DAIRY DEVELOPMENT DEPARTMENT ANNUAL STATE PLAN 2025-26

PART A :
STRENGTHENING QUALITY CONTROL LABS
(ONGOING SCHEME COMPONENTS)
2404-00-109-95-34-OC-03-OTHER ITEMS

DETAILED PROJECT REPORT

PLAN OUTLAY: RS. 418.00 LAKHS

PART A- DPR 2025-26 : STRENGTHENING QUALITY CONTROL LABS-ONGOING -SANCTION BY HOD

EXECUTIVE SUMMARY

STRENGTHENING QUALITY CONTROL LABORATORY (SQCL)

PART A

HEAD OF ACCOUNT:

2404-00-109-95-00-34-OC-03-Other items

PLAN OUTLAY: Rs. 418.00 Lakh

During 2025-26, an amount of **Rs. 500.00 Lakh** has been earmarked to the Department under the State Plan for implementation of the scheme Strengthening Quality Control Labs (Revenue Head) with HOA 2404-00-109-95**.** The Breakups of the financial outlay under Strengthening Quality Control Laboratory programme as follows

SQC LABS –OC (2404-00-109-95-00-34-OC-03-Other items)	**Rs 424.09 Lakh**
SQC LABS –WAGES – CONSOLIDATED PAY (2404-00-109-95-00-02-04-P-V)	**Rs. 67.40 Lakh**
SQC LABS –WAGES – DAILY WAGES (2404-00-109-95-00-02-04-P-V)	**Rs. 8.51 Lakh**
GRAND TOTAL – SQC LABS –REVENUE HEAD (2404-00-109-95)	**Rs. 500.00 Lakh**

DAIRY DEVELOPMENT DEPARTMENT : ANNUAL STATE PLAN 2025-26
PART A- DPR 2025-26 : STRENGTHENING QUALITY CONTROL LABS-ONGOING -SANCTION BY HOD

The various components detailed in the plan project for the financial year 2025-26 are aimed at improving the physico-chemical and microbiological quality of milk and to ensure cold chain mechanism to envisage the concept of from farm to fork of Total Quality Management system. The scheme components are aimed at improving the quality assurance mechanism of the Department at various strata. The testing labs like labs at DCS, QCO level labs, Mobile QC units, Regional Dairy Labs, Check Post Labs, State Dairy Lab will be strengthened and will ensure maximum efficiency and effectiveness. Safe and Fresh milk to consumers will be ensured. The projects also focussed to assure the safety of consumers by assuring the quality of milk and milk products marketed in our state too..

The total budget share for the scheme Strengthening Quality Control Laboratory Programme for the year 2025-26 is **Rs. 500.00 Lakh**. Out of 17 scheme components under this HOA, 16 scheme components are ongoing in nature with a total plan outlay of Rs 418.00 lakh. Hence as per the existing norms, the Head of Department holds the discretion to accord administrative sanction to those schemes with an outlay of less than Rs 5.00 crore, which are on-going in nature with no change in component outlay and subsidy amount.

1 scheme component with a total outlay of Rs 82.00 lakh is a modified scheme component and needs the approval of Departmental Working Group.

DAIRY DEVELOPMENT DEPARTMENT : ANNUAL STATE PLAN 2025-26
PART A- DPR 2025-26 : STRENGTHENING QUALITY CONTROL LABS-ONGOING -SANCTION BY HOD

STRENGTHENING QC LABS 2025-26 - REVENUE HEAD (ONGOING SCHEME COMPONENTS - SANCTION BY HOD 2404-00-109-95		
SCHEME WITH HOA	**NO. OF SCHEME COMPONENTS**	**AMOUNT (Rs in Lakh)**
SQC LABS – OC (2404-00-109-95-00-34-OC-03-Other items)	14	342.09
SQC LABS –WAGES – CONSOLIDATED PAY (2404-00-109-95-00-02-04-P-V)	1	67.40
SQC LABS –WAGES – DAILY WAGES (2404-00-109-95-00-02-04-P-V)	1	8.51
GRAND TOTAL - SQC LABS - REVENUE (ONGOING SCHEME COMPONETS) (2404-00-109-95)	16	418.00

STRENGTHENING QC LABS 2025-26 - REVENUE HEAD (MODIFIED SCHEME COMPONENTS) 2404-00-109-95-34-OC-03 Other Items		
SCHEME WITH HOA	**NO. OF SCHEME COMPONENTS**	**AMOUNT (Rs in Lakh)**
SQC LABS – OC (2404-00-109-95-00-34-OC-03-Other items)	1	82.00

DAIRY DEVELOPMENT DEPARTMENT : ANNUAL STATE PLAN 2025-26
PART A- DPR 2025-26 : STRENGTHENING QUALITY CONTROL LABS-ONGOING -SANCTION BY HOD

STRENGTHENING QC LABS 2025-26 - 2404-00-109-95 ONGOING SCHEME COMPONENTS					
PARTICULARS	2025-26				
	No. of Units	ONE UNIT		TOTAL UNITS	
		Total	Unit Subsidy	Total	Total Subsidy
		Rs	Rs	Rs in Lakh	Rs in Lakh
Special quality control testing drive - Onam Drive	1	700000.000	700000.000	**7.000**	**7.000**
Quality Awareness Programme	300	10000.000	7500.000	**30.000**	**22.500**
Consumer Inferface Programme	14	10000.000	10000.000	**1.400**	**1.400**
Special quality drive for detection of antibiotic in milk and aflotixin in milk and feed samples	14	285714	285714	**40.000**	**40.000**
Quality Control / Food Safety Training for Department Officers / DCS personnels	1	700000	700000	**7.000**	**7.000**
Clean Milk Production Kit to selected districts	500	5100	3500	**25.500**	**17.500**
Assistance for improving farm level hygiene at farm level	170	150000.000	75000.000	**255.000**	**127.500**
Need Based Assistance to DCS for improving the quality control activities	50	50000	37500	**25.000**	**18.750**
Setting up of advanced milk testing facility and completion of missing link for DCS	28	100000	75000	**28.000**	**21.000**
Assistance for 3 Regional Labs (Kottayam, Alathur and Kasargod)	3	Lumpsum	Lumpsum	**21.000**	**21.000**
Assistance for existing Check Post Labs (Meenakshipuram /Aryancavu / Parassala check Post)	3	Lumpsum	Lumpsum	**24.000**	**24.000**
Assistance for District QC Labs	14	Lumpsum	Lumpsum	**28.000**	**28.000**
Assistance for Mobile QC labs	14	Lumpsum	Lumpsum	**4.000**	**4.000**
Implementation, Documentation and Monitoring	1	Lumpsum	Lumpsum	**2.440**	**2.440**
SUB TOTAL - 2404-00-109-95-34-03 OTHER ITEMS				**498.340**	**342.090**
2404-00-109-95-02-04 Consolidated Pay				**67.400**	**67.400**
2404-00-109-95-02-05 Daily Wages				**8.510**	**8.510**
GRAND TOTAL - 2404-00-109-95				**574.250**	**418.000**

Savings in any scheme component shall be utilized for meeting the expenditure pertaining to any other scheme component with the same Head of Account

DIRECTOR

INDEX

PARA NO.	PARTICULARS	PAGE NO
	Executive Summary	**3**
1.00	**General Introduction**	9
1.02	**Importance of QA activities**	19
2.00	**General Objectives**	20
3.00	**Quality Control Programmes & State Budget Provision 2025-26**	22
4.00	**Financial Outlay**	23
5.00	**Scheme Proper**	24
5.01	*Special quality control testing drive - Onam Drive*	25
5.02	*Quality Awareness Programme*	25
5.03	*Consumer Inferface Programme*	27
5.04	*Special quality drive for detection of antibiotic in milk and aflotixin in milk and feed samples*	28
5.05	*Quality Control / Food Safety Training for Department Officers / DCS personnels*	36
5.06	*Clean Milk Production Kit*	38
5.07	*Assistance for improving farm level hygiene at farm level*	43

5.08	*Need Based Assistance to DCS for improving the quality control activities*	47
5.09	*Setting up of advanced milk testing facility and completion of missing link for DCS*	49
5.10	*Assistance for 3 Regional Labs (Kottayam, Alathur and Kasargod)*	51
5.11	*Assistance for existing Check Post Labs (Meenakshipuram /Aryancavu / Parassala check Post)*	55
5.12	*Assistance for District QC Labs*	58
5.13	*Assistance for Mobile QC labs*	60
5.14	*Implementation, Documentation and Monitoring*	61
5.15	*2404-00-109-95-02-04 Consolidated Pay*	61
5.16	*2404-00-109-95-02-05 Daily Wages*	61
6.00	**Implementation, Documentation and Monitoring**	62
7.00	**Calender of activities**	62
8.00	**Conclusion**	63
	Annexure	64

01. GENERAL INTRODUCTION

The livestock sector plays a pivotal role in the rural economy, contributing significantly to the livelihoods and well-being of farmers. Over the period the contribution of livestock sector in agriculture sector has been showing steady improvement that signifies its growing importance in the Indian economy. It serves as a source of food, income, and employment while also fostering rural development. Animal products such as milk, eggs and meat not only provide essential nutrition but also generate daily cash count for millions. Livestock rearing is one of the most critical economic activities in rural India significantly contributing to the national economy. This sector continues to play transformative role evident by it's impressive Compound Annual Growth Rate (CAGR) of 15 percentage from 2014-15 to 2022-23. Its contribution to the Indian agriculture and rural economy is steadily rising accounting for little more than 30 percentage of the GVA of agriculture and allied sector and 5.5 percentage of the total GVA of the country in 2022-23 and thereby significantly boosting the per capita availability of milk, eggs and meat. India's livestock sector is one of the largest in the world. As per the 20th Livestock Census (2019), the total livestock population in the country is 5368 lakh, registering an increase of 4.8 per cent over the Livestock Census of 2012.

Agriculture and allied sectors play a critical role in ensuring food security, reducing poverty, generating livelihood and providing impetus to the growth of industries and services. According to the Economic Survey of the Government of India for 2023-24, the agricultural sector provides livelihood support to about 42.3 per cent of the population and shares about 18.2 per cent of India's GDP at current prices.

Agriculture with allied sectors, is the largest source of livelihood in India. 70% of rural households still depend primarily on agriculture for their livelihood, with 82 % of farmers being small and marginal. Livestock contribute to food security on several levels. For households keeping livestock ensures healthy and nutrition diets and contributes income. In communities the sector creates employment opportunities. Nationally and globally livestock generate value and help provide population with solution and reliable supplies of nutritious affordable food

Dairy Development in India has played a key role in upliftment of Indian Economy especially the rural economy of the country. Dairying has been a significant part of rural Indian household since ages, generating a steady source of income and providing nourishment to the family. The Dairy Co-operative movement of India, spearheading our country to become global leader in milk production, is a role model worldwide. The growth and development of dairy industry in the country can be further escalated with up-scaling of dairy education and innovative research approaches.

Dairying holds significant importance in India for various reasons

As a tool for Livelihood:- It serves as a primary source of livelihood for millions of rural households, especially small and marginal farmers. Dairy farming provides them with a steady source of income, employment, and sustenance.

Adding to the nation's Nutritional security:- Dairy products are essential source of nutrition, especially fat, protein, lactose, vitamins and minerals. Milk is a staple food for a large segment of the Indian population, particularly for children and pregnant women, contributing to their overall health and well-being.

As a source of Income generation: - Dairy farming offers opportunities for income generation throughout the year. Apart from milk production, there are avenues for value addition such as processing milk into various dairy products like ghee, butter, cheese and yogurt which can fetch higher prices in the market.

Dairying for Rural development: - The dairy sector plays a crucial role in rural development by providing employment opportunities, infrastructure development, and stimulating economic activities in rural areas. It helps in reducing rural-urban migration by creating sustainable livelihood options in rural regions.

Significant contribution to GDP:- The dairy industry contributes significantly to the country's Gross Domestic Product (GDP) and agricultural GDP. India is one of the largest milk-producing countries globally and the dairy sector's growth directly impacts the nation's economy.

Dairying for Empowerment of women: - Dairy farming often empowers women in rural areas as they actively participate in activities like milking, animal care and sometimes even in managing the dairy business. This contributes to their economic independence and social status within their communities.

Utilization of resources: - Dairy farming efficiently utilizes agricultural by-products and marginal lands, thus improving the overall productivity of the agricultural sector. It also helps in the recycling of crop residues and agricultural waste as cattle feed, thereby promoting sustainable agriculture practices.

A potential source for foreign exchange earnings:- India exports dairy products like milk powder, butter and ghee to various countries, earning foreign exchange. The dairy industry's export potential continues to grow, contributing to the country's foreign trade balance.

Thus in a holistic way, dairying plays a multifaceted role in India's socio-economic fabric, contributing to food security, poverty alleviation, rural development, and economic growth. The Dairy Co-operative movement of India, spearheading our country to become global leader in milk production is a role model worldwide. The growth and development of dairy industry in the country can be further escalated with up-scaling of dairy education and innovative research approaches.

01.01 Dairy Sector – National Scenario

Unlike the developed countries, small and marginal farmers have been the driving force of the dairy sector in India. In an era of declining farm income and drop in employment opportunities, dairying and animal husbandry has emerged as an important subsector of India's Agriculture. Further the complementarity of co-operatives and private organizations in the industry has aided in bringing sophistication and efficiency in the entire value chain. Owing to the increasing demand for dairy products driven by the growing population, higher purchasing power of the customers, increased focus on nutrition and growing aversion for unbranded and loose products, milk production in India is set to reach approximately 628 MMT in the next 25 years (ie. till 2047). The dairy sector plays a vital role in achieving Sustainable Development Goals – especially SDG-1, SDG-3, SDG-5, SDG-8 and SDG-10 thereby plays a significant role in transforming lives of agrarian sector.

India has been the leading producer and consumer of dairy products worldwide since 1998 with a sustained growth in the availability of milk and milk products. Dairy activities form an essential part of the rural Indian economy, serving as an important source of employment and income. India also has the largest bovine population in the world. However, the milk production per animal is significantly low as compared to the other major dairy producers. Moreover, nearly all the dairy produce in India is consumed domestically, with the majority of it being sold as fluid milk. Because of this, the Indian dairy industry holds tremendous potential for value-addition and overall development.

The total milk production in the country is 239.30 million tonnes during 2023-24. India ranks first in the world in terms of total milk production. The milk production has increased by 3.78 % over the previous year. Presently the per capita availability of milk is 471 grams per day. The average yield for exotic/cross bred is 8.43 kg/day/animal and for indigenous/non-descript it is 3.54/day/animal. The milk production from exotic/cross bred cattle has increased by 5.72 % and indigenous/non-descript cattle has increased by 6.96% in 2023-24 compared to previous year.

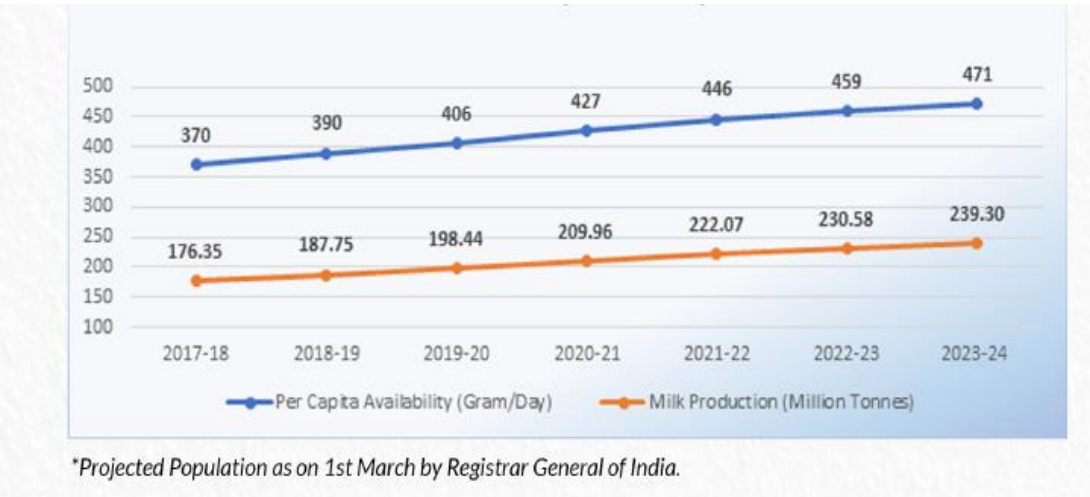
The share of agriculture and allied sectors in the country's total GVA has been declining in the last decade. Sector's share in the Gross Value

Added (GVA) of the country at constant prices has declined from 17.8 per cent in 2013-14 to 15.1 per cent (P) in 2022-23. The sectors share in total GSVA (at constant 2011-12 prices) of the State declined to 8.52 per cent in 2022-23 (QE), compared to 8.97 (P) per cent in 2021-22

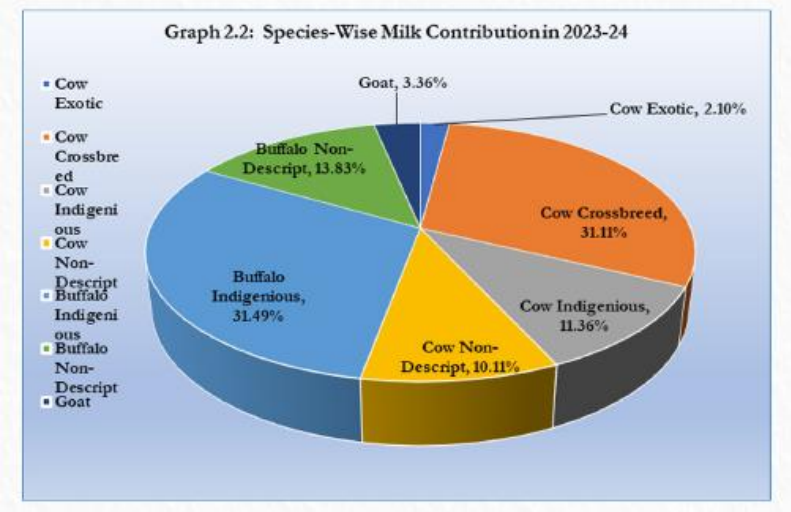
As per the 20th Livestock Census (2019), the total livestock population in the country is 536.76 million, showing an increase of 4.8 per cent over the Livestock Census of 2012. The 20th Livestock Census (2019) reports the State's livestock population as 29.09 lakh (5.42 per cent). As per the estimates of National Accounts Statistics (NAS) 2023, the contribution of livestock in total agriculture and allied sector GVA (at constant prices) increased from 29.8 per cent in 2020-21 to 30.5 per cent (2021-22). (Economic Review 2023)

India ranked 1st in milk production, contributing 24 per cent of global milk production. At the national-level, milk production has increased from 22.21 crore tonnes in 2021-22 to 23.06 crore tonnes in 2022-23, registering a growth of 3.83 per cent, sustaining the trend over the past three decades. The highest five milk producing states in India in 2022-23 were Uttar Pradesh (15.72 percent) Rajasthan (14.44 Percent) Madhya Pradesh (8.73 per cent), Gujarat (7.49 per cent), and Andhra Pradesh (6.70 per cent), which together contributed 53.08 per cent of total milk production in the country. (The average yield per animal per day for exotic crossbred is 8.55 Kg per day and for indigenous/non-descript is 3.44 Kg per day (Basic Animal Husbandry Statistics, 2023.). The per capita availability of milk has been increasing in India over the years and is estimated at 459 grams/day in 2022-23 (Basic AH Statistics 2023 by DAHD, GOI). The highest per capita availability is in Punjab (1283 grams per day) followed by Rajasthan (1138 grams per day). The species-wise milk production in the country shows that nearly 31.94 per cent of total milk production is contributed by indigenous buffaloes, followed by cross-bred cattle 29.81 per cent. The indigenous cattle contribute 10.73 per cent of the total milk production in the country. Goat milk contributes 3.30 per cent of the total milk production (Basic Basic Animal Husbandry Statistics, 2023). Kerala ranks 15th among the milk-producing states. Kerala's per capita availability is 198 grams per day (Basic Animal Husbandry Statistics, 2023).

