Dairying through Cooperatives (DTC)

(Referred by JICA as "Project for the Dairy Development")

Component B of NPDD Scheme

Manual on

Strengthening Milk Procurement Infrastructure

National Dairy Development Board
October 2021

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Annexures

Abbreviations

AMCU	:	Automatic Milk Collection Unit
BIS	:	Bureau of Indian Standards
BMC	:	Bulk Milk Cooler
BOD	:	Board of Directors
CC	:	Chilling Centre
CMP	:	Clean Milk Production
DCS	:	Dairy Co-operative Society
DPMCU	:	Data Processor based Milk Collection Unit
PI	:	Participating Institution
EMT	:	Electronic Milko Tester
EWS	:	Electronic Weighing Scale
GRM	:	Grievance Redressal Mechanism
GRO	:	Grievance Redressal Officer
LPD	:	Litres per day
MBRT	:	Methylene Blue Reduction Test
MIS	:	Management Information System
MCM	:	Management Committee Member
MPP	:	Milk Pooling Point
NDDB	:	National Dairy Development Board
PC	:	Producer Company
PMC	:	Project Management Cell
POI		Producers' Owned Institution
QA	:	Quality Assurance
SNF	:	Solids Not Fat
SWOT	:	Strength Weakness Opportunity Threat
TkgPD	:	Thousand kilograms per day
TS	:	Total solids
SMPI	:	Strengthening Milk Procurement Infrastructure

Foreword

This manual has been prepared primarily for the Producers' Owned Institutions (Milk Unions and Milk Producer Companies) who would be implementing the Sub-Project Plans under Strengthening Milk Procurement Infrastructure Component at field level. This would help equip the project staff with an understanding of how to go about in implementation of the activities, and equip them with essential information to implement the project effectively and in a comprehensive manner.

It also describes the objectives, Standard Operating Procedures (SOP) and guidelines for each activity, management and monitoring mechanism, and institutional arrangements necessary for implementation of the sub-project plan.

It is expected that this manual for the Strengthening Milk Procurement Infrastructure will be a useful guide for the people directly or indirectly involved with the project.

1. Introduction

1.1. What is this Manual and why it is needed?

1.1.1. This manual is written to give sound technical guidance to the people implementing the sub-project. This Manual is expected to provide relevant guidelines to the key operations of the activity so as to achieve the desired targets with quality output. It explains as to who would be implementing and monitoring the activity, the processes involved, their importance, the Standard Operating Procedures (SOPs) to be followed and the support required. It defines roles and responsibilities of all those involved in the implementation of the activity.

1.2. Whom is this Manual for?

1.2.1. This Manual is for all those involved in planning, monitoring and implementation of the component Strengthening Milk Procurement Infrastructures (SMPI) under the project. It is primarily for the Participating Institutions (PIs) who have proposed to take up SMPI activity in their area of operation and also for those directly or indirectly associated with the activity.

1.3. Milk pooling

1.3.1. Milk is defined as the normal mammary secretion derived from complete milking of a healthy animal without addition or extraction. It is made of several constituents which can be broadly classified under two categories: water and total solids. Further total solids have two components: fat and solids not fat (SNF).

1.3.2. In the Indian context, pooling of milk provides a source of livelihood for millions of rural producers and since many producers with little surplus live in far-off rural areas, it is important to pool their small quantities through village level institutions and provide sustainable market access to them.

1.3.3. Milk producers come together and form a village dairy cooperative society (DCS)/Milk Pooling Point (MPP) with the support of Milk Union/Producer Company (PC) and start supplying the surplus milk to the DCS/MPP, after retaining milk for their household consumption. The major operations of a DCS/MPP are hygienic milk collection and providing input services to their producer members. Milk collection involves reception, testing, local and sample milk sale, dispatch of milk to the Milk Union/PC, payment and accounts keeping. Input services include animal health coverage, artificial insemination, supply of cattle feed, mineral

mixture & other feed supplements, fodder seeds, and providing extension services to producer members including propagation of clean milk production practices.

1.3.4. The major functions of the Milk Union/PC are to procure, process and market milk and milk products, provide inputs such as cattle feed, veterinary services, extension services, etc. to the producer members through the DCS/MPP and arrange for training and education of management committee members, DCS/MPP staff, milk producer members, Board members, officials and Staff of the Milk Union/PC.

