALITY CONTROL ACTIVITIES

Milk is tested at BMC/CC/District union Dairy/Metro Dairy laboratory, chemically and bacteriologically to ensure procurement of quality of milk. Quality milk procurement from the societies is essential before the milk is sent for processing manufacturing of milk products. All quality standards of milk and milk products are to be ensured in the best interest of the consumers.

Adequate training is being imparted at all levels including milk producers. society staff, district Union staff and federation staff to ensure to acquire knowledge in testing of milk during collection of milk at society / BMC / CC / Dairy / FBD / Metro dairies. The milk procured by the primary milk Producers Cooperative Society is being tested thoroughly and duly ensured that the milk producers are getting reasonable price for the milk on quality basis and as per solids not fat (SNF).

To distribute, hygienic and quality milk and milk products to consumers, the Federation and District Cooperative Milk Producers dairies are conducting various quality tests at various levels from the initial stage of milk collection through their quality control units by using modernized testing equipments to ensure the quality milk and milk products to the consumers.

The quality standard certificates were obtained for all dairies and metro dairies such as ISO, FSSAI, BIS, AGMARK and HACCP as a testimony of its quality products.

10. FINANCIAL PERFORMANCE

10.1. Profit & Loss of Federation and District unions

Federation and 9 District unions which were continuously incurring losses up to 2011-12 started earning profit from the year 2012-13 onwards except during the years 2014-15 and 2015-16 when the procurement price of milk increased by Rs.3 per litre w.e.f 01.01.2014 without increase in the selling price of the milk and also due to crash in the price of the SMP below the cost of production in the international market.

The 6 District unions viz. Dharmapuri, Erode, Kancheepuram, Thanjavur, Sivagangai and Villupuram unions which were under loss during 2011-12 were turned around to profit by taking various rehabilitation measures by improving and rearranging the sale mix of milk and value added products and by cutting the cost of production by effectively monitoring the efficiency of operations.

Further the 3 District unions viz. Nilgiris, Dindigul and Virudhunagar unions which incurred loss during the year 2016-17 were also turned around to profit during the year 2017-18 by taking various rehabilitation measures like diversification in the product mix and market plan.

Table-10

Profit & Loss of Federation & District Unions 2006-2011 (Rs.crore)

S. No.	Year	Sales Revenue	Profit	Loss	Net profit / Loss	
1	2006-07	1566.58		-55.05	-55.05	
2	2007-08	1776.17		-27.89	-27.89	
3	2008-09	2085.08	7.80		7.80	
4	2009-10	2270.75		-25.36	-25.36	
5	2010-11	2368.67		-8.89	-8.89	
	Total	10067.25	7.80	-117.19	-109.39	

Table-11

Profit & Loss of Federation & District Unions 2011-2018 (Rs.crore)

S. No	Year	Sales Revenue	Profit	Loss	Net profit / Loss
1	2011-12	2652.00		-61.17	-61.17
2	2012-13	3284.00	115.37		115.37
3	2013-14	3518.00	136.18		136.18
4	2014-15	3881.00		-45.38	-45.38
5	2015-16	5139.00		-12.37	-12.37
6	2016-17	5281.00	139.34		139.34
7	2017-18	5478.00	46.52		46.52
	Total	29233.00	437.41	-118.92	318.49

10.2.Turnover and Sales Revenue of Federation and District Unions (Annexure V)

The turnover of the Federation and the District unions which was Rs.2369 crore during the year 2010-11 increased to Rs.5478 crore during the year 2017-18 i.e. an increase of 131%. There is growth of 4% in turn over during the year 2017-18 compared to 2016-17.

Further to improve the turnover, various measures are being taken in the form of increasing the procurement of milk, diversification of new value added products, exporting milk and milk products etc. Further to sustain steady growth, it is proposed to increase the turnover ratio of milk and milk products from the present level of 90:10 to 60:40 in another 5 years, since there is a steady market potential for the value added products.

11. STAFF WELFARE MEASURES

 As per Government announcement Ex-gratia pension scheme to the retired employees and legal heirs of deceased employees of the federation and 17 district unions has been implemented. Ex-gratia pension given for 4304 employees and family pension given for 888 legal heirs of deceased employees

- Supply of 500 ml free milk daily to retired employees of federation and district unions with effect from 01.09.2017
 - 3. The new health insurance scheme of Government has been extended to the 4485 employees of federation and district unions with effect from 01.01.2017 for 4 years and health insurance premium of Rs.1.06 crore per annum remitted to the insurance company
- 4. Promotions given to 14 were Dairv Development Department employees, 179 District Co-operative Milk Producers Union employees and 157 Tamil Nadu Co-operative Milk Producers Federation during the year 2017-18. 21 persons were newly recruited through direct recruitment method in Dairy Development Department in District Co-operative and 66 milk Producers Unions during the year 2017-18