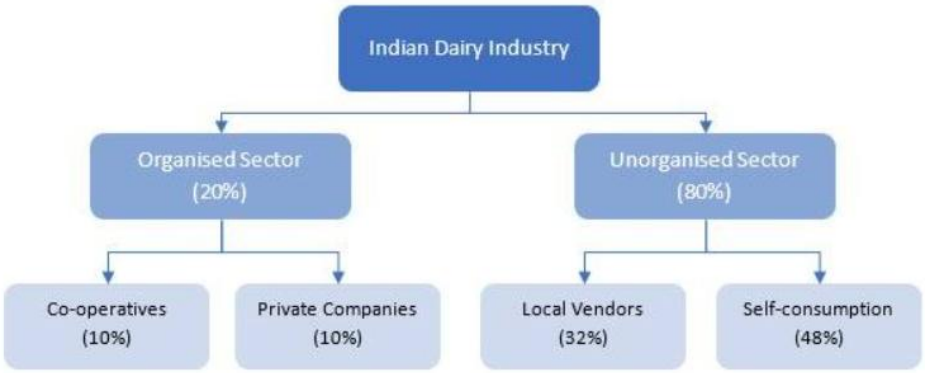
India - Milk Production (Million Tonne) & Per capita availability (gms/day)



India : Species wise milk production



The Indian dairy industry is divided into the organized and unorganized segments. The unorganized segment consists of milk handled by traditional milkmen/vendors, self-consumption at home, the organized segment consists of cooperatives and private dairies. As per the Annual Report for FY19 of Dept. of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture & Farmers Welfare, GOI, co-operatives & private dairies still procure only about 20% of the milk produced in the country, while 32% is sold in the unorganized market and about 48% is consumed locally. About 40% of the milk sold is handled by the organized sector and the remaining 60% by the un-organized sector. However, in most of the developed nations, 90% of the surplus milk is processed through organized sector. With the increase in population, rise in per capita income, changing lifestyle, affordable aspirational food habits, export opportunities etc., the demand for milk is expected to rise.



During the last five to ten years, India has seen dramatic shift towards consumption of value-added products such as cheese, yoghurt, UHT (ultra-heat treatment) milk, flavored milk and whey. To tap the advantages of the changing consumer food preferences most organized players are expanding product portfolios in the value-added segment. This segment offers high growth potential and better margins versus the liquid milk and Skimmed Milk Powder (SMP) segment. The value-added products overall contribute to ~35-40% of the total dairy market in India and commodity products together contribute to almost ~65% of market share. Furthermore, within the value-added segment, largest product category is ghee, having a market share of about 15-18% in the overall dairy market. While loose packets of curd is available locally, a key characteristic of emerging value-added products like UHT milk, flavoured milk, low-fat curd/yogurt, cheese and whey is that 100% of these products are sold through organized market. The value-added products market is under-penetrated, thus having tremendous scope for the growth and is expected to grow at much faster rate as compared with the commodity market.

The dairy industry in India is the largest globally, accounting for 24% of global milk production. The industry contributes 5% to the national economy and directly supports more than 8 crore farmers. India’s dairy industry has grown significantly over the past 10 years, supported by various initiatives taken by the government. The nation's milk production increased at a CAGR of 6.2% from 146.31 million tonnes (MT) in 2014-15 to 209.96 MT in 2020-21.

The major production area of dairy products in India is Uttar Pradesh, Maharashtra, Himachal Pradesh, Madhya Pradesh, Punjab, Rajasthan and Tamil Nadu. Competition in the Indian dairy industry has always been robust. Amul, Mother Dairy, Orissa State Cooperative Milk Producers Federation, Dudhsagar Dairy, Aavin, and Kwality Limited are some of the major players in the dairy industry in India.

Rural women play a significant role in animal rearing and are involved in operations such as, feeding, breeding, management, and health care. The livestock sector has emerged as one which generates employment and

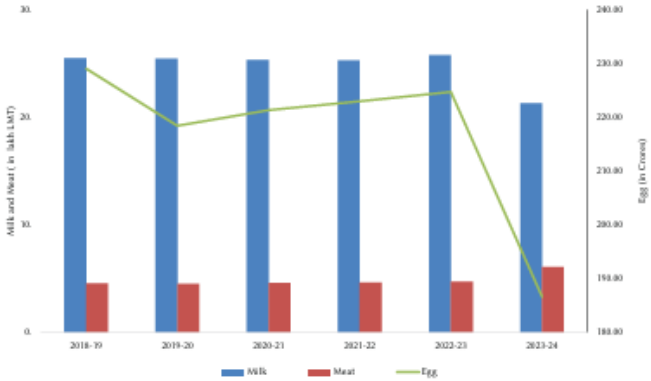
income security to women through micro enterprises. Women constitute 71 per cent of the labour force in livestock farming. In dairying sector 75 million women are engaged as against 15 million men, while in the case of small ruminants, the sharing of work with men is almost equal. The need for technology upgradation and skill enhancement through capacity building programmes are felt across the sector.

a. Dairy Development in Kerala

As per the estimates of National Accounts Statistics (NAS) 2024, the contribution of livestock in total agriculture and allied sector's Gross Value Added (GVA) by economic activity at current (2011-12) prices increased from 30.21 per cent in 2021-22 to 30.23 per cent in 2022-23. The contribution of the livestock sector was 5.5 per cent of total Gross Value Added (GVA) at basic prices in 2022-23. Livestock's contribution has decreased from 5.72 per cent to 5.5 per cent.

In Kerala, the livestock sector is one of the fastest growing sectors of the rural economy. The contribution of livestock sector in total agriculture and allied sector Gross State Value Added (GSVA) at current prices 2011-12 was 27.97 per cent (Quick estimates . The share in the total Gross State Value Added (GSVA) at current prices of the State was 2.76 per cent during 2022-23(P) and 2.69 per cent during 2023-24(Q). In real terms, GSVA in the Livestock sector at current prices (2011-12) was Rs 25,26,354 Lakh in 2022-23(P) and it increased to Rs 27,62,961 Lakh in 2023-24(Q)

Kerala:- Production of Milk, Meat and Egg during the period from 2017-18 to 2023-24



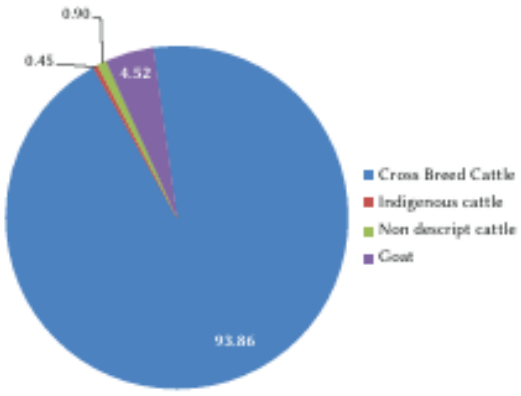
Source : Economic Review 2024

Kerala is ranked 15th among the milk producing States as per the BAHS 2024. Kerala's per capita availability is 197 grams per day (Basic Animal Husbandry Statistics, 2023). The total requirement of milk in Kerala in 2023-24 was 31.75 lakh metric tonnes, whereas the annual production was only 25.32 lakh metric tonnes. The state is 20 per cent deficient as far as self-sufficiency in the sector is concerned. Thus, there is a gap of around

6.43 LMT per annum (Economic Review 2024). Out of 25.799 MT of milk produced in the State, a major share of 23.9015 MT was produced by cross bred cattle (94 per cent). Indigenous cattle produced only 0.3993 MT of milk (0.5 per cent). The contribution of non-descript cattle was 1.92 MT (0.9 per cent). The milk production from goats was 0.96 MT (4.5 per cent). Indigenous and non-descript buffaloes contributed the rest (Animal Husbandry Department, GoK). Even though the herd sizes are low compared to major milk-producing states, cattle productivity in Kerala is higher than the national average. The average yield per animal per day for Exotic/ Crossbred cows in India in 2023-24 was 8.43 Kg/ day/animal. For indigenous cattle and non-descript cattle, it was 3.54 kg/day/animal. The yield rate from Exotic and crossbred in Kerala was 10.79 kg/day/animal, and 3.04 kg/day/animal from Indigenous and Non-Descript category. This is the third highest among the Indian states after Punjab 13.49 kg/day/animal and Chandigarh 12.22 kg/day/animal (Basic Animal Husbandry Statistics 2023). This advantage for Kerala was due to high per cent of exotic and crossbred animals in the population compared to other states.

Dairy Co-operatives have procured 6.78 lakh Metric Tonnes of Milk (18.6 Lakh liters per day) in 2023-24. This hike is a positive indicator as far as the Animal Husbandry and Dairy Development activities of the state is concerned and is a narration of the various development activities undertaken by the Government to nurture the sector.

Details of species-wise milk production in Kerala in 2023-24 is provided as below



Source : Economic Review 2023

Some important data published by DAHD, GOI pertaining to the year 2024 is as below

DAIRY DEVELOPMENT DEPARTMENT : ANNUAL STATE PLAN 2025-26
PART A- DPR 2025-26 : STRENGTHENING QUALITY CONTROL LABS-ONGOING -SANCTION BY HOD

NATIONAL & STATE WIDE - READY RECKNOR

MILK PRODUCTION - LAKH METRIC TONNE

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	25.2	25.759	25.482	25.443	25.338	25.324	25.797	25.799
ALL INDIA	1654.040	1763.470	1877.490	1984.390	2099.590	2210.630	2305.770	2393.000

MILK PRODUCTION - EXOTIC / CROSS BRED COWS - LAKH METRIC TONNE

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	23.58	24.16	23.9	23.7	23.7	23.66	23.93	23.9015
ALL INDIA	437.780	471.510	512.590	568.750	662.890	703.740	730.180	771.976

MILK PRODUCTION - INDIGENEOUS / NON DESCRIPT COWS - LAKH METRIC TONNE

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	0.235	0.265	0.239	0.325	0.319	0.293	0.378	0.3993
ALL INDIA	343.200	364.820	385.740	397.710	420.170	445.940	466.590	499.070

MILK PRODUCTION - BUFFALOES - LAKH METRIC TONNE

	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	0.122	0.126	0.121	0.119	0.124	0.132	0.1443	0.1476
ALL INDIA	812.660	862.610	918.170	959.430	953.910	996.260	1032.990	1043.880

MILK PRODUCTION -COWS - LAKH METRIC TONNE

	EXOTIC 2022-23	EXOTIC 2023-24	CB 2022-23	CB 2023-24	INDIG. 2022-23	INDIG. 2023-24	NON DESCRIPT 2022-23	NON DESCRIPT 2023-24
KERALA	0	0	23.9328	23.9015	0.0661	0.0706	0.3117	0.3287
ALL INDIA	42.818	48.790	687.360	723.180	247.390	264.170	219.200	234.490

MILK PRODUCTION -BUFFALOES - LAKH METRIC TONNE

	IND BUFF 2021-22	IND BUFF 2022-23	IND BUFF 2023-24	NON DESCRIPT BUFFALOE 2021-22	NON DESCRIPT BUFFALOE 2022-23	NON DESCRIPT BUFFALOE 2023-24	GOAT 2021-22	GOAT 2022-23	GOAT 2023-24
KERALA	0.0939	0.0565	0.0523	0.0383	0.0877	0.0953	1.2327	1.3427	1.3515
ALL INDIA	698.12	736.35	732.06	298.13	296.64	311.81	66.02	75.99	78.05

MILK PRODUCTION FROM BUFFALOES - IN LAKH METRIC TONNE

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA		0.1221	0.1267	0.1213	0.1195	0.1242	0.1321	0.1443	0.1476
ALL INDIA		812.66	862.62	918.17	959.43	953.91	996.27	1032.99	1043.88

NO. OF ANIMALS IN MILK OF EXOTIC /CROSS BRED COWS - IN LAKHS

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	6.686	6.305	6.494	6.443	6.337	6.339	6.242	6.0878	6.055
ALL INDIA	154.11	159.62	167.61	176.75	190.03	216.34	226.27	234.07	236.76

MILK PRODUCTION FROM 2016-17 TO 2023-24
NATIONAL & STATE WIDE - READY RECKNOR

NO. OF ANIMALS IN MILK OF INDIGENEOUS/NON DESCRIPT CATTLE - IN LAKHS									
	INDI. 2022-23	INDI. 2023-24	NON DESCRIPT 2022-23	NON DESCRIPT 2023-24					
KERALA	0.0829	0.0951	0.2394	0.2636					
ALL INDIA	162.35	171.66	209.19	213.19					

NO. OF INDIGENEOUS / NON DESCRIPT COWS - IN LAKHS									
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA		0.2126	0.2425	0.2205	0.2767	0.2662	0.2435	0.3223	0.3587
ALL INDIA		331.65	341.43	351.66	353.91	359.51	363.36	371.54	385.62

NO. OF BUFFALOES - IN LAKHS									
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	0.071	0.066	0.069	0.063	0.062	0.065	0.07	0.0748	
ALL INDIA	411.9	425.69	431.88	447.67	457.18	442.63	458.1	466.86	

PRODUCTIVITY OF EXOTIC / CROSS BRED COWS - KG PER DAY									
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	10.18	10.25	10.19	10.17	10.25	10.24	10.39	10.77	10.79
ALL INDIA	7.45	7.51	7.71	7.95	8.2	8.39	8.52	8.55	8.43

PRODUCTIVITY OF BUFFALOES - KG PER DAY									
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	5.04	5.11	4.98	5.04	5.27	5.2	5.16	5.28	4.97
ALL INDIA	5.09	5.23	5.47	5.62	5.75	5.9	5.96	6.06	5.92

PRODUCTIVITY OF INDIGENEOUS / NON DECRIPT COWS - KG PER DAY									
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24
KERALA	2.76	3.02	2.99	2.97	3.21	3.29	3.29	3.21	3.04
ALL INDIA	2.74	2.84	2.93	3.01	3.08	3.2	3.36	3.44	3.54

AVERAGE YIELD PER COW IN MILK ANIMAL - KG / DAY								
	EXOTIC 2022-23	EXOTIC 2023-24	CB 2022-23	CB 2023-24	INDIG. 2022-23	INDIG. 2023-24	NON DESCRIPT 2022-23	NON DESCRIPT 2023-24
ALL KERALA	0	0	10.77	10.79	2.19	2.03	3.57	3.41
ALL INDIA	11.42	9.82	8.41	8.35	4.17	4.2	2.87	3.00

AVERAGE YIELD PER BUFFALOE IN MILK ANIMAL - KG / DAY									
	IND BUFF 2021-22	IND BUFF 2022-23	IND BUFF 2023-24	NON DESCRIPT BUFFALOE 2021-22	NON DESCRIPT BUFFALOE 2022-23	NON DESCRIPT BUFFALOE 2023-24	GOAT 2021-22	GOAT 2022-23	GOAT 2023-24
ALL KERALA	5.38	5.26	5.05	4.7	5.3	4.93	0.71	0.74	0.74
ALL INDIA	6.62	6.76	6.63	4.82	4.82	4..73	0.46	0.5	0.48

NATIONAL & STATE WIDE - READY RECKNOR

NO. OF COWS IN MILK - IN LAKHS										
	EXOTIC 2022-23	EXOTIC 2023-24	CB 2022-23	CB 2023-24	INDIG 2022-23	INDIG 2023-24	NON DESCRIPT 2022-23	NON DESCRIPT 2023-24	2022-23	2023-24
ALL KERALA	0	0	6.09	6.055	0.0829	0.0951	0.2394	0.2636	6.4123	6.4137
ALL INDIA	10.26	13.57	223.8	236.76	162.36	171.66	209.19	213.96	605.61	635.95

NO. OF BUFFALOES IN MILK - IN LAKHS										
	INDI. BUFFALO 2022-23	INDI. BUFFALO 2023-24	NON DESCRIPT BUFFALO 2022-23	NON DESCRIPT BUFFALO 2023-24					2022-23	2023-24
ALL KERALA	0.0283	0.0283	0.0454	0.0528					0.0737	0.0811
ALL INDIA	298.27	301.58	168.58	180.07					466.85	481.65

PER CAPITA AVAILABILITY OF MILK - GRAM PER DAY										
	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	
ALL KERALA	211	200	203	200	198	197	196	198	197	
ALL INDIA	333	351	370	390	407	427	446	459	471	

01.02 IMPORTANCE OF QA ACTIVITIES

Milk being the perfect food which has to be produced and handled under hygienic conditions to ensure the safety of the consumers as well as to prevent spoilage. The food safety and standards regulations 2011 has also laid down several measures to ensure the safety of the milk produced in the farms. The scheme envisages assisting the dairy farmers of the state to purchase hygiene kits and renovate their cattle farms especially the floor which would enable to ensure that the microbial load of the milk is minimized and would prevent losses to the farmers through spoilage of milk. Department is also focusing various steps to keep the milk as fresh as possible, when it reaches dairy plants in the organised sector and thus to the consumer. Department is taking steps to assure quality of milk through BMC units installed across the state.

Besides being a health hazard, contamination of milk can lead to huge economic losses. Contamination occurs at different levels: at farm level, during collection and storage, and at processing centres. Milk contains many essential nutrients, such as carbohydrates, proteins, lipids, minerals and vitamins and therefore acts as an ideal medium for rapid proliferation of harmful micro-organisms. Milk needs to be protected from all possible sources of microbial contamination and various types of disease organisms.