1.4. Strengthening Milk Procurement Infrastructure -an overview

There is a need for Strengthening Milk Procurement Infrastructures (SMPI) for weighing, testing quality of milk received and making payment to milk producers due to the following challenges:

- The coverage of most of Producers' Owned Institutions (POIs) in the identified districts in terms of villages, milk producers and share of milk procurement in surplus milk is low due to weak cooperative structure. Thus, there is a need to strengthen the existing structure so as to provide milk producers a greater access to the organised milk market through POIs which will help them in getting better value of their milk.
- The project area is majorly dominated by small and marginal farmers owning 3 or less milch animals with low milk production and marketable surplus which restricts their bargaining power to sell milk at optimum price and are vulnerable to exploitation by unorganised players like dudhiyas and local contractors.
- There is need to strengthen the milk procurement system at village level and provide market access to the milk producers, installation of Automatic Milk Collection Unit (AMCU)/Data Processor based Milk Collection Unit (DPMCU) which will put in place a fair and transparent milk procurement system. Further, installation of Bulk Milk Coolers (BMC) will result in improvement of milk quality at village level.

1.4.1. Main expected results

The main expected results from the interventions proposed under SMPI are:

- Increase in coverage of PI by setting up of DCS/MPP.

- Increase in enrolment of milk producers as member of DCS/MPP.
- Remunerative price of the milk poured by milk producer.
- Greater participation of Women, SC/ST and small holders milk producers both as members and in the governance of village institutions.

1.5. Identification/ recruitment of Manpower

1.5.1. Identification of Project coordinator

- As per the approved Sub-project plan, PI shall ensure that the officer identified as Project Coordinator remains responsible for overall coordination of the sub project implementation, and also resolves issues related to the sub project through liaison with the IMC (located at NDDB) during the Project period.

1.5.2. Identification/ recruitment of Field supervisors

- PI shall ensure that essential manpower as per the approved SPP are deployed either from its existing staff or if required through recruitment for all field activities under the SPP, right from the project implementation planning to actual execution as per the timelines. The field supervisors shall be responsible for overseeing the proper functioning of the DCS/MPP and shall look after the DCS/MPP as assigned to him/her in the project area.

2. Milk Procurement operations

2.1. Milk pooling

2.1.1. Dairying is a source of livelihood for millions of rural producers. In a market driven economy, it is all the more important to have institutional structure that follow cooperative principles and provide the rural milk producers access to organised market.

2.2. Importance of milk pooling

2.2.1. Milk pooling activities under broadly consist of milk collection, testing for quality and payment to producers for the milk supplied. It is essential that the milk is collected, measured and tested in the presence of producer members with standardised duly calibrated equipment(Electronic Weighing Scale, Analyser, Lactometer etc.). Payment to the milk producers is done on daily basis, shift-wise or cycle-wise (may be weekly, fortnightly or 10 days). To ensure that milk producer members get their payment promptly and accurately, considering the technological advancement, where feasible, PI shall consider shifting from cash payment by DCS/MPI to payments to the individual bank accounts of milk producer members or business correspondent model. With a view to sustain the quality of milk collected till it reaches the dairy plant for processing, Bulk Milk Coolers need to be installed in the villages.

2.3. Identification of potential area

2.3.1. Identification of potential area for dairying is the most crucial activity of the milk pooling. The first step involved in setting-up dairy cooperative societies (DCS)/Milk Pooling Point (MPP) is to identify milk potential area through secondary data and validating it subsequently by field surveys. Having identified the area, potential blocks consisting of villages/cluster of villages is selected for initiating milk pooling activities. Soon after the area identification for the intervention, it is required to seed the concept of milk pooling to the milk producers. It is important to persuade the potential producers to come together and make them understand about the collective effort required for milk pooling.

2.3.2. In case of a revival of a defunct DCS/MPP, the activity involved is similar but more effort is necessary in terms of confidence building and to ensure that the revival is sustainable.

2.4. Area of operation

2.4.1. Demarcation of operational area is very important in milk pooling activity. It helps in delegating responsibilities for various activities. A DCS/MPP generally caters to a revenue village, or as an area defined in its bye-laws.