- During Pongal festival, Productivity linked incentives are being paid to the employees of federation and district unions
- Bonus and ex-gratia are paid to the employees of federation and district unions during Deepavali festival
- 7. The department provides uniforms to the society employees
- Milk products are distributed as gift to the employees of the federation and district unions during Pongal and Deepavali festivals
- 9. As a means of encouragement to the employees of Primary Milk Cooperatives, District unions and Federation a sum of Rs.500/- was given additionally towards purchase of cloth and Stitching charges from the year 2017-18
- 10. Government has spent Rs.4.12 crore for the renovation of residential department quarters

12. DEPARTMENT OF AUDIT FOR MILK CO-OPERATIVES

The Department of Audit for Milk Cooperatives was created as a separate department in 1987 to conduct statutory audit exclusively for milk co-operatives comprises of the Tamil Nadu Cooperative Milk Producers Federation Ltd at apex level, 17 Cooperative Milk Producers Unions at District level and Milk Producers / Consumers Cooperative Societies at Primary level to enhance accountability and transparence in its operations and financial discipline.

12.1. Cadre Strength

The Department has been sanctioned with 333 permanent posts of which 297 posts have been filled on deputation basis.

Table-12

Cadre Strength of Department of Audit for Milk Cooperatives

Name of the cadre	Strength
Director	1
Joint Director	1
Deputy Director (Accounts)	1
Regional Deputy Director	5
Assistant Director	59
Senior Cooperative Auditor	224
Junior Cooperative Auditor	7
Ministerial Service	10
General Subordinate Service	8
Basic Service	17
Total	333

12.2. Audit of TCMPF Ltd

The statutory Audit of Tamil Nadu Cooperative Milk Producers Federation for the year 2016-17 was completed and audit certificates issued within the statutory time limit. Audit for the year 2017-18 is in progress.

12.3. Audit of District Coop. Milk Producers Unions

Statutory Audit of 17 District Cooperative Milk Producers Unions for the year 2016-17 has been completed and audit certificates issued within the statutory time limit. Half yearly Audit for the year 2017-18 of 14 unions namely Coimbatore, Dindigul, Erode, Kanniyakumari, Madurai, Nilgiris, Pudukkottai, Salem, Sivagangai, Thiruneveli, Thanjavur, Trichy, Virudhunagar Villupuram and District Cooperative Milk Producers Unions have been completed and audit is in progress in the remaining 3 unions. Issue of audit certificates for the 14 unions is in progress. The final audit for the year 2017-18 is under progress in all the district cooperative milk Producers unions.

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12.4. Audit of Primary Societies

During the year 2017-18, Statutory Audit of 10702 Primary Milk Producers Cooperatives and Milk Consumers' Cooperative Societies for the year 2016-17 have been completed. The audit programme for 2017-18 has been drawn up and audit work has commenced in the MPCS.

12.5. Audit Fees & Fundamental Rule Costs

During the year 2017-18, a sum of Rs. 58.07 lakh was collected towards audit fees for undertaking statutory audit in Milk Cooperative societies and a sum of Rs. 65.73 lakh was collected towards Fundamental Rule 127 cost for undertaking concurrent audit in State Federation, District Cooperative Milk Producers Unions and Primaries all of which were remitted into Government Account.

12.6. Audit review (Accounts) committee meetings

Audit review (Accounts) committee meetings have been conducted regularly to facilitate the rectification of audit objections relating to Milk Cooperatives. During the year 2017-2018, rectification reports in respect of 134 audit objections of District Cooperative Milk Producers Unions and 438 audit objections relating to Primary Milk Producers/Consumers Cooperative Societies, were placed before the audit committee for review and treated as settled.

12.7. Training and Development

To improve the professional competency, audit personnel of the Department have been exposed to various training programmes. Refresher training programmes have also been conducted for the auditors of the Department with the financial assistance sanctioned by the Government.

13. BUDGET FOR 2018-2019

A sum of Rs.118.02 crore has been provided in the Budget for 2018-2019. Out of this, projected Revenue expenditure is Rs.53.02 crore and the Capital expenditure is Rs.65.00 crore.