Milk testing and quality control is an essential component of any milk processing industry irrespective of its handling volume. Milk being made up

of 87% water and is prone to adulteration by unscrupulous middlemen and unfaithful producers for getting higher value. Moreover, its high nutritive value makes it an ideal medium for the rapid multiplication of bacteria, particularly under unhygienic production and storage at ambient temperatures. Besides ensuring the quality of milk being procured at farm level, milk transported, handled, stored, chilled/processed at Dairy Co-operatives, the Dairy Development Department is committed to ensure the availability of fresh, adulterant free and pure milk to the consumers of the state. The Quality control activities of the Department are channelled through the following department level institutions

- NABL Accredited State Dairy Lab, Pattom, Thiruvananthapuram
- Regional Dairy Labs at Kottayam, Alathur and Kasargod.
- District Level Quality Control Units headed by Quality Control Officers
- Check Post Labs at Meenakshipuram (Palakkad), Aryankavu (Kollam) and Parassala (Thiruvananthapuram)
- Mobile Quality Control Labs

02. GENERAL OBJECTIVES OF SCHEME COMPONENTS COVERED UNDER SQC LABS

The proposed scheme is aimed to

- Assurance of quality of milk and milk product especially during festival season to ensure consumer well being
- To undertake special quality control drives throughout the state.
- To undertake a special quality drive for detection of antibiotic in milk and aflatoxin in milk and feed samples
- To improve the quality of milk produced and procured at farm level by implementing clean milk production drive in selected 3 districts
- Assist modernisation and strengthening of existing laboratories in the state and to create new testing labs
- To improve the infrastructure and testing facilities of State Dairy Lab
- Accreditation of existing laboratories under IS 17025 (NABL)

- Improve testing facility at DCS with Bulk Milk Chilling Centres
- Improve the overall hygiene of BMCC
- To assist DCS to improve the quality of water used for cleaning equipment, chiller, etc.
- Providing assistance to DCS with BMCC for ensuring effective effluent treatment mechanism
- Providing hygienic milk production kit to selected districts.
- Provide assistance to DCS for purchasing BMCC cleaning and sanitising agents
- Provide assistance to DCS for completing missing link in the procurement line
- Provide need based assistance to DCS with BMCC for ensuring quality milk procurement, chilling, storing and transportation.
- Assistance for improving farm level hygiene in Commercial Dairy Farms
- Specialised quality control training to department officials and DCS personnel
- Assistance for infrastructure development and expansion activity of Regional Dairy Labs at Alathur, Kottayam and Kasargod.
- Assistance for infrastructure development and expansion activity of NABL accredited State Dairy Lab at Thiruvananthapuram.
- To take all possible measures to ensure that superior quality milk (w.r.t sensory, Physico-chemical and microbiological quality) is produced at farm level, being handled at different levels, chilled / processed at different chilling / processing units and being marketed in the state and hence ensuring fresh and safe milk to consumers.

03. QUALITY ASSURANCE PROGRAMMES AND STATE BUDGET PROVISIONS 2025-26 UNDER REVENUE HEAD

An amount of Rs 500 lakh is earmarked for implementation of various scheme components under the scheme **Strengthening Quality Control Labs** with H. O. A – 2404-00-109-95. In the budget document 2025-26, Rs.500 Lakh is divided under 3 subheads

SQC LABS –OC (2404-00-109-95-00-34-OC-03-Other items)	**Rs 424.09 Lakh**
SQC LABS –WAGES – CONSOLIDATED PAY (2404-00-109-95-00-02-04-P-V)	**Rs. 67.40 Lakh**
SQC LABS –WAGES – DAILY WAGES (2404-00-109-95-00-02-04-P-V)	**Rs. 8.51 Lakh**
GRAND TOTAL – SQC LABS –REVENUE HEAD (2404-00-109-95)	**Rs. 500.00 Lakh**

The total budget share for the scheme Strengthening Quality Control Laboratory Programme for the year 2025-26 is **Rs. 500.00 Lakh.** Out of the 17 scheme components under this HOA, 16 scheme components are ongoing in nature with a total plan outlay of Rs 418.00 lakh. Hence as per the existing norms, the Head of Department holds the discretion to accord administrative sanction to those schemes with a plan outlay of less than Rs 5.00 crore and which are on-going in nature with no change in component outlay and subsidy amount.

1 scheme components with a total outlay of Rs 82.00 lakh is modified in nature and needs the approval of Departmental Working Group.

04. FINANCIAL OUTLAY – SQCL REVENUE – ONGOING SCHEMES

STRENGTHENING QC LABS 2025-26 - 2404-00-109-95 ONGOING SCHEME COMPONENTS					
PARTICULARS	2025-26				
	No. of Units	ONE UNIT		TOTAL UNITS	
		Total	Unit Subsidy	Total	Total Subsidy
		Rs	Rs	Rs in Lakh	Rs in Lakh
Special quality control testing drive - Onam Drive	1	700000.000	700000.000	**7.000**	**7.000**
Quality Awareness Programme	300	10000.000	7500.000	**30.000**	**22.500**
Consumer Inferface Programme	14	10000.000	10000.000	**1.400**	**1.400**
Special quality drive for detection of antibiotic in milk and aflotixin in milk and feed samples	14	285714	285714	**40.000**	**40.000**
Quality Control / Food Safety Training for Department Officers / DCS personnels	1	700000	700000	**7.000**	**7.000**
Clean Milk Production Kit to selected districts	500	5100	3500	**25.500**	**17.500**
Assistance for improving farm level hygiene at farm level	170	150000.000	75000.000	**255.000**	**127.500**
Need Based Assistance to DCS for improving the quality control activities	50	50000	37500	**25.000**	**18.750**
Setting up of advanced milk testing facility and completion of missing link for DCS	28	100000	75000	**28.000**	**21.000**
Assistance for 3 Regional Labs (Kottayam, Alathur and Kasargod)	3	Lumpsum	Lumpsum	**21.000**	**21.000**
Assistance for existing Check Post Labs (Meenakshipuram /Aryancavu / Parassala check Post)	3	Lumpsum	Lumpsum	**24.000**	**24.000**
Assistance for District QC Labs	14	Lumpsum	Lumpsum	**28.000**	**28.000**
Assistance for Mobile QC labs	14	Lumpsum	Lumpsum	**4.000**	**4.000**
Implementation, Documentation and Monitoring	1	Lumpsum	Lumpsum	**2.440**	**2.440**
SUB TOTAL - 2404-00-109-95-34-03 OTHER ITEMS				**498.340**	**342.090**
2404-00-109-95-02-04 Consolidated Pay				**67.400**	**67.400**
2404-00-109-95-02-05 Daily Wages				**8.510**	**8.510**
GRAND TOTAL - 2404-00-109-95				**574.250**	**418.000**

Savings in any scheme component can be utilized for meeting the expenditure pertaining to any other scheme component in the same HOA

05. SCHEME PROPER

05.01. SPECIAL QUALITY CONTROL TESTING DRIVE - ONAM DRIVE

PLAN OUTLAY - 07.00 LAKH

During festival seasons, especially during Onam, the demand for milk in the state increases and lot of milk reaches the state from neighbouring states. Unscrupulous traders take this as an opportunity to make huge profit by supplying inferior quality and adulterated milk. This is a major threat to public health, as many of the chemicals added to milk as adulterants or preservatives are hazardous in nature. In order to prevent such practices, special quality testing drives are conducted throughout the state during Onam season. Milk Quality Information Centres are also set up in all districts headquarters where the quality of all brands of milk marketed is tested. Facilities are provided for daily testing samples of milk brought by public and providing results then and there.

To prevent the entry of adulterated and low quality milk into the state, special camps with laboratory facilities are set up at the five major check post ***(Walayar, Meenakshipuram, Kumily, Aryankavu and Parassala)*** of the state through which majority of the milk flows into the state. The samples from vehicles are taken and those found adulterated or of low quality are denied entry into the state and actions can be initiated against the offenders. For the above activities an amount of Rs.7.00 lakh is to be set apart from this plan fund. Components under this category are appended below

Sl no.	Particulars	Amount (Rs)
1	A room at the check post for arranging lab facilities. Rent @Rs.1500/day x 7days	10,500
2	Conveyance for transportation of equipment, samples, officials etc. vehicle hiring charges @Rs.2500/day x 7 days	17,500
3	Camp office near the check post for the use of officials on duty. Rent @Rs.2000/day x 7days	14,000

4	Purchase of testing kits for preservatives and adulterants @Rs.2100, Glass ware (test tubes, pipettes, sample bottles) , Chemicals and reagents for various tests, vessels for storing water, mixing and heating samples etc.	28,000
5	Miscellaneous charges, printing formats, internet (USB Modem with 3G / 4G SIM card & recharge amount), stationary, fax, phone courier charges, food & refreshment charges etc.	24,000
6	***TOTAL OUTLAY FOR ONE CHECK POST (1+2+3+4+5)***	***94,000***
7	**FOR 5 CHECK POSTS**	**4,70,000**
8	For setting up milk quality information center's at all district headquarters Rs 15000 x 14 districts	**2,10,000**
9	Preparation, Monitoring and supervisory charges including arranging of conveyance for directorate officials	**20,000**
GRAND TOTAL (7 + 8 + 9)		**7,00,000**

(Savings in any one component may be utilized for any other component detailed above)

Check posts details are as follows

- **Walayar (Palakkad district)**
- **Meenakshipuram (Palakkad district)**
- **Kumily (Idukki district)**
- **Aryankavu (Kollam district)**
- **Parassala (Thiruvananthapuram district)**

UNITS	NO OF UNITS	UNIT COST (Rs)	UNIT SUBSIDY (Rs)	TOTAL COST (Rs in Lakh)	TOTAL SUBSIDY (Rs in Lakh)
Lump sum	**1**	**700000**	**700000**	**7.00**	**7.00**

05.02. QUALITY AWARENESS PROGRAMME

PLAN OUTLAY – 22.500 LAKH

Quality Awareness Programme (QAP) is an ongoing programme organized with the help of Dairy Co-operatives, NGOs and other farmer groups to create awareness among the milk producers in maintaining the quality of milk and milk products produced and marketed in the state. It helps the farmers to get better price and in maintaining good quality of milk pooled at the society level. Since the Food Safety and standards Act 2006 has been implemented in the state the Hygienic milk production at source has to be ensured. Food safety incidents often originate in the early stages of the production chain starting from the health of the animal, environment in which milk is produced, farm management practices etc. Though it is necessary to control all the factors in each step of the production chain for producing safe and wholesome milk, thrust should be at farmer level as contamination at that level is at a high degree, which plays the key role in the final quality of the product. The farmer should be made aware of the potential sources of contamination, its hazards, quality factors, hygienic practices, practices for quality improvement etc. through the awareness programme.

The QAP will provide an opportunity to the farmers to become familiarized with the FSSA requirements. Priority may be given to elite progressive farmers, the newly registered societies and DCS pouring inferior quality of milk to the concerned regional milk unions. The District Quality Control officer under the guidance of the District Dairy Development officer will be responsible for organizing the programme. The topic selected for discussion / demonstration shall be need based and shall suit the specific requirement of the region / DCS / farmers selected. 100 programmes are to be organized in the state during 2025-26. The programme consists of arranging discussions and demonstrations regarding the importance of hygienic handling of milk, good milking practices, maintenance of cold chain and better management practices which would result in the improved chemical and microbial quality of raw milk and fetching better price for the producers at farmer level. The services of Dairy Training Centre can be utilized for maximizing the effectiveness of the QAP. ***The expected cost for conduct of QAP is Rs 10,000 per QAP. Rs 7500/- per QAP (maximum) or 75 % of the cost whichever is the less, shall be the Plan Fund assistance for the conduct of QAP***. The expenditure over and above the plan assistance shall be the contribution from host Dairy Co-operative.

A minimum of 40 farmers are expected to attend each QAP. The assistance is meant for meeting the expenditure for publicity, hall arrangement, training materials, arranging the demonstrations, discussion, classes, light refreshment, etc. In case, if the attending farmers are less than the targeted number, then the plan assistance shall be reduced in proportion to the actual attendance.

Financial Outlay

QUALITY AWARENESS PROGRAMME				
No. of Programmes	Cost per QAP	Plan Fund per QAP	Total Cost	Total Plan Fund
	Rs	Rs	Rs in Lakh	Rs in Lakh
300	10,000	7500	30.00	22.500

05.03. CONSUMER INTERFACE PROGRAMME

PLAN OUTLAY – 1.40 LAKH

Being perishable commodities milk and milk products need day-to-day and prompt quality checking starting from the procurement stage to the end user. The producers as well as the consumers are to be made aware of the quality standards and regulations regarding milk and milk products. The consumers have to be safe guarded from unscrupulous traders entering the market to make a quick profit***. For this Consumer Interface programmes are to be conducted for providing a forum for the consumers to interact with the producing dairies and officials to air their views and suggestions.***

Consumer Interface Programme (CIP) is an important programme organized once in a year in selected district as a special drive during Onam season or other festival season to create awareness among the consumers about the quality of milk and possible adulterants and precautions to be taken to avoid health hazards. It is organized with the help of line institutions preferably at district or any taluk headquarters. Milk quality information centres will be set up at all district headquarters where information regarding the quality of different brands of milk marketed in the district will be made available to the general public through electronic and print media. Samples of milk brought by the consumers or general public will be tested free of cost and result made available to them. Seminars will be organized with the help of ***consumer organizations /residents association*** to create awareness about the quality of milk and milk products. It is conducted by the Quality Control Officer of the respective district. **In the state, 6 CIP will be conducted at a cost of Rs 10,000/ - per programme.** The assistance is meant for meeting the expenditure for publicity, hall arrangement, training materials, arranging the demonstrations (Lab setting charges),honorarium to external faculty / technocrat, refreshment charges etc. Exhibitions/ demonstrations shall be organized for better interaction.

Financial Outlay

CIP (14 No's) X Rs 10000 / CIP = Rs. 1.40 Lakh

05.04. SPECIAL QUALITY DRIVE FOR DETECTION OF ANTIBIOTIC IN MILK AND AFLOTIXIN IN MILK AND FEED SAMPLES

PLAN OUTLAY – 40.00 LAKH

05.04.01. Introduction

a. Antibiotic residues in milk and its impact

Every year, all over the world diseases are caused by food-borne pathogens. The risk is especially high in low-income countries and each year up to 1.4 million children die of diarrhoea. Out of these cases up to 90% of these can be linked to food (WHO), and animal-source food especially is a risk. However, in milk there may not only be pathogens, there may also be chemicals posing potential hazards to human health. Milk is one of the most important foods worldwide, but also a potential transmitter of zoonotic disease as well as chemical hazards. Milk-borne pathogens include brucellosis, tuberculosis, listeriosis, salmonellosis, and diphtheria, all diseases that circulate in India today. India is the fourth largest economy in the world today. It has a population of about 1.2 billion people of which, according to the UN, more than a third is living in poverty. It is a diverse country with a mix of modern mega-cities as well as small rural farm villages. It is estimated that more than half of the population is engaged in agriculture and many people depend on animal husbandry for their livelihood.

Antibiotic Resistance has gained a global health concern as it is attributed to the death of about 0.7 million people yearly. Usage of antibiotics in food producing animals causes the subsequent deposition of these residues in milk, meat and eggs.Poor sanitation, hygiene and mismanagement of antibiotics in the farm and irrational use leads to higher residues. Around 40 – 90% of administered antibiotics is excreted through urine and feces as active form, leads to environmental contamination. In environment, the antibiotic residues promote the development of resistant bacteria through selective pressure.

In dairy Cows a wide range of antibiotics is used to treat and prevent mastitis (Udder infection). Many of these residues are not neutralised by conventional heat treatment methods. It creates a problem in the preparation of fermented Dairy Products by partially or fully inhibiting the

growth of Lactic acid producing bacteria in starter cultures. Globally Milk and milk products with antibiotic residues above the maximum residue limit (MRL) and resistant bacteria are recognized as a threat to public health. It causes toxicity to humans threatening the human life. Moreover, long duration exposure might alter the nature of gut microflora resulting in the enhancement of many diseases. Residues consumed through milk may cause different harmful reactions to human health like carcinogenic, mutagenicity, nephropathy, reproductive disorders. Consumption of antibiotic -contaminated milk also leads to severe illness related to skin irritations.

Poor sanitation, hygiene and mismanagement of antibiotics in the farm and irrational use leads to higher residues. Around 40 – 90% of administered antibiotics is excreted through urine and feces as active form, leads to environmental contamination. In environment, the antibiotic residues promote the development of resistant bacteria through selective pressure.In dairy Cows a wide range of antibiotics is used to treat and prevent mastitis (Udder infection). Many of these residues are not neutralised by conventional heat treatment methods. It creates a problem in the preparation of fermented Dairy Products by partially or fully inhibiting the growth of Lactic acid producing bacteria in starter cultures. Tetracycline, betalactums, sulphonamides, macrolides and aminoglycosides are the source of antibiotic residues. After a long period of treatment with antibiotic, residues will be present in the milk if not following the withholding period. After the period of treatment, the minimum withhold period of milk is 7 days. The failure to observe the prescribed withdrawal time is the major reason of the presence of drug residues. Withdrawal time is defined as the time required for the residue of toxicological product to reach safe concentration in terms of tolerance.

Maximum Residue Limit (MRL) of antibiotics in milk as per Codex Alimentarius Commission

Sl No.	**Name of antibiotic**	**Maximum Residual Limit (µg/Kg)**
1	Benzyl pencillin	4
2	Ampicillin	4
3	Amoxycillin	4
4	Oxacillin	30
5	Cloxacillin	30
6	Dicloxacillin	30
7	Tetracycline	100
8	Qxytetracyclin	100

9	Chlortetracyclin	100
10	Dihydrostreptomycin	200
11	Gentamycin	200
12	Sulponamides	100
13	Ceftiofur	100

Residues consumed through milk may cause different harmful reactions to human health like carcinogenic, mutagenicity, nephropathy, reproductive disorders. Consumption of antibiotic -contaminated milk also leads to severe illness related to skin irritations. Tetracycline, betalactums, sulphonamides, macrolides and aminoglycosides are the source of antibiotic residues. After a long period of treatment with antibiotic, residues will be present in the milk if not following the withholding period. After the period of treatment, the minimum withhold period of milk is 7 days. The failure to observe the prescribed withdrawal time is the major reason of the presence of drug residues. Withdrawal time is defined as the time required for the residue of toxicological product to reach safe concentration in terms of tolerance.

Techniques used for drug residue detection and analysis

- ELISA
- HPLC- High Performance Liquid Chromatography
- Liquid Chromatography
- Gas Chromatography
- Paper chromatography

Pathological effects of antibiotics residues in milk and milk products

- Occurrence of allergic reactions
- Antibiotic resistant bacteria
- Reproductive disorders
- Carcinogenicity
- Allergy by pencillin
- Gastrointestinal disturbances
- Nephropathy due to gentamycin

Prevention of Antibiotic Residues

1. Raise awareness of the issue by proper training programs
2. Rapid screening methods for antibiotic residue assessment
3. Immediate grading and prohibition of more than MRL containing foods

4. Milk aid processing to inactivate antibiotics - Refrigeration leads penicillin to disappear. Most antibiotics will lose activity in pasteurization.
5. Prevention of irrational use of antibiotics
6. Developing simple and economic field test to identify drug residues
7. Wide tracking and periodic surveillance of microbial residues in milk

Rapid Antibiotic testing Kits are available in Market for conducting the field tests. Single antibiotic detection and multiple antibiotic detection kits are also available in the market.

05.04.02. Aflatoxin residues in compounded feed and feed components

Mycotoxins, especially aflatoxins, are other chemical hazards in the milk. Aflatoxins are toxins produced in food and feed crops by the fungi Aspergillus flavus and A. parasiticus. Aspergillus flavus thrives in a hot, humid climate and the toxins are of concern due to its impact on human and animal health. One of these toxins produced is aflatoxin B1. Aflatoxin B1 is the most potent naturally occurring chemical liver carcinogen known. It can cause acute liver damage and induces hepatocellular carcinoma (HCC), a form of liver cancer. Acute aflatoxicosis is caused by extremely high doses of aflatoxin and can lead to haemorrhage, acute liver damage and death. HCC can be caused by chronic aflatoxin exposure. Exposure to aflatoxin has also been associated with immune system disorders and diminished weight and height in children, so called stunting. Studies have shown that aflatoxin may have immunosuppressive impacts. It has been suggested that aflatoxin is responsible for the stunted growth in children due to its apparent dose–response relationship with exposure. Aflatoxin also causes liver damage and immunosuppression in animals and reduces milk production in cattle. Aflatoxin M1 is a metabolite produced in the liver when humans or animals consume aflatoxin B1 and is excreted in the milk. It is similar to aflatoxin B1 in toxicity and almost as high in carcinogenicity.

Aflatoxin is the most widespread and studied group of all mycotoxins. They are primarily produced by fungi of genes *Aspergillus (Aspergillus flavus, Aspergillus parasiticus, Aspergillus nomius).* They are prevalent in warm and humid climatic conditions.Major forms of aflatoxin found in Feeds is Aflatoxin B1, B2, G1 and G2. The most common and toxic is Aflatoxin B1. Aflatoxin M1 is found in milk and milk products.

The United States Food and Drug Administration (USFDA) and Food Safety and Standards authority of India (FSAAI) has set a maximum permissible level for Aflatoxin B1in feed at 20ppb and Aflatoxin M1 in milk

at 0.5µg/kg (parts per billion) of milk which means that one ton of milk should not contain more than 500 micrograms of Aflatoxin.

Approximately 1 to 6% of Aflatoxin B1 is transferred to milk as Aflatoxin M1. Aflatoxin B1 is metabolized by enzymes found primarily in the liver to M1 in milk.Aflatoxins are mostly found in substantial levels in Feed and Feed Ingredients. It is rarely found in forages. Cereals and cereal byproducts like maize, De-oiled rice bran, rice polish and wheat bran has been analysed and found positive for presence of Aflatoxin .Aflatoxins appear in milk within 12 hours following oral administration of Aflatoxin B1. The peak concentration in milk occurs after 24 hours. Clearance is also very rapid. Aflatoxin disappears from the milk four days after cessation of oral administration.

Aflatoxin M1 is heat stable, and normal processing and storage are not effective in reducing its levels in milk and milk products. Small levels of this contaminant may impose health risks for consumers of large quantities of milk products, such as children, a particularly vulnerable subgroup in the population .

Impact of feeding Aflatoxin contaminated feed in Dairy Animals

Feed refusal, reduced growth rate, decreased feed conversion efficiency are the predominant signs of chronic aflatoxin poisoning.Weight Loss, Rough hair coat and mild diarrhea , impairing of reproductive efficiency and abortions, impaired immune system response and increased susceptibility to diseases are few other symptoms due to intake of Aflatoxin contaminated feed in animals..

Control of Aflatoxin

1. Use of mycotoxin binders - The most effective method of controlling the mycotoxins is to bind them into an inert compound before they can be absorbed from the intestine. Mycotoxin binders are used to prevent the fungal growth and toxin production in feed stuff. This also decontaminates the existing mycotoxins in feed
2. Use of higher levels of methionine, selenium and vitamin supplementation of affected diets.
3. Certain herbal and herbal extracts have been found to exert inhibitory effect on mould growth and thus toxin production. Aqueous extracts of garlic, onion, turmeric, neem ,etc have been shown to exert anti-fungal activity and inhibit Aflatoxin production.
4. Certain chemicals tested to detoxify / inactivate mycotoxins include ammonia, sodium bisulphite, peroxide, acids, bases and gases.
5. A natural organic product, glucomannan -containing yeast product, a cell wall derivative of Saccharomyces cerevisiae have shown considerable binding ability with commonly occurring mycotoxins and is found beneficial in minimizing the adverse effects of mycotoxins in livestock and poultry.

6. Many types of clay have been tested for counteracting mycotoxins including bentonites, zeolites and aluminosilicates.

Test Methods for Aflatoxin analysis in Laboratory and field levels.

- At field level KITS using ELISA (Enzyme linked immunosorbent Assay) technology can be used for testing of Aflatoxin B1 in finished feed and raw materials and M1 in milk and milk products.
- Analytical methods include Thin Layer Chromatograohy (TLC) and High Peformance Liquid Chromatography (HPLC)
- Lateral Flow based strips are also available in market for quick detection of Aflatoxins in feed and milk.

Storage under field conditions to prevent fungal growth

- Dry the raw materials immediately after harvesting to moisture content less than 13%.
- Avoid damaged and broken grains
- Avoid insect damaged grains
- Pre-clean and dry the grains before storage in silos or in bags.
- Use mould inhibitors to prevent fungal growth if the moisture in raw materials is more than 13%
- Store the raw materials in wooden pallets or crates and away from the walls to prevent moisture migration from the floor and walls.

Preventive measures to be taken at cattle feed plant level

- Preclean the maize to remove dust and all the waste materials
- Use mould inhibitors in finished feed in hot and humid conditions
- Store the finished feed on wooden pallets or crates to prevent moisture migration from the floor.
- Follow systematic inspection and cleanup programs.
- Remove dust and all waste materials

05.04.03. Objective of the scheme component

The objective of this scheme component is to investigate the prevalence of aflatoxin and antibiotic residues in milk and feed from the farm house sample, DCS samples and also from the market samples

Food Safety and Standards Authority of India (FSSAI) carried out a survey on safety and quality of liquid milk in the country, referred to as 'National Milk Safety and Quality Survey 2018'. This Survey was carried out from May 2018 to October 2018 covering all States and UTs. A major finding in the survey was presence of aflatoxin M1 residues beyond permissible limits in 368 (out of 6,432) samples, that is 5.7% of the samples. This is the

first time that presence of aflatoxin M1 in milk has been assessed. Aflatoxin M1 comes in the milk through feed and fodder, which are currently not regulated in the country. Amongst the top three States with highest levels of aflatoxin M1 residues are Tamil Nadu (88 out of 551 samples), Delhi (38 out of 262 samples) and Kerala (37 out of 187 samples). This problem is more dominant in processed milk rather the raw milk. The survey further showed that 77 (out of 6,432) samples, that 1.2 % of the samples had residues of antibiotics above the permissible limits. Amongst the top three States with highest levels of aflatoxin M1 residues are Madhya Pradesh (23 out of 335 samples), Maharashtra (9 out of 678 samples) and UP (8 out of 729 samples). Only one raw milk sample in Kerala was found to contain pesticide residue above the permissible level.

Based on this survey report and based on the direction from State Planning Board, GOK, Dairy Development Department has initiated to conduct a special drive for detection of aflatoxin and antibiotic residues at all Bulk Milk Chiller units and Dairy Co-operatives. Also an awareness among dairy farmers for adopting good managerial practices as well as judicious use of antibiotics in dairy cattle to prevent occurrence of antibiotic residues and mycotoxins in milk, thus, preventing unacceptable health risks to consumers has already been started

05.04.04. Scheme in detail

The scheme calls for the state-wide detection of aflatoxin concentration in milk and feed samples as well as the presence of antibiotics in milk. Lateral Flow based strips are also available in market for quick detection of Aflatoxins in feed and milk and antibiotics in milk.

According to a 2019 FSSAI survey, 37 out of 187 samples, or roughly 20% of the samples, were found to be aflatoxin positive in Kerala. Processed milk tends to have this issue more than raw milk does. The main reason for this may be due to improper storage of feed and / or from the raw materials used for compounded feed production.Frequent cases of mastitis and overall poor animal health, antibiotics may be overused. This creates an increased risk of development of resistant bacteria and due to lack of time of restraint of the treated animal's milk, antibiotic residues, as well as other drugs may be present in the milk and other animal products. Poor sanitation, hygiene and mismanagement of antibiotics in the farm and irrational use lead to higher residues.

Now a days there are various methods for detection of aflatoxin and antibiotics in laboratory for the quick detection by using rapid test kits. Some of the methods are as follows

a) Desktop Readers – which is fast and convenient reader for laboratory use for the detection of antibiotic and aflatoxin

b) Portable Readers - for the detection of aflatoxin in milk while transportation. Through Portable readers the end result can be obtained through mobile app and cloud solution
c) Mini Incubator - farm level testing can be done through this mini incubator.

All these test results are quantitative. Different kits are used for detection of antibiotics and aflatoxin.

The Quality control officers can purchase this based on their requirements. A random and routine testing of milk and feed samples from farms and DCS should be conducted by QCOs and the test report should be communicated with the Technical Cell of Directorate on monthly basis.

The scheme includes the purchase of

01. Reader / Incubator for quantitative analysis
02. Aflatoxin Strip kit
03. Antibiotic Strip kit
04. Infrastructure development for assisting testing of antibiotics and aflatoxin residues in milk, cattle feed samples

- The Quality Control Officers can purchase these equipment's and strip kits based on the store purchase rule.
- The strip should be purchased on a regular basis and the test should be coducted in every month

05.04.05. Financial Outlay

STRENGTHENING QC LABS - REVENUE HEAD - 2025-26					
PARTICULARS	2025-26				
	No. of Units	ONE UNIT		TOTAL UNITS	
		Total	Unit Subsidy	Total	Total Subsidy
		Rs	Rs	Rs in Lakh	Rs in Lakh
Special quality drive for detection of antibiotic in milk and aflotoxin in milk and feed samples	**14**	**285714**	**285714**	**40.000**	**40.000**
GRAND TOTAL - 2404-00-109-95-34-03 OTHER ITEMS				**40.000**	**40.000**

COST PER UNIT

Sl No.	Particulars	No.	Unit Cost (Rs.)	Total Cost (Rs.)
1	Reader / Incubator	1	35400	35400
2	Aflatoxin Kit	6	20160	120960
3	Antibiotic Kit	6	20160	120960

4	Miscellaneous expenses		Lump sum	8394
GRAND TOTAL				**285714**

Cost of sub components are indicative & Savings in any component shall be utilized for meeting the expenses pertaining to any other component

05.04.06. Conclusion

The occurrence of antibiotic residues and mycotoxins in milk is a matter of public health concern and causes severe economic loss to the dairy industry. There is a need to generate awareness among dairy farmers for adopting good managerial practices as well as judicious use of antibiotics in dairy cattle to prevent occurrence of antibiotic residues and mycotoxins in milk, thus, preventing unacceptable health risks to consumers. In addition to this, there is a need for framing and implementing strict regulations/legislations for controlling the occurrence of antibiotic residues in food of animal origin.

05.05. QUALITY CONTROL / FOOD SAFETY TRAINING FOR DEPARTMENT OFFICERS / DCS PERSONNELS

PLAN OUTLAY – 7.00 LAKH

The Dairy Department is actively involved in monitoring the quality aspects of milk from procurement point to the point where it ultimately reaches the consumer. The organoleptic, physico-chemical and microbiological quality of milk produced, processed, handled and marketed has to be within the standards considering the acceptance level and also from legal point of view. The MBR time of milk procured at DCS level and Dairy level is found to be significantly low. This has to be redressed so as to ensure safe production and consumption of milk. The quality control activities of the department are streamlined through the quality control officers of individual districts. The quality control activities are delegated to the DESU level through the Dairy Extension Officers. All the 14 districts have fully equipped quality control labs and most of the districts also have Mobile Quality Control Units. The raw milk samples from farm level, DCS samples, BMCC milk samples, milk samples from BMCC cluster units, market milk etc are being tested on a routine basis. Moreover it is expected that the dairy department be vested with the legal authority for collecting samples of milk and milk products for analysis.

The Department is presently equipped with a full-fledged STATE DAIRY LAB attached to the Directorate of Dairy Development at Thiruvananthapuram. The lab is NABL accredited. The said lab is equipped with sophisticated and modern equipment for analysing the quality of milk,

milk products, water and cattle feed samples. 3 regional labs one each at Kottayam, Alathur and Kasargod. The regional lab at Kottayam, Alathur, Palakkad also carries out quality analysis of milk and milk products on a regular basis.

It is the need of the hour that the department officials be trained to carry out modern testing methods for testing of milk, milk products, water and cattle feed samples. Since the Feed Act nearby came to be released.

The scheme envisages providing training and exposure to selected department level officers (and also selected DCS personnel) in the field of quality analysis of milk, milk products, water and cattle feed samples. Specialised training for SDL officials, department officials at regional labs, state lab-Alathur shall be undertaken in this scheme component. Training for calibration of lab equipments and utensils shall be covered under this sub component.

Training can be imparted at various institutions like

- NDRI, Karnal
- CIFT, Kochi
- Centre for Analysis and Learning in Livestock and Food (CALF)
- CEPC Lab, Kollam
- SDL, Dairy Department, Thiruvanathapuram
- Other accredited labs in the field of dairy and food analysis

Training in the field of ISO auditing to selected dairy department officials can also be taken up under this scheme component.

QUALITY CONTROL / FOOD SAFETY RELATED TRAINING FOR DEPT OFFICIALS / DCS PERSONNELS		
SI.NO	**PARTICULARS**	**AMOUNT (Rs in lakh)**
1	Training Fees	7.00
2	Training Materials	
3	Rent, Rates, Taxes	
4	Travelling Expenses / Daily Allowances	
5	Food and Accommodation	
6	Miscellaneous / Other expenses	
GRAND TOTAL		**7.00**

The above breakup and rates are indicative. Savings in any component shall be utilized for meeting the expenditure pertaining to any other scheme component listed as 1 to 6 above

05.06 CLEAN MILK PRODUCTION KIT TO SELECTED DISTRICT

PLAN OUTLAY – 52.50 LAKH

Kerala's milk production has increased over the last few years from the annual production of 21 Lakh metric tonne in 2005-06 to 25.80 Lakh metric tonne in 2024-25. However the microbial quality of the milk produced in the state is low compared to that produced in the developed countries. Milk being the perfect food has to be produced and handled under hygienic conditions to ensure the safety of the consumers as well as prevent spoilage. The conditions in the small and medium farms where the majority of milk is produced are far from satisfactory. The food safety and standards Act 2006 has also laid down several measures to ensure the safety of the milk produced in the farms. The scheme envisages assisting the dairy farmers of the state to purchase hygiene kits and renovate their cattle farms especially the floor which would enable to ensure that the microbial load of the milk is minimized and would prevent losses to the farmers through spoilage of milk.

Besides being a health hazard, contamination of milk can lead to huge economic losses. Contamination occurs at different levels: at farm level, during collection and storage, and at processing centres. Milk contains many essential nutrients, such as carbohydrates, proteins, lipids, minerals and vitamins and therefore acts as an ideal medium for rapid proliferation of harmful microorganisms. Milk needs to be protected from all possible sources of microbial contamination and various types of disease organisms. When the milk is secreted from the udder, it is almost sterile. The employment of hygienic practices at the time of milking is therefore one of the first and most important steps in clean milk production.

'Clean Milk' is generally defined as "milk drawn from the udder of healthy animals, which is collected in clean dry milking pails and free from extraneous matters like dust, dirt, flies, hay, manure etc. Clean milk has a normal composition, possesses a natural milk flavour with low bacterial count and is safe for human consumption".

05.06.01 BENEFITS OF CLEAN MILK PRODUCTION

Advantages of Clean Milk Production can be summed as

- Clean milk is safe for human consumption and free from disease producing microorganisms.

- Clean milk has a high keeping quality.
- Clean milk has a high commercial value.
- Clean milk can be transported over long distances without spoilage.
- Clean milk is a high quality base product for processing, resulting in high quality dairy products.

Contamination and Control Measures at Farm Level

Potential sources of contamination of milk are dung, water, utensils, soil, feed, air, milking equipment, the animal and the milker her/himself. Contamination of milk can occur at the following levels:

- Animal shed and environment.
- The Animal
- Milkers and milking routine
- Milking equipment
- Storage and transport

The sources of contamination are:

- **Faecal contamination from soiled animals :** especially teats, udders and tails; bacterial contamination from poor milking practices, soiled hands, soiled equipment and failure to clean and disinfect teats prior to milking; contamination due to failure to detect abnormal milk (mastitis pathogens, blood and clots); physical contamination, especially from defective components in milking machines and bulk tanks, dust, bedding materials, dung, insects and animal hair; bacterial contamination from inadequate cleaning and disinfection of milking equipment and bulk milk tanks; chemical contamination from veterinary product residues, cleaning chemicals and use of non-food-grade materials in farm equipment coming in contact with milk.
- **Animal shed and environment:** The animal shed is one of the main sources of contamination. At the same time however, a good shed protects against micro-organisms as it keeps out other animals, people, wind, rain and excessive heat, all increasing the danger of contamination. Mud, urine, dung, and feed residues should regularly be removed from the shed. The shed should have proper drainage, sufficient light and ventilation. The milking area of the shed needs special hygienic attention. The floor of the milk shed should be swept with clean water, and disinfected with one percent bleaching powder solution. So in Kerala condition, it is very necessary to ensure a clean floor which adverse the proliferation of microbiological hazards.
- **The Animal:** The animal itself is one of the most significant sources of contamination, care and management of the animal and its health is therefore the starting point for clean milk production.

The skin of the animal provides a large surface for possible contamination. Long hairs on the flanks, hind legs, tail and udder need to be clipped at frequent intervals. If washing of animals is not practiced regularly as is observed in most cases, at least grooming of the animals should be done to keep the hair and dust away from milk. The udder is the part of the animal nearest to the milk and needs to be washed before each milking, and dried with a clean cloth or towel.

- **Milkers and Milking Routine:** In the case of hand milking, the danger of contamination coming from the milkers is higher as compared with machine milking. The milker should therefore be free from contagious diseases. A good milking routine prevents contamination of the milk. A consistent milking method at regular intervals, fast but gentle and complete milking, and sanitary methods during milking are all important aspects. After milking, the teats can be dipped or sprayed with a gentle antiseptic solution to prevent the entry of microbes via teat canal and leading to infection.
- **Milking Equipment:** Dirty milking equipment is one of the main sources of contamination of milk. About 15 minutes before milking, milking equipment should be rinsed with a sanitizing solution. In this way, dust and contamination will be removed. Milking equipment should also be thoroughly cleaned after use because any milk residues in the equipment will allow microorganisms to grow rapidly. The utensils and equipment used during milking need to be of standard quality. They should be made up of acceptable, non-absorbent, corrosion-resistant material and should be easy to clean. The utensils and equipment should not have any joints or open seams and should be free from dents, rust etc. The milking utensils and equipment should be thoroughly cleaned and sanitized after each milking. An acceptable, non-toxic and non-corrosive cleaning and bactericidal agent should be used for cleaning and sanitation.

05.06.02 ABOUT THE PROJECT

This proposal envisages providing hygiene kits to 500 progressive dairy farmers of Kozhikode district to ensure the food safety at farm level. During the FY 2024-25, though the scheme was physically achieved, financial allocation could not be given due ot plan cut. During the year 2025-26, the amount under this head shall be also utilized for meeting the pending expenditure of FY 2024-25

Components – Clean Milk Production Kit

Component in kit	Composition/Material
Surface disinfectant & Cleaning solution- 1 Litre	Alkyl dimethyl ethyl benzyl ammonium chloride
CMT Kit with paddle having 500ml reagent	500ml reagent for CMT kit
Teat dip cup	1 unit
Mirco-fibre towel	Hand micro fibre towel* 3 units (12*12 inches)
SS Milk Bucket	SS milking pail of SS 304- 10 litres capacity
Cattle Grooming Brush	Grooming brush
SaafKit 500ml with bottle (inclusive of taxes) *2 bottles	Iodine I.P. (0.71%) w/v
Trisomix 50 grams* 20 units pack (supplement)	Trisodium citrate with chelated minerals and vitamins

05.06.03 OBJECTIVE OF THE SCHEME

- To create awareness among dairy farmers regarding the importance of hygienic milk production
- To prevent losses due to spoilage of milk due to unhygienic conditions in the farm
- To prevent spread of disease through milk by proper production and handling methods
- To produce high quality milk suitable for value addition
- To ensure better price to farmers.
-

05.06.04 BENEFICIARIES AND SELECTION

500 progressive farmers who rear more than 2 milch animals from selected districts shall be beneficiaries of this project. Those dairy farmers who pour milk to Dairy Co-operatives shall be given priority while finalizing the select list of beneficiaries. Primary application shall be submitted at concerned Dairy Extension Service Unit. After field level inspection, the ranked beneficiary list shall be forwarded to concerned Quality Control Officer. Based on the district target and allocation from Directorate, the Quality Control Officer, based on the ranked list from various DESU's shall finalize the district level ranked beneficiary list for this programme.