Table-13 Budget Allocation for Year 2011-2012 to 2018-2019 (Annexure – VI)

Year	Allocation (Rs. in crore)			
2011-2012	65.72			
2012-2013	51.25			
2013-2014	35.97			
2014-2015	81.91			
2015-2016	98.18			
2016-2017	101.21			
2017-2018	118.63			
2018-2019	118.02			

14. WAY FORWARD

Following initiatives will be taken in the coming years for the welfare of the farmers and dairy industry:

- Steps will be taken to revive the dormant societies and procure the milk from uncovered areas
- 2. Steps will also be taken to increase the cattle feed sales along with enhancing the subsidy
- 3. To overcome Green fodder shortage, action will be initiated to cultivate Fodder in all the available land of Unions and green fodder will be supplied at affordable cost to the milk producers
- 4. Stringent Quality control measures will be taken by strengthening of Quality Control Labs of dairies, Chilling centers and Bulk milk cooler centres and regular monitoring of Quality

- Infrastructure in major Dairies like Chennai, Vellore, Salem, Thanjavur, Trichy and Virudhunagar will be created by investing around about Rs.400 crore
- 6. The sale of milk and milk products will be increased by adopting aggressive marketing strategies like increasing number of outlets, extending the market coverage to all over the country, exporting of Aavin milk products to various countries and also by doing adequate advertisement and publicity
- 7. Continuous efforts will be taken to double the farmer's income

15. CONCLUSION

Over the years, the role of TCMPF Ltd., in the up-lifting of rural economy while meeting the consumer demand through Aavin products has always been one that merits appreciation due to its untiring efforts in production of quality milk, adoption of cost effective energy efficient technologies, diversification of products, establishment of marketing outlets and Hi-tech parlours, etc with the clear guidance and support by the Government have enabled the dairy sector to confront the challenges and rise to greater levels, as witnessed by the increase in milk procurement from 20.67 LLPD in 2010 – 11 to 29.46 LLPD in 2017 -18.

balanced Α committed and focus on both producer welfare and consumer satisfaction transformed Aavin from a household has one of international repute, name to especially after the launching of Ultra High Temperature (UHT) treated milk in Singapore recently.

And now, it may be rightly said that despite the competition of private players in the market, Aavin will continue to

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successfully fulfill the needs of the consumer, while striving ahead to achieve the objective of doubling the farmers income by 2022.

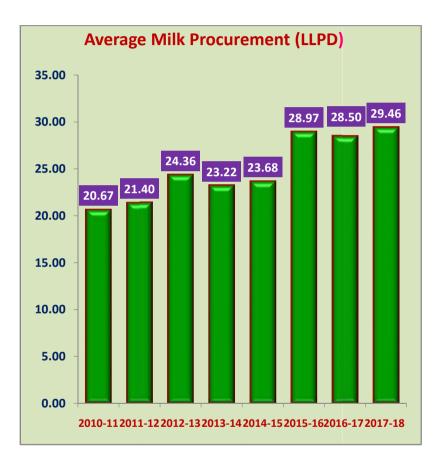
> K.T.Rajenthrabhalaji Minister for Milk and Dairy Development

Milk Cooperative Sector at a glance

S.No	Items	
1	Total number of Milk Producers Coop. Societies	12,585
2	Milk Producers Co-operative Societies formed during	446
	2017-18 (in Nos.)	
3	Total Number of members in Milk Producers	20.26
	Cooperative Societies (In Lakh)	
4	Number of milk pouring members (In lakh)	4.60
5	Milk Production by societies (In LLPD)	31 to 36
6	Number of District Cooperative Milk Producers Union	17
7	State Level Federation	1
8	Milk Procurement by Unions (In LLPD)	26 to 31
9	Milk marketing in Chennai City (In LLPD)	11.91
10	Milk marketing in District Unions (In LLPD)	10.00
11	Number of Union Dairies	18
12	Number of Federation Dairies	5
13	Handling Capacity of Union Dairies (In LLPD)	29.57
14	Handling Capacity of Federation Dairies (In LLPD)	14.15
15	Number of Chilling Centres	34
16	Handling Capacity of Chilling Centres (In LLPD)	14.25
17	Number of Bulk Milk Cooler Units	341
18	Chilling Capacity of Bulk Milk Cooler units (In LLPD)	15.19
19	Number of rural milk collection routes	798
20	Number of milk distribution routes at the level of	304
	District Unions	
21	Number of milk distribution routes in Chennai Metro	149
22	Number of Powder plants (Erode, Salem, Madurai	5
	Dharmapuri District Unions and Federation)	
23	Capacity of powder plants for drying Milk (MT/day)	90
24	Butter storage capacity (in MT)	4,304
25	SMP storage capacity (in MT)	6,950