Registration Fees – Rs 170 per beneficiary

05.06.04 SCHEME COMPONENTS AND FINANCIAL OUTLAY

Sl No.	Component in kit	Composition/Material	Cost per unit (Rs)
1	Surface disinfectant & Cleaning solution- 1 Litre	Alkyl dimethyl ethyl benzyl ammonium chloride	5100
2	CMT Kit with paddle having 500ml reagent	500ml reagent for CMT kit	
3	Teat dip cup	1 unit	
4	Mirco-fibre towel	Hand micro fibre towel* 3 units (12*12 inches)	
5	SS Milk Bucket	SS milking pail of SS 304- 10 litres capacity	
6	Cattle Grooming Brush	Grooming brush	
7	SaafKit 500ml with bottle (inclusive of taxes) *2 bottles	Iodine I.P. (0.71%) w/v	
8	Trisomix 50 grams* 20 units pack (supplement)	Trisodium citrate with chelated minerals and vitamins	
TOTAL COST PER CMP KIT (Rupees) (inclusive of all rent, rate and taxes)			**5100**
PLAN ASSISTANCE PER CMP KIT (Rupees)			**3500**
BENEFICIARY CONTRIBUTION PER CMP KIT (Rupees)			**1600**

Savings in any one component can be utilized for meeting the expenditure pertaining to any other component detailed above.

NO. OF UNITS	UNIT COST	UNIT SUBSIDY	TOTAL COST	TOTAL PLAN OUTLAY	BEN. CONTR.
	Rs	Rs	Rs in Lakh	Rs in Lakh	Rs in Lakh
500	5100	3500	25.500	17.500	8.00

The Hygiene Kit / Clean Milk Production Kit shall be distributed by M/s Indian Immunological Ltd, a subsidiary of National Dairy Development

Board or any other government accredited agencies. The Department with the approval of the Director, DDD will also have the option to arrange the kit through other sources purchased after following the existing standard store purchase rules.

05.07 ASSISTANCE TO COMMERCIAL DAIRY FARMERS FOR IMPROVING THE MILK HYGIENE AT FARM LEVEL AND FOR MAINTENANCE OF COLD CHAIN (WITH LINKAGE THROUGH DCS)

PLAN OUTLAY – 127.500 LAKH

During the last decade, in Kerala there has been a shift from subsistence farmer (rearing 1 to 2 milch animals) to mini dairy units / commercial farms / entrepreneurs who rear more than 5 milch animals. More and more young entrepreneurs are coming to this sector. It a need of the hour that those farmers need to be encouraged to produce quality milk in the farm and dispose good quality milk.

Objective

The scheme is envisaged to assist 72 numbers of dairy farmers / entrepreneurs for implementation of hygiene improvement practices in their commercial farms and for maintenance of cold chain. The assistance shall be need based.

The items that will be assisted under this scheme component are

- Purchase of Stainless Steel Milk Can (SS 304 grade with 40 litre Capacity)
- Purchase of Clean Milk Production Kit like SAAF Kit, California mastitis Kit, disinfectants, farm cleaning solutions, milch animal grooming brush etc
- Repair / Maintenance of Cattle Shed (Floor & Roof)
- Construction of Dung Pit and Urine Channel
- Purchase of Stainless steel can, Milking pail, other utensils useful in Dairy Farms
- Purchase of Cow Mat
- Installation of automatic drinking bowl
- Purchase of Pressure Washer for cleaning of cattle shed
- Purchase of Milking Machine
- Environment Stress reduction components in Dairy Farm
- Purchase of insulated PUFF boxes
- Installation / Repair of biogas plant
- Purchase / Repair of mini cooling systems for chilling raw milk at farm level

- Other missing links required for cold chain maintenance.
- Insulation of transportation vehicle for transporting milk from farm to nearest DCS / collection centre
- Purchase of power generation system including solar panel
- Installation of fly trap, environmental cooling systems and other stress managing equipment.
- Purchase of slurry pump
- Mechanisation activities which aid quality improvement in the farm
- Farm level Milk mini cooling systems
- Composting Machine / Cow Dung dryer
- Any other farm level hygiene enhancement systems, not included above, but with the prior approval of the Deputy Director on the basis of a project report recommended by the concerned Dairy Extension Officer

Implementation

The Quality Control Officers shall be the district level Implementing Officer of this scheme component.

Applications shall be invited through **"Ksheerashree"** Online Portal of Dairy Development Department. Rank list and waiting list will be published based on the points attained by individual applicant depending on the extent to which the eligibility and priority criteria are achieved by the applicant.

05.07.01 Selection through Ksheerasree Portal

The implementation of selected schemes especially those targeting individual beneficiaries shall be exclusively done online through Ksheerasree Portal (***https://ksheerasree.kerala.gov.in***). The entire processes starting from registration using Aadhaar and online submission of application till the transfer of subsidy in DBT mode to the bank accounts of beneficiaries will be done through the portal. The portal is owned by Department of Dairy Development, developed by NIC and is integrated to e-treasury, ReLIS and e-PDS portals of Treasury department, Revenue department and Civil Supplies department respectively.

The entire workflow and processes can be summarized as follows:

1. Release of calendar of activities from Directorate regarding various stages of scheme implementation starting from application submission dates to release of financial assistance.
2. Submission of online applications along with necessary documents
3. Priority list and waiting list generation based on eligibility and priority criteria as detailed in DPR and allied documents.
4. Field level physical verification by concerned officials
5. Further verification and final approval by concerned officials

6. Online remittance of registration fees by approved beneficiaries through Ksheerasree Portal
7. Physical Implementation of scheme components by approved beneficiaries
8. Online Submission of documents by selected beneficiaries as proof of implementation as detailed in DPR
9. Physical and online verification and approval of scheme implementation by concerned officials
10. Proceedings generation and TR 59 Bill generation through portal by implementing officers
11. e-Submission of bills to treasury through Ksheerasree Portal
12. Online bank transfer of subsidy/financial assistance to beneficiaries via e DBT mode from treasury and status updation of same in the Portal
13. Report generation

- The selection and ranking of applicants are made based on the eligibility criteria and priority criteria earmarked against each scheme component as given below. To attract youngsters towards dairy sector, weightage should be given for lower age group for all schemes processed through Ksheerasree Portal in case of a tie during selection process. The timelines shall be strictly adhered to. Officers authorized for verification and final approval shall be notified separately.
- The approved beneficiaries shall remit prescribed registration fees for respective scheme preferably within one week from the date of beneficiary approval and the implementing officer reserves the right and power to reject any approved beneficiary if he or she fails to remit the registration fees within the prescribed time limit. This is to ensure smooth implementation of project and to keep the timelines of the project
- From among the applications submitted by the applicant, after verification by concerned officials, if an application is approved by the concerned authority and is selected as beneficiary for that particular scheme component during the financial year, then it will be considered as final for all schemes. The selected beneficiary will be entitled to implement that particular scheme component only and is liable to complete its implementation and submit all required documents within prescribed time limit for availing subsidy.
- The selected beneficiaries of schemes (as specified in the approved guidelines) shall submit an agreement (in the model prescribed by the Dairy Development Department) in Kerala Stamp Paper worth the amount as published by GOK (Rs 200/-)
- Individual applicants who received financial assistance under any scheme component during this fiscal year will not be considered for selection during this financial year.

Beneficiary Selection Criteria

(Eligibility and Priority Criteria)

Eligibility Criteria	Priority Criteria
• The applicant shall be an Indian citizen • Shall be a resident of Kerala possessing valid kerala state ration card • Should have attained 18 years of age • Shall rear not less than 5 number of milch animal • The average milk production in the farm shall be not less than 50 litre per day • The beneficiary shall be a member / non-member of nearby DCS, but pouring milk to DCS	• Rearing more number of cattle • Presently pouring milk to DCS • Women applicants • SC/ST applicants • Young applicant below 40 years • Individual applicants who have not received financial assistance under MSDP scheme for last 3 years

The beneficiary shall have the freedom to select one or more components listed above for assistance according to his need for enhancing farm level hygiene enhancement. The financial assistance shall be released directly to the beneficiary as DBT mode.

The registration fees shall be Rs 250/- per beneficiary

The assistance shall be Rs 75,000/- (max) or 50 % of the actual cost. In case of savings in the allotted fund to districts / DESU, more number of beneficiaries shall be assisted. However the total subsidy per beneficiary shall not exceed Rs 75,000/-.

Financial Outlay

ASSISTANCE TO COMMERCIAL DAIRY FARMERS FOR IMPROVING THE MILK HYGIENE AT FARM LEVEL AND FOR MAINTENANCE OF COLD CHAIN						
Sl. No.	**No. of Units**	**Unit Cost Rs.**	**Unit Subsidy Rs.**	**Total Cost (Rs in lakh)**	**Plan Fund (Rs in lakh)**	**Beneficiary Fund (Rs in lakh)**
1	170	1,50,000	75,000	255.00	127.50	127.50
Gross Amount (Rs. in Lakh)				**255.00**	**127.50**	**127.50**

05.08 NEED BASED ASSISTANCE TO DCS WITH BMCC FOR IMPROVING QUALITY CONTROL ACTIVITIES

PLAN OUTLAY – Rs 18.750 LAKH

In order to ensure microbiological quality of milk, maintenance of cold chain has to be ensured from farm to consumer points. With a view to improve the bacteriological aspect, the dairy department with the help of the regional unions have upgraded numerous Dairy Co-operatives to Bulk Milk Chilling Centres (BMCC). The BMCC's have ensured that the milk collected at farm level is to be chilled to a temperature below 4^0C meeting the guidelines of FSSR. This helps to arrest the bacteriological multiplication and thereby ensuring the quality of milk. This cold chain will be ensured subsequently by chilling and storage of milk in DCS, transportation of milk to processing dairies in insulated tankers, marketing the packed milk by maintaining the cold chain.

In order to improve the quality control activities, the quality testing facilities available at the BMCC has to be improved. An improved lab facility has to be established at the BMCC's. This will help to continuously monitor the quality of milk received from farmers and also milk received by route from the nearby cluster DCS. At present the DCS with BMCC is incurring huge amount for purchase of cleaning and sanitising agents. Also the effluent treatment mechanism presently available at BMCC has to be improved.

In order to meet the FSSR requirements and ensure safe milk consumption, the quality of milk at farm level has to be improved. Progressive farmers have to be motivated for ensuring the hygiene level at production level. Assisting farmers for purchase of farm cleaning cum sanitising materials will ensure production of milk with superior quality.

The scheme envisages assisting the DCS with BMCC and also progressive dairy farmers of the state for improving the milk testing facilities, maintaining hygienic environment at farm level and BMCC's and also other aspects which will enhance the Physico-chemical and microbiological aspects of milk.

This scheme is aimed at providing need based assistance for improving the overall functioning of the Mother BMCC

Need based assistance for following components shall be included.

- Breakdown / regular maintenance of BMCC
- Installations for up gradation of existing facilities of BMCC
- Purchase of cleaning / sanitising agents
- Purchase of pipeline cleaning brushes, standby milk pumps, line filters, C- Spanner
- Water treatment unit / Water Purifier Unit
- Assistance for setting testing of MBRT

- Meeting electricity charges
- Non-recurring wages connected with operation of BMCC
- Other overhead charges
- Meeting AMC charges of BMCC
- Meeting expenditure for implementing FSSA requirements in BMCC
- Any other item not specified above, but with the approval of The Deputy Director of concerned district

(A detailed project report shall be submitted along with application detailing the justification for the item requested for assistance)

BENEFICIARY

The beneficiary shall be those BMCC which handles **more than 200 lpd on an average**. Preference shall be given for **Cluster BMCC's**

Registration Fees – Rs 250 per beneficiary DCS

FINANCIAL

Scheme is meant for assisting 28 DCS with BMCC. Preference shall be given to those DCS having higher installation capacity and that links more neighbouring DCS. ***The assistance shall be 75 % of the cost incurred subject to a maximum of Rs 37,500 per BMCC***

NEED BASED ASSISTANCE TO DCS FOR IMPROVING QUALITY						
Sl. No.	**No. of Units**	**Unit Cost Rs.**	**Unit Subsidy Rs.**	**Total Cost (Rs in lakh)**	**Plan Fund (Rs in lakh)**	**Beneficiary Fund (Rs in lakh)**
1	50	50,000	37,500	25.00	18.750	6.250
Gross Amount (Rs. in Lakh)				**25.00**	**18.750**	**6.250**

05.09 ASSISTANCE FOR SETTING UP OF ADVANCED MILK TESTING FACILITY AND FOR ENSURING HYGIENIC MILK RECEPTION, STORAGE, PROCESSING AND HANDLING BY DAIRY CO-OPERATIVES

PLAN OUTLAY – 21.00 LAKH

In order to improve the quality control activities, the quality testing facilities available at the DCS has to be improved. An improved lab facility has to be established at the DCS especially those DCS where the milk procured, handled, transported and marketed are high. Especially the milk testing facilities at those DCS with BMCC and Cluster societies have to be effective and efficient. This will help to continuously monitor the quality of milk received from farmers and also milk received by route from the nearby cluster DCS.

A lab with advanced facilities in the DCS will ensure quality of procured milk from farmers and also from cluster societies that pour milk in to that particular DCS / BMCC. A fully fledged lab equipped to test the sensory, physico-chemical and microbiological quality of milk shall be ensured.

The scheme envisages at assisting DCS for establishing milk testing lab/ improving the quality of milk procured, handled, chilled / processed and transported at / from DCS, by giving assistance for installing drip saver, can conveyors, can washer, can scrubber, dumb tanks etc. Any activity that enhance / ensure quality procurement, chilling, storing, processing, and marketing of milk / milk products can be taken up in this scheme components.

This is also been observed in many of the BMCCs lacking a dump tank in procurement line. This has led to increased manpower in handling more milk volume and also resulting erroneous sampling due to lack of a proper composite sampling procedure.

The fund shall be used for

- Establishing a new lab at DCS (preferably those DCS with BMCC/Mother BMCC) with milk testing facilities
- Purchase of milk testing chemicals, equipment and other lab related utensils
- Improving the infrastructure facility at existing lab of DCS
- Assisting for purchase of advanced milk testing equipment, glass wares, utensils etc
- For establishing /repair / maintenance of RMRD
- Establishing drip saver, can conveyors, can washer, can scrubber, dumb tanks etc in DCS especially those DCS with BMCC
- Installation of load cell, flow meters for ensuring correctness of quantity of milk procured and despatched.

- Installation of drip savour, fly traps, U.V light, any other missing components to ensure environmental hygiene.
- Purchase of dump tank of matching volume and pump for completing the missing link in pooling milk.
- Effluent treatment related activities of the DCS.
- Training for DCS personnel's engaged in milk procurement and processing.
- The assistance shall be Need based in Nature.
- Any other items, not specified above, but with the prior sanction of The Deputy Director, based on a detailed project report by the DCS with proper recommendations by The DEO of concerned DESU can be taken up

FINANCIAL ASPECT

NO. OF PROPOSED UNITS	UNIT COST (Rs in lakhs)			COST FOR TOTAL UNITS (Rs in lakhs)		
	TOTAL	UNIT SUBSIDY	BEN. CONT	TOTAL	SUBSIDY	BEN. CONT
28	1.000	0.750	0.250	28.00	21.00	7.00
GRAND TOTAL				**28.00**	**21.00**	**7.00**

A detailed project report shall be attached along with the application of the DCS applying for assistance

BENEFICIARY

The beneficiary shall be those DCS with an average milk collection of minimum 200 lpd. (Average of last 6 months). Preference shall be given to DCS which handles more milk per day and also those cluster DCS and Cluster BMCC

Registration Fees – Rs 500 per beneficiary DCS

IMPLEMENTATION AND MONITORING

The Deputy Director of concerned district shall be the sanctioning authority. A committee consisting of Deputy Director, Quality Control Officer and concerned Dairy Extension Officer and President of the beneficiary society shall evaluate periodically and monitor the progress of the implementation.

05.10 ASSISTANCE FOR REGIONAL DAIRY LABS AT KOTTAYAM, ALATHUR AND KASARGOD

PLAN OUTLAY – 21.00 LAKH

Department had aimed to set up regional laboratories at different parts of State to assist and support District labs under Quality Control Officers. In the financial year 2013-14, sanction had been accorded to construct 2 regional laboratories at Kasargod and Kottayam Districts. Both the regional labs have become functional and during the year 2018-19, the labs are all set for starting analysis of milk, milk products, water and cattle feed samples.

05.10.01 Details of fund sanctioned till date for newly started Regional labs at Kasargod and Kottayam

The fund allotment to 3 Regional Dairy Labs till date is as follows

REGIONAL DAIRY LAB - KOTTAYAM		
ANNUAL PLAN	**AMOUNT (Rs in Lakh)**	**AS ORDER DETAILS**
2013-14	57.79	GO(Rt) No. 2093/2013/AD dated 28.11.2013
2014-15	37.91	GO(Rt) No. 1606/2014/AD dated 30.08.2014
2015-16	128.83	GO(Rt) No. 1995/2015/AD dated 02.12.2015
2016-17	15.00	GO(Rt) No. 60/2016/AD dated 12.07.2016
2017-18	5.00	GO(Rt) No. 63/2017/AD dated 13.06.2017
2018-19	5.00	GO(Rt) No. 49/2018/AD dated 14.06.2018
2019-20	12.40	GO(Rt) No. 81/2019/AD dated 01.07.2019
2020-21	11.80	GO(Rt) No. 42/2020/DD dated 22.06.2020
2021-22	11.78	DDDKER/1364/2021-PC dated 03.04.2021
2022-23	13.51	DDDKER/1453/2022-D3 dated 21.05.2022
2023-24	12.00	DDDKER/1233/2023-D3 dated 01.06.2023
2024-25	4.00	DDDKER/1372/2024-D3 dated 03.05.2024
GRAND TOTAL	**315.02**	

REGIONAL DAIRY LAB - KASARGOD		
ANNUAL PLAN	**AMOUNT (Rs in Lakh)**	**AS ORDER DETAILS**
2013-14	192.20	GO(Rt) No. 2093/2013/AD dated 28.11.2013
2014-15	70.00	GO(Rt) No. 1606/2014/AD dated 30.08.2014
2015-16	37.18	GO(Rt) No. 1995/2015/AD dated 02.12.2015
2016-17	30.00	GO(Rt) No. 60/2016/AD dated 12.07.2016
2017-18	20.00	GO(Rt) No. 63/2017/AD dated 13.06.2017
2018-19	5.00	GO(Rt) No. 49/2018/AD dated 14.06.2018
2019-20	9.40	GO(Rt) No. 81/2019/AD dated 01.07.2019
2020-21	15.40	GO(Rt) No. 42/2020/DD dated 22.06.2020
2021-22	12.86	DDDKER/1364/2021-PC dated 03.04.2021
2022-23	5.18	DDDKER/1453/2022-D3 dated 21.05.2022
2023-24	17.00	DDDKER/1233/2023-D3 dated 01.06.2023
2024-25	2.53	DDDKER/1372/2024-D3 dated 03.05.2024
GRAND TOTAL	**416.75**	

REGIONAL DAIRY LAB - ALATHUR		
ANNUAL PLAN	**AMOUNT (Rs in Lakh)**	**AS ORDER DETAILS**
2019-20	9.4	GO(Rt) No. 81/2019/AD dated 01.07.2019
2020-21	11.8	GO(Rt) No. 42/2020/DD dated 22.06.2020
2021-22	3.38	DDDKER/1364/2021-PC dated 03.04.2021
2022-23	1.88	DDDKER/1453/2022-D3 dated

		21.05.2022
2023-24	11	DDDKER/1233/2023-D3 dated 01.06.2023
2024-25	1.51	DDDKER/1372/2024-D3 dated 03.05.2024
GRAND TOTAL	**38.97**	

05.10.02. Financial support to Regional Dairy Labs at Kottayam, Alathur and Kasargod

An amount of Rs 21.00 lakh is proposed to be included for assisting the functioning and development activities at Regional Dairy Labs (Kottayam, Alathur and Kasargod). This amount is in addition to the provision for providing wages (Consolidated Pay & Daily Wages)

The infrastructure development charges and charges incurred for other capital items shall be met under the scheme : Strengthening Quality Control Labs – Capital Head with HOA - 4404-00-109-95

REGIONAL DAIRY LAB – KASARGOD

REGIONAL DAIRY LAB – KOTTAYAM

05.10.03. FINANCIAL ASSISTANCE – ASSISTANCE FOR REGIONAL DAIRY LABS

SI.NO	PARTICULARS	REGIONAL LAB - KOTTAYAM	REGIONAL LAB - ALATHUR	REGIONAL LAB - KASARGOD
		AMOUNT (Rs In Lakh)	AMOUNT (Rs In Lakh)	AMOUNT (Rs In Lakh)
1	Purchase of Chemicals, reagent, media, glassware's etc. for routine analytical purpose, Safety gear, fire extinguishers	4.00	4.00	4.00
2	Setting up or upgrading of workstation, racks for labs, Almarah etc.	1.00	1.00	1.00
3	Training Charges / Meeting expenses / Charges for calibration	1.00	1.00	1.00
5	Other Expenses	1.00	1.00	1.00
GRAND TOTAL		**7.00**	**7.00**	**7.00**

Saving on any one component may be utilized for any other component mentioned above

OFFICE	NO. OF MONTHS	ANALYST @ Rs 30000/month	TRAINEE ANALYST @ Rs 17500/ month	TOTAL (Rs in Lakh)
REGIONAL DAIRY LAB, KOTTAYAM	12	0	2	4.2
REGIONAL DAIRY LAB, ALATHUR	12	0	2	4.2
REGIONAL DAIRY LAB, KASARGOD	12	1	2	7.8
GRAND TOTAL	**12**	**1**	**6**	**16.2**

The wages (Consolidated Pay and Daily Wages) shall be met from the sub head under 2404-00-109-95-02-4 consolidated pay and 2404-00-109-95-02-5 Daily Wages respectively.

05.11 ASSISTANCE FOR EXISTING MILK TESTING CHECK POST LABS AT MEENAKSHIPURAM, ARYANKAVU & PARASSALA

PLAN OUTLAY – 24.00 LAKH

For the purpose of ensuring the quality of milk crossing the border, and to ensure availability of safe milk to consumers of the state, the department has started permanent milk testing facility at selected check posts of Kerala.

The permanent milk testing lab at Meenakshipuram started functional during the year 2017-18, the lab at Aryankavu check post started during the year 2018-19 and the lab at Parassala check post started during the year 2019-20.

All the labs are functioning 24 X 7. Shift system (3 shifts) is followed at both Meenakshipuram check post lab, Aryankavu check post lab and Parassala Check post lab.

The milk vehicles carrying raw milk, processed milk and milk sachets are checked for sensory qualities, Physico-chemical qualities and microbiological qualities. The samples are also tested to detect the presence of adulterants, neutralisers and preservatives

PART A- DPR 2025-26 : STRENGTHENING QUALITY CONTROL LABS-ONGOING -SANCTION BY HOD

It is proposed to allot an amount of Rs 24.00 lakh for the infrastructure development, expansion of milk testing facilities, for meeting overhead expenses, meeting expenditure pertaining to payment of wages to technical staff on contract wages (both consolidated wages and daily wages) etc.

PERMANENT MILK TESTING LABORATORY – ARYANKAVU, KOLLAM DISTRICT

PERMANENT MILK TESTING LABORATORY – PARASSALA, TVM DISTRICT

03.10.01 Financial assistance to Permanent Milk

Item	Meenakshipuram Check Post (Rs in Lakh)	Aryankavu Check Post (Rs in Lakh)	Parassala Check Post (Rs in Lakh)
Purchase of Chemicals, Reagent, media, glassware etc. for routine analytical purpose	7	5	3
Setting up of work station, racks for labs, Almarah etc.	1	1	1
Rent, Rate and Taxes (including electricty charges, internet/telephone charges etc)	1	1	1
Lab maintenance charges	1	1	1
Grand Total	**10**	**8**	**6**

Savings in any scheme sub component listed above can be utilised for meeting the expenditure pertaining to any other scheme sub component

Depending upon the requirement, the Director, DDD holds the discretion to re-allot the total proposed amount of Rs 24.00 lakh between the Meenakshipuram, Aryankavu and Parassala check post.

Manpower requirement of Check Post Labs

CHECK POST LAB	NO. OF MONTHS	ANALYST @ Rs 30000/month	TRAINEE ANALYST @ Rs 17500/month	TOTAL (Rs in Lakh)
CHECK POST LAB, MEENAKSHIPURAM	12	1	4	12
CHECK POST LAB, ARYANKAVU	12	1	3	9.9
CHECK POST LAB, PARASSALA	12	1	1	5.7
GRAND TOTAL	**12**	**3**	**8**	**27.6**

Savings in any scheme sub component listed above can be utilised for meeting the expenditure pertaining to any other scheme sub component

The above amount required for manpower requirement (Wages – Consolidated Pay) shall be met from the sub head 2404-00-109-95-02 Wages – Consolidated Pay.

05.12 ASSISTANCE TO DISTRICT QUALITY CONTROL LABS

PLAN OUTLAY – 28.00 LAKH

The quality control unit labs at district level under the control of Assistant Directors / Quality Control Officers of the district are the epi-centre for Quality control activities in the district and block level. The quality control labs at district level are equipped with facilities to analyse the sensory, Physico-chemical and microbiological quality of milk being produced at farm level, being transported, stored, chilled and / or processed at DCS level and also marketed in the district. The Quality Control Officers are assisted by Lab attenders and also Lab Assistants to carry out QC activities in the district. The Quality Control Officers also act as Nodal Officers for KDFWF activities. The main activities at QC units are as detailed below.

a. In charge of the quality control activities of the district

b. Sampling and testing the quality of milk at farm level, DCS level and market samples
c. Assisting the Deputy Directors and organising and co-ordinating the quality control drives organised by the Department at district level
d. Quality assurance activities at BMCC level
e. Organising Cluster BMCC meetings
f. Nodal Officer for KDFWF activities in the district
g. Guiding the Dairy Extension Officers for taking measures to ensure quality milk production, handling, processing and marketing at DESU level
h. Organising Quality Awareness Programmes and Consumer Interface Programmes in the district
i. Co-ordination with P & I units of regional unions for ensuring quality control programmes in DCS and other production cum marketing pockets.
j. Implementation of Quality related aspects
k. To organise and undertake special quality assurance programmes initiated by the Department.

SI.NO	ITEM	RATE PER DISTRICT	PLAN PROVISION FOR 14 DISTRICTS
		(Rs)	(Rs in Lakh)
1	Purchase of testing equipment / chemicals / reagents / testing media / Purchase of rack or shelf / purchase of market milk sample for testing / rapid adulterant & Aflatoxin detection kit /utensils/ glassware / Purchase of face mark, disinfectants, hand sanitizers etc. for distribution to Dairy Co-operatives / safety gear/fire extinguisher, consumables for testing kit or equipment	70,000	9.80
2	Calibration of testing equipment,glasswares	7,000	0.98
3	Rent, Rate and Taxes	5,000	0.70
4	Preparation of brochure, leaflets and other publication related to quality control activities	6,000	0.84

5	Meeting expenditure pertaining to fuel charges (related to QC activities) - Max	24,000	3.36
6	Repair and Maintanance of QC unit vehicle plus purchase of other vehicle utilities - Max	11,000	1.54
7	Purchase and/or repair of computers/printers, Purchase/Refilling of printing toners etc in the QC unit. Purchase of other electronic gadgets - Max	37,000	5.18
8	Cluster BMCC meeting charges (limited to Rs 3000 per meeting) and expenditure pertaining to other QA related training activities in the district taken up by the QC unit.	24,000	3.36
9	Telephone charges, Internet charges, Photostat charges etc	14,000	1.96
10	Miscellaneous expenditure	2,000	0.28
GRAND TOTAL		**200,000**	**28.00**

Savings in any sub scheme component cited above (except for scheme components listed as SI.No 05, 06 and 07) can be utilised for meeting the expenditure pertaining to any other scheme component specified above

05.13 ASSISTANCE TO MOBILE QUALITY CONTROL UNITS

PLAN OUTLAY – 04.00 LAKH

All the districts are attached with a mobile quality control lab. The mobile lab is equipped with milk quality testing equipment, utensils, facilities for performing rapid adulterant kit tests, facilities for cleaning testing utensils, glass wares etc.

The mobile quality control unit is an integral part of the quality assurance facility of the dairy development department. The Mobile QC unit is under the control of the district level Quality Control Officer.

The scheme component with a plan outlay of **Rs 4.00 lakh** is intended for

1. Enhancing the infrastructure and testing facility of the Mobile Quality Control Units in 14 district
2. Alterations in the vehicle so as to ensure an effective make over to Mobile QC unit.

3. Purchase of chemicals, testing materials, testing equipment for the Mobile QC unit.
4. To meet the expenses pertaining to fuel charges for effective use of Mobile Quality Control Unit (with the prior approval of The Director, DDD)

The allotment of amount shall be in a need based manner to various districts. Quality Control officers shall forward a detailed request detailing the fund needed for efficient and effective use of Mobile QC labs under their control.

05.14 IMPLEMENTATION, MONITORING AND DOCUMENTATION CHARGES

PLAN OUTLAY – 2.44 LAKH

Rs 2.44 lakh is included as implementation, documentation and monitoring charges

05.15 WAGES TO CONTRACT STAFF AT SDL, RDLs & STATE CHECK POST

05.15.01 - SQCL-Wages-Consolidated Pay (2404-00-109-95-02 Wages-04 Consolidated Pay)

Rs 67.40 lakh is benchmarked under this HOA

OFFICE	NO. OF MONTHS	ANALYST @ Rs 30000/ month	TRAINEE ANALYST @ Rs 17500/ month	TECH. SUPPORT @ Rs 17,500/ month	TOTAL (Rs in Lakh)
STATE DAIRY LAB	12	6	0	1	23.58
REGIONAL DAIRY LAB, KOTTAYAM	12	0	2	0	4.2
REGIONAL DAIRY LAB, ALATHUR	12	0	2	0	4.2
REGIONAL DAIRY LAB, KASARGOD	12	1	2	0	7.8
CHECK POST LAB, MEENAKSHIPURAM	12	1	4	0	12
CHECK POST LAB, ARYANKAVU	12	1	3	0	9.9
CHECK POST LAB, PARASSALA	12	1	1	0	5.7
MISCELLENEOUS CHARGES					0.02
GRAND TOTAL	12	10	14	1	67.4

05.15.02 - SQCL-Wages-Daily Pay (2404-00-109-95-02 Wages-05 Daily Wages)

Rs 8.51 lakh is benchmarked as SQCL Wages – Daily Wages

06 IMPLEMENTATION, DOCUMENTATION AND MONITORING OF THE SCHEME

The Quality Control officers shall implement the programme with the guidance of the concerned Deputy Director of the district. The Joint Director, SDL shall monitor, evaluate and report the progress of the activities related to State Dairy Lab. Tvm. The Joint Director (Planning), The Deputy Director (Planning) and The Technical Cell, Directorate with the guidance of The Deputy Director (Extension) shall monitor and periodically evaluate the progress of the various scheme components. The Director, Dairy Development shall be the authority for state wide implementation of the scheme components under this scheme.

07 CALENDER OF ACTIVITIES

Implementation Stages	Time Limit
Propaganda for the programme	before 05.06.2025
Advertising	before 25.06.2025
Inviting applications	before 10.07.2025
Scrutiny of application	before 10.08.2025
Selection of beneficiary / beneficiary DCS	before 15.09.2025
Publishing select list	before 20.09.2025
Completion of scheme component	before 10.12.2025
Evaluation / Monitoring	Before 31.12.2025
Sanction of plan assistance	before 10.01.2026

08 CONCLUSION

The various components detailed in the plan project for the financial year 2025-26 are aimed at improving the Physico-chemical and microbiological quality of milk and to ensure cold chain mechanism to envisage the concept of from farm to fork of Total Quality Management system. The scheme components are aimed at improving the quality assurance mechanism of the Department at various strata. The testing labs like labs at DCS, QCO level labs, Mobile QC units, Regional Dairy Labs, Check Post Labs, State Dairy Lab will be strengthened and will ensure maximum efficiency and effectiveness. Safe and Fresh milk to consumers will be ensured. The projects also focussed to assure the safety of consumers by assuring the quality of milk and milk products marketed in our state too. Provisions are included for advanced training for department level staff in the area of quality control activities. A component is proposed as a measure to equip the district level labs for detection of antibiotics residues in milk and aflatoxin residues in feed samples and compounded feed stuff

The implementation of the programme will definitely help to improve the quality of milk procured and consumed. Also it will help to follow FSSR guidelines.

DIRECTOR

ANNEXURE

STRENGTHENING QC LABS 2024-25 - REVENUE HEAD (ONGOING SCHEME COMPONENTS) 2404-00-109-95 REGISTRATION FEES & UNIT COST DETAILS			
PARTICULARS	2024-25		
	REGISTRATION FEES	ONE UNIT	
		Total	Unit Subsidy
		Rs	Rs
SQCL OC (REVENUE)- 2404-00-109-95-34-03 OTHER ITEMS			
Assistance for improving farm level hygiene at farm level	250	150000	75000
Need Based Assistance to DCS for improving the quality control activities	250	50000	37500
Setting up of advanced milk testing facility and completion of missing link for DCS	500	100000	75000

DAIRY DEVELOPMENT DEPARTMENT

PLAN SCHEME 2025-26

PART B :

STRENGTHENING QUALITY CONTROL LABS

(ONGOING SCHEME COMPONENTS OF REVENUE HEAD)

2404-00-109-95-34-OC-03-OTHER ITEMS

PLAN OUTLAY: RS. 82.00 LAKHS

&

PART C

SQCL -CAPITAL HEAD (4404-00-109-95)

PLAN OUTLAY : RS. 300.00 LAKH

DETAILED PROJECT REPORT

EXECUTIVE SUMMARY

STRENGTHENING QUALITY CONTROL LABORATORY (SQCL)

PART B & PART C

PART B - SQCL REVENUE – Rs 82.00 LAKH
2404-00-109-95-34-OC-03 OTHER ITEMS
&
PART C - SQCL CAPITAL – Rs 300.00 LAKH
4404-00-109-95

During 2025-26, an amount of **Rs. 500.00 Lakh** has been earmarked to the Department under the State Plan for implementation of the scheme Strengthening Quality Control Labs (Revenue Head) with HOA 2404-00-109-95**.** Further an amount of Rs 300.00 lakh is bencmarked for implementation of components under the Capital Head of Strengthening QC Labs (4404-00-109-95)

The Breakups of the financial outlay under Strengthening Quality Control Laboratory programme as follows

SQC LABS –OC (2404-00-109-95-00-34-OC-03-Other items)	**Rs 424.09 Lakh**
SQC LABS –WAGES – CONSOLIDATED PAY (2404-00-109-95-00-02-04-P-V)	**Rs. 67.40 Lakh**
SQC LABS –WAGES – DAILY WAGES (2404-00-109-95-00-02-05-P-V)	**Rs. 8.51 Lakh**
GRAND TOTAL – SQC LABS –REVENUE HEAD (2404-00-109-95)	**Rs. 500.00 Lakh**

SQC LABS – CAPITAL HEAD (4404-00-109-95)	**Rs 300.00 Lakh**

The various components detailed in the plan project for the financial year 2025-26 are aimed at improving the physico-chemical and microbiological quality of milk and to ensure cold chain mechanism to envisage the concept of from farm to fork of Total Quality Management system. The scheme components are aimed at improving the quality assurance mechanism of the Department at various strata. The testing labs like labs at DCS, QCO level labs, Mobile QC units, Regional Dairy Labs, Check Post Labs, State Dairy Lab will be strengthened and will ensure maximum efficiency and effectiveness. Safe and Fresh milk to consumers will be ensured. The projects also focussed to assure the safety of consumers by assuring the quality of milk and milk products marketed in our state too..

The total budget share for the scheme Strengthening Quality Control Laboratory Programme for the year 2025-26 is **Rs. 500.00 Lakh**. Out of 17 scheme components under this HOA, 16 scheme components are ongoing in nature with a total plan outlay of Rs 418.00 lakh. Hence as per the existing norms, the Director,DDD being the Head of Department has already accorded administrative sanction to those schemes with an outlay of less than Rs 5.00 crore, which are on-going in nature with no change in component outlay and subsidy amount (vide proceedings No. DDDKER/1648/2025-D3 dated 24.04.2025 of The Director, DDD)

1 scheme component (Assistance to NABL accredited State Dairy Lab) with a total outlay of Rs 82.00 lakh is a modified scheme component and needs the approval of Departmental Working Group.