Annexure – I

Milk Procurement by DCMPUs



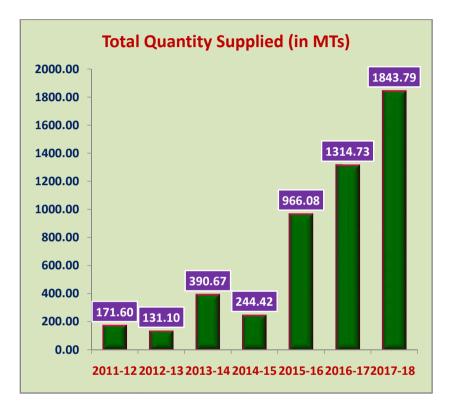
Annexure - II

Cattle Feed Supply



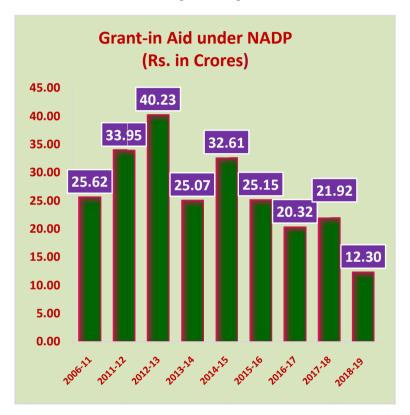
Annexure - III

Mineral Mixture Supply



Annexure - IV

National Agriculture Development Programme (NADP)



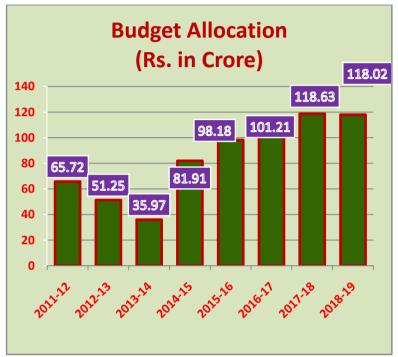
Annexure – V





Annexure - VI

Budget Allocation For The Year 2011-12 To 2018-2019



Union-wise milk handling capacity (Litre per Day)

	Name of the	Processing capacity of Dairies		Chilling capacity				
6.No	Union	No Capacit	Grandita	Chilling Centre		ВМС		
			Capacity	No	Capacity	No	Capacity	Total
1	Salem	1	5,00,000	3	2,30,000	50	1,99,000	4,29,000
2	Coimbatore	1	5,00,000	4	1,30,000	24	1,14,000	2,44,000
3	Madurai	1	5,00,000	1	1,00,000	14	61,000	1,61,000
4	Erode	1	3,00,000	3	1,35,000	66	3,24,000	4,59,000
5	Trichy							
	a) Tiruchirapalli	1	1,50,000	3	2,00,000	42	2,00,000	4,00,000
	b) Padalur	1	1,00,000	0	0	0	0	0
6	Dharmapuri	1	2,00,000	2	60,000	21	93,000	1,53,000
7	Vellore	1	1,50,000	4	2,30,000	38	1,76,000	4,06,000
8	Villupuram	1	1,00,000	2	1,10,000	19	78,000	1,88,000
9	Thiruneveli	1	1,00,000	4	90,000	12	58,000	1,48,000
10	Kancheepuram- Thiruvallur	1	1,00,000	2	60,000	11	45,000	1,05,000
11	Nilgiris	1	50,000	1	10,000	6	11,000	21,000
12	Sivagangai	1	50,000	1	10,000	12	52,000	62,000
13	Virudhunagar	1	50,000	1	10,000	1	5000	15,000
14	Pudukkottai	1	35,000	0	0	0	0	0
15	Dindigul	1	30,000	2	40,000	12	50,000	90,000
16	Thanjavur	1	26,000	1	10,000	13	51,000	61,000
17	Kanniyakumari	1	30,000	0	0	0	0	0
	Total	18	29,71,000	34	14,25,000	341	15,19,000	29,44,000
	Metro Dairies							
а	Central Dairy	1	3,50,000					
b	Ambattur	1	4,00,000					
С	Sholinganallur	1	4,00,000					
d	Product Dairy	1	65,000					
e	DCPP Thiruvannamalai	1	2,00,000					
	Total	5	14,15,000					
	Grand Total	23	43,86,000					



Milk Collection at MPCS



Fodder Farm - Pudukudi



Milk Collection at BMC



Milk Collection at Chilling Centre



Continuous Butter Making Machine



Butter Packing Facilities at Erode





Madurai - Farmers' Training Centre Inaugurated by Honourable Chief Minister





Madurai Skim Milk Powder Storage Facilities Inaugurated by Honourable Chief Minister





Launch of UHT Milk Sale in Singapore





Madurai Deputy Registrar (Dairying) Building Inaugurated by Honourable Chief Minister on 13.03.2018





Hi - Tech Parlours Inaugurated by Honourable Chief Minister on 13.03.2018



Virudhunagar Hi - Tech Parlour Inaugurated by Honourable Minister for Dairy Development on 23.07.2017



Modern Dairy at Sholinganallur



Automated Dairy at Coimbatore