Under the SQCL CAPITAL Head, the components intented for infrastructure development of various labs, amounting to Rs 300.00 lakh is placed before the DWG for approval

STRENGTHENING QC LABS 2025-26 - REVENUE HEAD (ONGOING SCHEME COMPONENTS - SANCTION BY HOD 2404-00-109-95		
SCHEME WITH HOA	**NO. OF SCHEME COMPONENTS**	**AMOUNT (Rs in Lakh)**
SQC LABS – OC (2404-00-109-95-00-34-OC-03-Other items)	14	342.09
SQC LABS –WAGES – CONSOLIDATED PAY (2404-00-109-95-00-02-04-P-V)	1	67.40
SQC LABS –WAGES – DAILY WAGES (2404-00-109-95-00-02-05-P-V)	1	8.51
GRAND TOTAL - SQC LABS - REVENUE (ONGOING SCHEME COMPONETS) (2404-00-109-95)	**16**	**418.00**

STRENGTHENING QC LABS 2025-26 - REVENUE HEAD (MODIFIED SCHEME COMPONENTS) 2404-00-109-95-34-OC-03 Other Items		
SCHEME WITH HOA	**NO. OF SCHEME COMPONENTS**	**AMOUNT (Rs in Lakh)**
SQC LABS – OC (2404-00-109-95-00-34-OC-03-Other items)	1	82.00

STRENGTHENING QC LABS 2025-26 - CAPITAL HEAD (MODIFIED SCHEME COMPONENTS) 4404-00-109-95		
SCHEME WITH HOA	**NO. OF SCHEME COMPONENTS**	**AMOUNT (Rs in Lakh)**
SQC LABS – CAPITAL (4404-00-109-95)	**2**	**300.00**

STRENGTHENING QC LABS (REVENUE) 2025-26
2404-00-109-95-34-OC-03 OTHER ITEMS

SCHEME COMPONENTS	2025-26				
	No. of Units	ONE UNIT		TOTAL UNITS	
		Total	Unit Subsidy	Total	Total Subsidy
		Rs	Rs	Rs in Lakh	Rs in Lakh
Assistance for State Dairy Lab, Tvm	1	8200000	8200000	**82.000**	**82.000**
GRAND TOTAL - 2404-00-109-95-34-03 OTHER ITEMS				**82.000**	**82.000**

STRENGTHENING QC LABS 2025-26 - CAPITAL HEAD
4404-00-109-95

PARTICULARS	2025-26				
	No. of Units	ONE UNIT		TOTAL UNITS	
		Total	Unit Subsidy	Total	Total Subsidy
		Rs	Rs	Rs in Lakh	Rs in Lakh
Infrastructure Development and Installation of quality testing equipments for NABL accredited State Dairy Lab at Pattom, Tvm	1	22500000.000	22500000.000	**225.000**	**225.000**
Infrastructure development, purchase of testing equipments, glasswares, utensils for District QC Labs, Regional Dairy Labs, Mobile QC Labs and State Check Post Labs	30	Lumpsum	Lumpsum	**75.000**	**75.000**
GRAND TOTAL				**300.000**	**300.000**

Savings in any scheme component shall be utilized for meeting the expenditure pertaining to any other scheme component with the same Head of Account

INDEX

PARA NO.	PARTICULARS	PAGE NO
	Executive Summary	
1.00	**General Introduction**	
1.02	**Importance of QA activities**	
2.00	**General Objectives**	
3.00	**Quality Control Programmes & State Budget Provision 2025-26**	
4.00	**Financial Outlay**	
5.00	**Scheme Proper - SQCL REVENUE**	
5.01	*Assistance to NABL Accredited State Dairy Lab*	
5.02	**Scheme Proper - SQCL CAPITAL**	
5.03	*Infrastructure Development and Capital items for NABL Accredited State Dairy Lab*	
5.04	*Infrastructure Development and Capital items for Regional Dairy Labs, District QC labs, State Check Post Labs, Mobile QC Labs etc*	
6.00	**Implementation, Documentation and Monitoring**	
7.00	**Calender of activities**	
8.00	**Conclusion**	
	Annexure	

01.GENERAL INTRODUCTION

The General Introduction part will be covered in the initial part of the document

01.02 IMPORTANCE OF QA ACTIVITIES

Milk being the perfect food which has to be produced and handled under hygienic conditions to ensure the safety of the consumers as well as to prevent spoilage. The food safety and standards regulations 2011 has also laid down several measures to ensure the safety of the milk produced in the farms. The scheme envisages assisting the dairy farmers of the state to purchase hygiene kits and renovate their cattle farms especially the floor which would enable to ensure that the microbial load of the milk is minimized and would prevent losses to the farmers through spoilage of milk. Department is also focusing various steps to keep the milk as fresh as possible, when it reaches dairy plants in the organised sector and thus to the consumer. Department is taking steps to assure quality of milk through BMC units installed across the state.

Besides being a health hazard, contamination of milk can lead to huge economic losses. Contamination occurs at different levels: at farm level, during collection and storage, and at processing centres. Milk contains many essential nutrients, such as carbohydrates, proteins, lipids, minerals and vitamins and therefore acts as an ideal medium for rapid proliferation of harmful micro-organisms. Milk needs to be protected from all possible sources of microbial contamination and various types of disease organisms.

Milk testing and quality control is an essential component of any milk processing industry irrespective of its handling volume. Milk being made up of 87% water and is prone to adulteration by unscrupulous middlemen and unfaithful producers for getting higher value. Moreover, its high nutritive value makes it an ideal medium for the rapid multiplication of bacteria, particularly under unhygienic production and storage at ambient temperatures. Besides ensuring the quality of milk being procured at farm level, milk transported, handled, stored, chilled/processed at Dairy Co-operatives, the Dairy Development Department is committed to ensure the availability of fresh, adulterant free and pure milk to the consumers of the state. The Quality control activities of the Department are channelled through the following department level institutions

- NABL Accredited State Dairy Lab, Pattom, Thiruvananthapuram
- Regional Dairy Labs at Kottayam, Alathur and Kasargod.
- District Level Quality Control Units headed by Quality Control Officers

- Check Post Labs at Meenakshipuram (Palakkad), Aryankavu (Kollam) and Parassala (Thiruvananthapuram)
- Mobile Quality Control Labs

02. GENERAL OBJECTIVES OF SCHEME COMPONENTS COVERED UNDER SQC LABS

The proposed scheme is aimed to

- Assurance of quality of milk and milk product especially during festival season to ensure consumer well being
- To undertake special quality control drives throughout the state.
- To undertake a special quality drive for detection of antibiotic in milk and aflatoxin in milk and feed samples
- To improve the quality of milk produced and procured at farm level by implementing clean milk production drive in selected 3 districts
- Assist modernisation and strengthening of existing laboratories in the state and to create new testing labs
- To improve the infrastructure and testing facilities of State Dairy Lab
- Accreditation of existing laboratories under IS 17025 (NABL)
- Improve testing facility at DCS with Bulk Milk Chilling Centres
- Improve the overall hygiene of BMCC
- To assist DCS to improve the quality of water used for cleaning equipment, chiller, etc.
- Providing assistance to DCS with BMCC for ensuring effective effluent treatment mechanism
- Providing hygienic milk production kit to selected districts.
- Provide assistance to DCS for purchasing BMCC cleaning and sanitising agents
- Provide assistance to DCS for completing missing link in the procurement line

- Provide need based assistance to DCS with BMCC for ensuring quality milk procurement, chilling, storing and transportation.
- Assistance for improving farm level hygiene in Commercial Dairy Farms
- Specialised quality control training to department officials and DCS personnel
- Assistance for infrastructure development and expansion activity of Regional Dairy Labs at Alathur, Kottayam and Kasargod.
- Assistance for infrastructure development and expansion activity of NABL accredited State Dairy Lab at Thiruvananthapuram.
- To take all possible measures to ensure that superior quality milk (w.r.t sensory, Physico-chemical and microbiological quality) is produced at farm level, being handled at different levels, chilled / processed at different chilling / processing units and being marketed in the state and hence ensuring fresh and safe milk to consumers.

03. QUALITY ASSURANCE PROGRAMMES AND STATE BUDGET PROVISIONS 2025-26 UNDER REVENUE HEAD & CAPITAL HEAD

An amount of Rs 500 lakh is earmarked for implementation of various scheme components under the scheme **Strengthening Quality Control Labs** with H. O. A – 2404-00-109-95. In the budget document 2025-26, Rs.500 Lakh is divided under 3 subheads

SQC LABS –OC (2404-00-109-95-00-34-OC-03-Other items)	**Rs 424.09 Lakh**
SQC LABS –WAGES – CONSOLIDATED PAY (2404-00-109-95-00-02-04-P-V)	**Rs. 67.40 Lakh**
SQC LABS –WAGES – DAILY WAGES (2404-00-109-95-00-02-05-P-V)	**Rs. 8.51 Lakh**
GRAND TOTAL – SQC LABS –REVENUE HEAD (2404-00-109-95)	**Rs. 500.00 Lakh**

STRENGTHENING QC LABS 2025-26 - CAPITAL HEAD (MODIFIED SCHEME COMPONENTS) 4404-00-109-95		
SCHEME WITH HOA	**NO. OF SCHEME COMPONENTS**	**AMOUNT (Rs in Lakh)**
SQC LABS – CAPITAL (4404-00-109-95)	**2**	**300.00**

The total budget share for the scheme Strengthening Quality Control Laboratory Programme (Revenue Head) for the year 2025-26 is **Rs. 500.00 Lakh.** Out of the 17 scheme components under this HOA, 16 scheme components are ongoing in nature with a total plan outlay of Rs 418.00 lakh. Administrative sanction has already been issued vide proceedings no. DDDKER/1648/2025-D3 dated 24.04.2025 of The Director, DDD

1 scheme components with a total outlay of Rs 82.00 lakh is modified in nature and needs the approval of Departmental Working Group.

Under the SQCL CAPITAL Head, the components intented for infrastructure development of various labs, amounting to Rs 300.00 lakh is placed before the DWG for approval

04. FINANCIAL OUTLAY – SQCL REVENUE – ONGOING SCHEMES

STRENGTHENING QC LABS (REVENUE) 2025-26 2404-00-109-95-34-OC-03 OTHER ITEMS					
SCHEME COMPONENTS	**2025-26**				
	No. of Units	**ONE UNIT**		**TOTAL UNITS**	
		Total	**Unit Subsidy**	**Total**	**Total Subsidy**
		Rs	**Rs**	**Rs in Lakh**	**Rs in Lakh**
Assistance for State Dairy Lab, Tvm	1	8200000	8200000	**82.000**	**82.000**
GRAND TOTAL - 2404-00-109-95-34-03 OTHER ITEMS				**82.000**	**82.000**

Savings in any scheme component can be utilized for meeting the expenditure pertaining to any other scheme component in the same HOA

B.05 SCHEME PROPER

B. 05.01 ASSISTANCE TO STATE DAIRY LAB

Rs 82.00 LAKH

State Dairy Laboratory is one of the initiatives of Government of Kerala with the help of Central Government aided fund, under the flagship of Dairy Development department, to assure the quality of milk and milk products being consumed in our state. The concept of creation of state run Dairy Laboratory is first of its nature in India. This centralized laboratory was inaugurated on 21.04.2010 and occupies state of art imported machineries to cater the various microbiological and chemical analyses of milk and milk products. In addition to this, Lab also analyses the quality of cattle feed and the water including packaged drinking water.

Laboratory carries out all the testing activities in accordance with the international standard ISO 17025 : 2017 satisfying the needs of the customer. SDL is a part of Dairy Development Department and has a well-defined and documented organizational structure in order to identify potential conflicts of interest and prevent an involvement or influence on the testing activities of the laboratory. It is the policy of SDL, that, the laboratory shall not engage in any activity that may endanger its independence of judgment and integrity, in relation to its testing activities.

State Dairy Laboratory(SDL) is a multi-disciplinary NABL Accredited Laboratory established under the Dairy Development Department, Kerala. SDL offers a wide range of reliable and accurate analytical testing services in the field of Milk & Milk products, Water and Animal Feed and Feed Ingredients, Food Materials, Grains and Other Consumables assuring the quality of these products supplied across the State. SDL follows a Quality Management System based on ISO 17025: 2017 to ensure the Operational Integrity and Confidentiality.

B. 05.01.01 SCOPE OF ACTIVITIES

ISO 17025:2017 NABL ACCREDITATION FOR 99 PARAMETERS in Chemical and Microbiology divisions

- ISO 9001:2008 CERTIFIED
- CALIBRATION OF GLASSWARES
- TRAINING PROGRAMME

B. 05.01.02 ROLE OF SDL

Samples from all over Kerala is being analysed for microbiological and chemical parameters and which is being reported to Director, Dairy Development and then to respective District Quality Control Officers to take proper remedial action in case of any quality violation. A copy of report is also circulated to Government as well as Commissionerate of Food Safety. SDL collects samples from private parties (Farmers, Consumers and Private Dairies) also. A testing fee is being collected as revenue generation for the department. SDL also provides facilty for calibration of glassware for primary Co-Operative societies as well as for various private dairies. Fully fledged state of art microbiology lab with modern imported machineries like Tempo(R) and Vidas(R) facilitates rapid estimation of microbiological quality including species level detection of pathogens of milk, milk products and water samples. Chemistry lab supported with AAS, GC and HPLC can provide compositional analysis to express results in parts per billion. Lab provides special quality check drives in Capital city during festival seasons to ensure the quality of milk supplied from other states and also impart training programmes to persons of respective fields.

B. 05.01.03 QUALITY POLICY OF THE STATE DAIRY LAB

State Dairy Laboratory is committed to provide services of excellence in analysis/testing of Milk, Milk Products, Water and Food as per International standards by adopting good professional practices, skill, experience , technical knowledge of the Personnel through impartial , competent and consistent laboratory operations and thereby achieve confidence and best possible satisfaction of our invaluable customers, stakeholders, statutory & regulatory bodies and pledge to provide accurate and reliable test results along with maintaining their confidentiality and familiarizing all the personnel with the documentation and implementation of the policies and the procedures in their work with conformity and Continuous improvement in the Quality Management System as per ISO/ . IEC/17025:2017.

B. 05.01.04 CHEMICAL DIVISION

Lab is equipped to do all tests to check the quality of milk and milk products like various physical as well as chemical attributes. We have facilities to check all compositional parameters, quality of milk i.e. presence of adulterants, preservatives, neutralizers etc.

In addition to this lab is equipped with High Performance Liquid Chromatography (HPLC - Waters), Gas Chromatography (GC - Schimadzu),Automated Fibre Extraction Unit, Automated Fat Extraction Unit ,AAS (Atomic Absorption Spectrophotometer) to check various metals and heavy metals in food, milk ,water and feed , HPLC Machine to quantify the aflatoxins in food in ppb level. Various coloured compounds as well as

concentration of liquids can be identified by using UV VIS spectrophotometer.

Lab also assures the chemical quality of Milk products like SMP, Ice cream, Cheese, butter, Ghee and all indigenous milk products. Lab is gearing up to analyze all parameters of Cattle Feed.

Sophisticated Equipment and related Tests in Chemical Division

Chemistry

- **High Performance Liquid Chromatography**

Analysis of Aflatoxin M1 in milk, Aflatoxin B1 in cattle feed, Veterinary drug residues in feed, melamine in milk powder, vitamins

- **Gas Chromatography**

Pesticide residues in milk, water and Fatty acid profiling in ghee

- **UV Spectrophotometer**

Urea in Cattle feed, metals in milk and water

- **Atomic Absorption Spectrophotometer**

Analysis of metals like iron, copper, Zinc, including heavy metals like lead, Cadmium in food and water

- **Automated Equipment (Soxtec, Fibertec)**

Determination of Crude fat & Fiber, protein ,urea in Cattle feed

- **Real Time PCR machine :** A1- A2 casein in milk & its products

B. 05.01.05 . MICROBIOLOGY DIVISION

Microbiology division of State Dairy Lab is well equipped with all the testing equipments and experienced microbiologists to handle testing of various products like milk, milk products, water and food products .complete microbiological testing facility accredited by nabl is maintained here including pathogenic testing for bacterias like *Salmonella,Shigella ,Clostridium and Pseudomonas.*

The lab consists of TEMPO and VIDAS systems (FSSAI/ AOAC/BAM Approved) to analyze the micro biological quality of milk and milk products . These equipments give faster and accurate results in comparison to conventional methods. Lab also has the facility to identify all milk related microorganisms conventionally. Various Tests which can be performed in our Microbiology Lab is appended below. Standard Plate count

1. Coliform count
2. Yeast and Mould
3. *Escherichia coli*

4. *Salmonella*
5. *Shigella*
6. *Staphylococcus aureus*
7. *Listeria monocytogenes.*
8. Spore forming bacteria (Aerobic and anaerobic)
9. Pseudomonas.

Lab is having the facility for various staining techniques supported by bright field microscopes which ease the typing of bacteria. SDL have the facilities to give the *complete* results with in 72 hrs after receiving samples. VIDAS system can provide results within an hour regarding the presence of pathogens in milk and Milk products.

In addition to this, lab can also assure the quality of milk, milk products by doing Dye reduction tests (MBRT, Resazurin), Phosphatase test (Using Lovibond Comparator) and Sterility test. Thus Lab can provide a complete package to all Dairies functioning in our State.

Other features:

1. Species level identification in case of pathogens
2. Environmental (Air, water, equipment) sterility checking
3. Personnel Hygiene checking
4. Microbiological analysis of Packing Materials.

Training facilities

1.Training for laboratory personnel in analytical skills and GLP.
2.Training related to plant/personal Hygiene as per ISO and FSSAI.
3.Training for students,professionals and Staffs of Different Departments

Sophisticated Equipment and related Tests in Microbiology Division

- **TEMPO -** Rapid enumeration of microbial count including total viable count, coliforms, staphylococcus, Enterobacter in food
- **VIDAS -** Rapid determination of pathogens like Ecoli, Salmonella, Campylobacter, Listeria in food
- **UV Chamber**
- ***Determination of fluorescence of Pseudomonas species***

B. 05.01.06 DETAILS OF SAMPLE COLLECTION

SAMPLE	2016 -17	2017 - 18	2018 - 19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Cattle feed	236	306	186	212	103	144	169	198	294
Milk & Milk Products	264	209	134	88	22	51	49	89	93
Water	32	80	198	210	207	330	185	306	666
Calibration	1160	137	1799	1296	1378	1163	786	1417	2447
Cereal, Cereal Product & other foods	0	0	0	0	0	0	0	0	9
TOTAL	**1,692**	**732**	**2,317**	**1,296**	**1,710**	**1,688**	**1,189**	**2,010**	**3,509**

B. 05.01.07 INCOME GENERATION

YEAR	AMOUNT (RUPEES)
2016-17	1,73,448
2017- 8	4,51,766
2018-19	9,97,138
2019-20	9,32,234
2020-21	9,50,386
2021-22	9,07,272
2022-23	5,34,201
2023-24	10,43,539
2024-25	16,00,153

SDL is equipped to analyse 590 parameters for ensuring the quality of Milk, Milk Products, Water and Cattle Feed. In future, the SDL will also be serving as an advanced training centre for department officials and other personnel.

At present the SDL is headed by Joint Director (SDL) / Quality Manager. The Quality Manager is assisted by an Assistant Director (Head of Division), Analyst-Microbiologist (permanent -1, Contract basis-2) and Analyst-Chemical (Permanent-1, Contract basis-2).

DAIRY DEV. DEPARTMENT : STATE PLAN 2025-26 - DPR
PART B & C - STRENGTHENING QUALITY CONTROL LABS- SQCL REVENUE + SQCL CAPITAL

SQCL 2025-26 - REVENUE HEAD (2404-00-109-95-34-OC-03 OTHER ITEMS)		
1	Recurring expenditure	Amount (Rs in Lakh)
	a) Chemicals, Reference Standards and medias	35.00
2	Purchase of testing, adulterant detection kits	5.00
3	NABL Fees and audit related expenses	8.00
4	Training for SDL officers	10.00
5	Publicity, Documentation	5.00
6	Website development and maintenance charges	5.00
7	Fumigation, Pest Control charges	1.00
8	Waste disposal expenses	1.00
9	Proficiency Testing Charges	3.00
10	Fire & EEP Insurance Policy	3.00
11	Breakdown repair and Preventive Maintenance Charges	5.00
12	Other Miscelleneous	1.00
TOTAL FINANCIAL OUTLAY		**82.00**

PART C

SQCL – CAPITAL HEAD

PLAN OUTLAY – Rs 300.00 LAKH

C. 01 SCHEME PROPER – SQCL CAPITAL

C. 01. 01. INFRASTRUCTURE DEVELOPMENT & INSTALLATION OF NEW QUALITY ANALYSIS EQUIPMENTS FOR STATE DAIRY LAB - Rs 225.00 LAKH

Kerala with the help of Central Government aided fund, under the flag ship of Dairy Development department, to assure the quality of milk and milk products being consumed in our state. The concept of creation of state run Dairy Laboratory is of first in its nature in India. This centralized laboratory was inaugurated on 21.04.2010 and occupies state of art imported machineries to cater the various microbiological and chemical analyses of milk and milk products. In addition to this, Lab also analyses the quality of cattle feed and the water including packaged drinking water.

Laboratory carries out all the testing activities in accordance with the international standard ISO 17025 satisfying the needs of the customer. SDL is a part of Dairy Development Department and has a well-defined and documented organizational structure in order to identify potential conflicts of interest and prevent an involvement or influence on the testing activities of the laboratory. It is the policy of SDL, that, the laboratory shall not engage in any activity that may endanger its independence of judgment and integrity, in relation to its testing activities.

State Dairy Laboratory(SDL) is a multi-disciplinary NABL Accredited Laboratory established under the Dairy Development Department, Kerala. SDL offers a wide range of reliable and accurate analytical testing services in the field of Milk & Milk products, Water and Animal Feed and Feed Ingredients, Food Materials, Grains and Other Consumables assuring the quality of these products supplied across the State. SDL follows a Quality Management System based on ISO 17025: 2017 to ensure the Operational Integrity and Confidentiality.

The scheme component envisaged the following.

Upgradation of the State Dairy laboratory to State Reference Laboratory for testing Dairy, Food and feed products equipped with latest Modern equipments . Since this is the only NABL Accredited dairy product testing lab in Kerala and has all the basic infrastructure for developing into food testing lab and become a FSSAI Reference Laboratory for testing all the parameters related to FSSAI Regulations . Now the Lab is NABL accredited for around 590 parameters in milk, milk products, water and feed . Considering the Laboratory is from Government of Kerala and can be available to common man of India and can impart a great contribution

in providing Food security and safety to Public. The Project Proposal includes purchase of Most modern equipments like HPLC/UPLC, UV SPECTRO PHOTOMETER,AUTOMATIC PROTEIN ANALYZER, FIBRE ANALYZER , FAT ANALYZER etc. for testing Foodsafety contaminants and residues like Aflatoxins, Antibiotics ,Pesticides and Heavy metals and can ensure greater level of Food Security and Food Safety of People. In Government sector only limited number of Labs are available for testing Contaminants and Residues . If Project proposal is approved ,it will be great for the most of the food industries, Dairy Industries and water Producing Companies of Kerala as currently the Companies are giving Sample to neighbouring states for Complete FSSAI testing of their products. As the testing will be chargeable as per FSSAI rate, income of the State Government will be increased

SL. No	Description (equipment/ work)	Amount (Rs in Lakhs)
1	Semi Automatic Fat analyzer	25.00
2	Microwave digestion System	30.00
3	U V Spectophotometer	10.00
4	Bacteriological Incubator - 2 No.s	2.00
5	Hot plate 2 no.s	1.00
6	Nitrogen evaporator	4.14
7	Lovibond comparator	1.00
8	Muffle furnace with ramping	4.50
9	Water bath	0.80
10	Hot Air oven - 2 No.s	4.00
11	Membrane filtration apparatus	1.00
12	HPLC pump - 2 No.s	20.00
13	Painting of Chemistry lab	5.00
14	Vortex mixer	0.25
15	Furniture	5.00
16	Fumehood	5.00
17	Calibration of equipments & glasswares	2.85

18	AMC Of Equipments	10.00
19	Electronic gadgets including printers and computers and soft ware	2.00
20	Airconditioners 10 nos	5.00
21	VIDAS machine Soft Ware & P C	3.56
22	VIDAS Kits	4.00
23	AAS Lamps & Ultrasonic bath	2.00
24	Refrigerator - 2 No.s	1.00
25	Completion of electrical related works (entrursted to KPHCC) & Civil works releated to renovation of existing SDL Lab	75.00
26	Miscelleneous Charges	0.90
GRAND TOTAL - ASSISTANCE TO STATE DAIRY LAB		**225.00**

State Dairy Lab – Description of components

1. **Semi-Automatic Fat Analyser**

   S**emi-Automatic Fat Analyser Machine** is a laboratory instrument used primarily to determine the **fat content** of various food products, feed and feed ingredients. It combines some level of automation with manual operation to balance efficiency and cost, making it ideal for food testing labs. This machine typically uses the **Soxhlet extraction method**, which is a standard technique for fat determination. In this method, a solvent extracts fat from a dried food sample. The Semi-Automatic model automates some steps like heating, solvent recovery, or extraction timing, while other steps (such as sample preparation and loading) are performed manually. This machine is very essential for a feed testing laboratory

2. **Microwave Digestion System**

   A M**icrowave Digestion System** is a crucial instrument in food testing lab especially when preparing samples for **elemental analysis** (like heavy metals or minerals). It uses **microwave energy** to accelerate the digestion of food samples with acids, transforming complex organic matrices into clear solutions suitable for techniques like **ICP-OES**, **ICP-MS**, or **AAS**.

A single microwave high capacity Microwave Digestion system is used for the preparation of feed samples to analyse the presence of heavy metals.

3. UV Spectrophotometer

A **UV-Vis Spectrophotometer** (Ultraviolet-Visible Spectrophotometer) is a widely used analytical instrument in food testing laboratories for **quantitative and qualitative analysis** of substances that absorb light in the UV (200–400 nm) and visible (400–800 nm) regions of the spectrum. This equipment is used for analysing urea in cattle feed, quantifying fluorides, nitrates etc. in water, amino acids and minerals in food samples. Other uses are determination of food additives and preservatives, Protein and amino acid analysis, Vitamin analysis, Colour measurement in food and beverages, Phenolic compounds and antioxidants in food products.

4. Bacteriological Incubator

A Bacteriological Incubator is a laboratory instrument used to grow and maintain bacterial cultures under controlled conditions. It is used generally for micro biological analysis of Dairy and food Products. A bacteriological incubator is designed to regulate temperature (typically between 25°C to 37°C, depending on the microorganism), humidity, and other environmental parameters. These incubators include features for temperature uniformity**,** precision, and adjustability to ensure consistent and accurate results.

5. Hot Plate

A laboratory Hot Plate is an instrument used to uniformly heat samples in a lab testing. It is commonly used for tasks like, heating chemical solutions, evaporating solvents, sterilising tools, and for maintaining a reaction temperature.

6. Nitrogen Evaporator with Nitrogen Cylinder

A Nitrogen Evaporator **(**also called a nitrogen blow down evaporator**)** is a lab instrument used to evaporate solvents gently from samples using a stream of nitrogen gas**.** It is common in sample preparation, especially in fields like, food safety, and toxicology. It is used as supporting equipment for the sample preparation of pesticide analysis and vitamin analysis.

7. Lovibond Comparator

A Lovibond Comparator is a colour measurement device used in food labs to determine the colour of liquids and some solids by comparing them visually against calibrated colour standards. It is widely used in quality control for things like edible oils, honey, syrups, beverages,

and fats. It is also used for checking the pasteurization efficiency of milk.

8. Muffle Furnace with ramping

A Muffle Furnace with ramping is a high-temperature lab furnace that allows precise control over heating rates (ramps) and holding times**.** It is commonly used for ash content analysis**,** ceramic firing**,** annealing**,** calcination**,** and other thermal treatments that require controlled temperature profiles. It is used for ashing purpose while analysing various parameters of feed, water and other food products.

9. Water Bath (Double chamber with stirrer-20 ltrs)

This Laboratory device is used for maintaining the desired temperature of samples, chemicals and reagents for testing.

10. Hot Air Oven

This Laboratory instrument is used for sterilization and drying of samples.

11. Membrane Filtration Apparatus

This is used for the filtration of water samples for microbiological and chemical testing. This unit consists of magnetic funnel filtration assembly, membrane filter papers, filtering flask and hose.

12. HPLC Pump

An HPLC pump is a critical component of a High-Performance Liquid Chromatography (HPLC) system. Its job is to deliver the mobile phase (solvent or solvent mixture) at a constant, precise flow rate and pressure through the column, where separation of sample components occurs. High pressure is provided by these pumps.

13. Painting of State Dairy Lab

The State Laboratory under the Dairy Development Department is a NABL-accredited facility that plays a pivotal role in ensuring the safety and quality of food, feed, and water. With accreditation under ISO/IEC 17025, the laboratory is authorized to test approximately 590 parameters, covering a wide range of samples critical to public health and regulatory compliance. As a high-performance analytical facility, it is essential to maintain the lab's infrastructure in accordance with strict hygiene, safety, and quality standards mandated under the NABL scope.

Over time, the lab's interiors and exteriors have experienced visible wear due to routine operations and environmental exposure. To sustain a contamination-free, professional, and compliant work environment, it is proposed to undertake repainting of the laboratory

premises using appropriate, lab-grade coatings. This will enhance the overall cleanliness, durability, and audit-readiness of the facility, ensuring continued excellence in testing and service delivery.

14. Vortex Mixer

This is used for proper mixing of the samples and reagents there by ensure uniform distribution and solubility.

15. Furnitures

The existing laboratory furniture has become insufficient to meet current operational demands and evolving technical requirements. Many of the current workstations, storage units, and sample handling areas lack the durability, chemical resistance, and ergonomic features necessary for a modern testing facility. Therefore, it is proposed to procure specialized, lab-oriented furniture designed to support high-precision testing environments and ensure compliance with NABL standards. This upgrade will enhance laboratory efficiency, improve workflow safety, and support sustained accreditation.

16. Fume Hood

Used for protection of laboratory personnel from exposure to hazardous chemicals, fumes, vapours and dust generated during experiments or chemical processes.

17. Calibration of equipments and glass wares

In an NABL-accredited laboratory operating under ISO/IEC 17025 standards, the accuracy and reliability of test results are of paramount importance. Calibration of laboratory equipment is a fundamental process that ensures all measurements are precise, consistent, and traceable to national or international standards. Regular calibration not only helps in maintaining technical competence but is also a mandatory requirement for sustaining NABL accreditation. Given the critical role of the State Laboratory under the Dairy Development Department which tests approximately 590 parameters of food, feed, and water , it is essential that all analytical instruments and measuring devices undergo timely and proper calibration. This practice enhances the credibility of the laboratory, reduces measurement uncertainties, supports data integrity, and ensures full compliance during internal audits and external assessments. Systematic calibration thus serves as a foundation for achieving excellence in testing services and upholding public trust.

18. AMC of Equipments

The State Laboratory under the Dairy Development Department, accredited by NABL as per ISO/IEC 17025 standards, performs high precision testing across approximately 590 parameters related to food,

feed, and water. To maintain the reliability, accuracy, and compliance of its analytical operations, it is essential that all laboratory equipment function optimally without interruption.

In this context, the implementation of an Annual Maintenance Contract (AMC) for critical laboratory instruments is both a preventive and strategic measure. Regular maintenance under AMC ensures timely servicing, reduces the risk of unexpected breakdowns, extends equipment lifespan, and supports continuous compliance with NABL requirements. Furthermore, it helps to maintain data integrity and minimises downtime during audits and daily operations.

Considering the importance of equipment performance in a quality-driven lab environment, provision for annual maintenance costs is vital for sustaining the laboratory's operational excellence and accreditation status.

19. Electronic gadgets and Softwares for Lab

The State Laboratory under the Dairy Development Department, accredited by NABL as per ISO/IEC 17025 standards, is entrusted with the critical task of testing and analysing approximately 590 parameters related to food, feed, and water samples. To support the growing demands of high-precision testing and efficient data management, it is essential to equip the laboratory with modern electronic gadgets and supporting technologies.

The integration of advanced electronic devices such as computers, printers, tablets, data storage systems, and analytical accessories is necessary to enhance operational efficiency, ensure accurate documentation, facilitate data traceability, and maintain compliance with NABL and ISO/IEC 17025 requirements. Upgrading electronic infrastructure also strengthens the lab's audit-readiness and improves overall workflow management, contributing directly to the quality and reliability of testing services.

In view of the above, it is proposed to procure essential electronic gadgets and softwares to further augment the laboratory's technical capabilities and maintain its position as a centre of excellence in food and feed analysis.

20. Air conditioners

The State Laboratory under the Dairy Development Department, accredited by NABL as per ISO/IEC 17025 standards, undertakes critical testing and analysis of approximately 590 parameters covering food, feed, and water. Maintaining a controlled and stable environmental condition within the laboratory is essential to ensure

the accuracy, reliability, and consistency of analytical results, as mandated under NABL guidelines.

Temperature and humidity variations can significantly affect the performance of sensitive instruments, reagents, and samples. Therefore, to preserve the integrity of testing processes and to comply with prescribed environmental monitoring requirements, it is proposed to procure and install air conditioners across key laboratory sections. The installation of efficient air conditioning systems will help to maintain optimal ambient conditions, enhance equipment lifespan, improve staff comfort, and support uninterrupted laboratory operations.

This initiative is crucial for upholding the quality standards and operational excellence expected of an NABL-accredited laboratory.

21. VIDAS machine software and PC

The **VIDAS machine** (Vitek Immuno Diagnostic Assay System) is a widely used automated diagnostic tool in food labs for performing high throughput, precise immunoassays. Its use in a food lab, particularly for testing food safety and quality, offers several key benefits.

VIDAS machine is used for the rapid pathogen detection of milk and food products. It is a software based machine.

22. VIDAS kits

The **purpose of VIDAS kits** is to provide fast, accurate, and reliable testing for a wide range of food safety, quality, and microbiological parameters. These kits are used in conjunction with the **VIDAS machine** to detect specific pathogens, allergens, toxins, and other substances in food and environmental samples.

23. AAS lamps

The purpose of **Atomic Absorption Spectroscopy (AAS) lamps** is to provide a stable, specific light source that enables the detection and quantification of trace metals in samples, which is critical in many analytical applications, including food safety, environmental monitoring, and clinical diagnostics. Different Deuterium type lamps are using in Atomic Absorption Spectrophotometer.

24. Ultra Sonic Bath

An **Ultrasonic Bath** machine is commonly used in laboratories for various sample preparation processes, including **HPLC (High-Performance Liquid Chromatography)** sample preparation. In the context of HPLC, the ultrasonic bath is typically employed to assist with sample homogenization, dissolution, extraction, and degassing prior to analysis. It uses high-frequency sound waves (usually 20–40

kHz) to agitate liquid, improving sample preparation consistency and speed.

25. Refrigerators

The State Laboratory under the Dairy Development Department, accredited by NABL as per ISO/IEC 17025 standards, is responsible for ensuring the safety, quality, and compliance of food products through rigorous testing. In order to maintain the integrity of food samples, reagents, and other materials used in various analyses, it is crucial to have reliable and efficient refrigeration systems. Proper storage conditions are essential to prevent sample degradation, bacterial growth, or chemical instability, ensuring accurate and reliable results.

To support the increasing demands of high precision testing and to align with international best practices, it is proposed to purchase specialized **refrigerators** designed for food testing purposes. These units will be used to store perishable food samples, calibration standards, microbiological cultures, and temperature-sensitive reagents, thereby maintaining the quality and stability of these critical components.

The installation of these refrigerators will contribute significantly to the laboratory's ability to meet regulatory standards, enhance workflow efficiency, and ensure the accurate preservation of samples, ultimately supporting the lab's on going commitment to excellence in food safety testing.

26. Civil works related to renovation of existing SDL

State dairy lab established in the year 2010 and since then no renovation is done. As a part of infra-structure development some civil works needed for expansion of existing lab.

C. 01. 02. INFRASTRUCTURE DEVELOPMENT & INSTALLATION OF NEW QUALITY ANALYSIS EQUIPMENTS FOR REGIONAL DAIRY LABS, DISTRICT QC LABS, STATE CHECK POST LABS & MOBILE QC LABS

Plan Outlay – Rs 75.00 lakh

This scheme component shall be implemented in a need based manner based on the project report submitted by concerned Deputy Directors / Heads of Regional Dairy Lab

The scheme envisages providing infrastructure support and installation of new quality checking equipments for

01. 14 district level Quality Control Labs
02. Mobile labs
03. 3 Regional Dairy Labs
04. 3 State Check Post Labs

Purshase of equipment shall be through e-tender procedures and based on other revised stores purchase rules of GOK

C.01.02.01 FINANCIAL OUTLAY

INFRASTRUCTURE DEVELOPMENT & INSTALLATION OF NEW TESTING EQUIPMENTS FOR REGIONAL DAIRY LABS, DISTRICT QC LABS, STATE CHECK POST LABS AND MOBILE QC LABS		
SQCL_CAPITAL HEAD 2025-26 4404-00-109-95		
SI.NO	**DESCRIPTION (EQUIPMENT / WORK)**	**AMOUNT (RS IN LAKH)**
1	**Infrastructure development, purchase of tesing equipments, glasswares, utensils for District QC Labs, Regional Dairy Labs, State Check Post Labs and Mobile QC Labs**	**75.00**

03 IMPLEMENTATION, DOCUMENTATION AND MONITORING OF THE SCHEME

The Quality Control officers shall implement the programme with the guidance of the concerned Deputy Director of the district. The Joint Director, SDL shall monitor, evaluate and report the progress of the activities related to State Dairy Lab. Tvm. The Joint Director (Planning), The Deputy Director (Planning) and The Technical Cell, Directorate with the guidance of The Deputy Director (Extension) shall monitor and periodically evaluate the progress of the various scheme components. The Director, Dairy Development shall be the authority for state wide implementation of the scheme components under this scheme.

04 CALENDER OF ACTIVITIES

Implementation Stages	Time Limit
Propaganda for the programme	before 05.06.2025
Advertising	before 25.06.2025
Inviting applications	before 10.07.2025
Scrutiny of application	before 10.08.2025
Selection of beneficiary / beneficiary DCS	before 15.09.2025
Publishing select list	before 20.09.2025
Completion of scheme component	before 10.12.2025
Evaluation / Monitoring	Before 31.12.2025
Sanction of plan assistance	before 10.01.2026

05. CONCLUSION

The various components detailed in the plan project for the financial year 2025-26 are aimed at improving the Physico-chemical and microbiological quality of milk and to ensure cold chain mechanism to envisage the concept of from farm to fork of Total Quality Management system. The scheme components are aimed at improving the quality assurance mechanism of the Department at various strata. The testing labs like labs at DCS, QCO level labs, Mobile QC units, Regional Dairy Labs, Check Post Labs, State Dairy Lab will be strengthened and will ensure maximum efficiency and effectiveness. Safe and Fresh milk to consumers will be ensured. The projects also focussed to assure the safety of consumers by assuring the quality of milk and milk products marketed in our state too. Provisions are included for advanced training for department level staff in the area of quality control activities. The New Components is proposed as a measure to equip the district level labs for detection of antibiotics residues in milk and aflatoxin residues in feed samples and compounded feed stuff

The implementation of the programme will definitely help to improve the quality of milk procured and consumed. Also it will help to follow FSSR guidelines.

DIRECTOR