2.5. Organisation of village level institutions

2.5.1. Assessment of village potential and identification of village

- Survey is essential to assess the future prospects of a milk cooperative society, ascertain interest and faith of farmers in collective activity. While conducting a survey to assess viability of starting of DCS/MPP, some of the crucial aspects which need to be studied include existing cattle and buffalo population, milk production and utilization/disposal pattern of milk and milk products, marketing channel for surplus milk and returns from sale of milk realized by farmers, agriculture facilities, production pattern, basic amenities such as access by an all-weather road, water supply, rain dependence, communication links, educational facilities etc., other source of income, performance and strategies of other institutions involved in dairying, different communities living in the village and their inter-relationship.
- Field staff of the PI viz., field supervisors conduct the survey with the help of Village Sarpanch or Pradhan. Basic information is collected from Panchayat office. The supervisor also moves door-to-door to collect information about individual villagers. All information collected is then cross-checked for validity.

2.5.2. Registration of DCS

2.5.2.1. After the survey, villages are categorized on the basis of milk potential and other related factors such as approachability and locations in the proposed milk routes. PI's personnel initiate work pertaining to the organization of a DCS once the categorization of villages is complete and proposed area for the routes is decided. The Sarpanch and villagers of the selected village shall be informed about SMPI intervention under the project, its requirements and details of assistance. Consent of Gram sabha needs to be taken before going ahead with implementation. Normally following steps are taken to form a society:

a. Organising the Gram Sabha

- Procurement personnel from the PI visit identified villages and arrange a village level meeting i.e. *"Gram-sabha"*. A well accepted elderly person from the villages is requested to preside over the meeting. The officer/staff explains the purpose and advantages of forming dairy cooperative society in the village. Once the milk producers decide to form a DCS, an organiser is selected from them. The organiser is authorized to collect the share subscription (as per state cooperative societies act, rules, model by-laws of society, etc.) and entrance fee from all those milk producers who are interested in becoming members. After a sufficient number of milk producers become members (depending on the expected quantity of milk procurement, number of milk producers in the village, etc.), the amount of share money and entrance fee is deposited to a local bank in the name of proposed society.
- The importance of setting up or strengthening a DCS through revival as applicable shall be presented in Gram sabhas. The importance of getting organized, having better bargaining power, enhancing coverage, assured market linkage and prices, assured returns and input services could be explained to convince the milk producers
- This meeting shall be conducted ensuring equitable participation by milk producers of all economic/social strata in an inclusive manner. Emphasis by the PI field staff shall be on systematic inclusion of women, SC/ST, smallholders during Gram Sabha meetings, village/ household surveys as also at each stage of DCS formation such as entry-level consultations, selection of initial promoters, selection of DCS members, etc.

b. DCS Organization Meeting

- A general meeting of all the milk producers who have subscribed to the share deposit of the proposed society is convened and one of the members is elected as Chairman. The following issues are discussed and resolved:
  - To form a milk producers' cooperative society on the lines of bye-laws as suggested by PI and to apply for registration in due course under the applicable Act. Until the registration certificate is obtained, this will be called proposed DCS.
  - To decide the area of operation of the DCS.

- To constitute an ad-hoc managing committee comprising members to look after the society's affairs till the registration, to elect the Chairman of the proposed society as per rule, to authorize the managing committee to appoint society staff for day-to-day work, to authorize the Chairman and Secretary to open a bank account in the name of the Proposed DCS and operate jointly, to obtain tangible security from the Secretary to become eligible for operating bank account and handling of cash, to regularize the collection of share money and entrance fees from milk producers towards membership etc.
- To make the DCS duty bound to follow all the suggestions and directions given by PI to which the society desires to affiliate.
- To collect milk from all the members and supply the same to PI and to supply the inputs on cost to the members as provided by PI.
- To select the milk collection centre/location/premise for the society in the village which desirably a centrally located position and accessible by most of the members.
- To procure milk cans, milk collection and testing equipment, stationery, chemicals for testing etc. from PI before the date of commencement of milk procurement by DCS.
- To decide the modalities of milk transportation (head load), if the society is not on the transport route or is linked to a BMC.
- To raise fund/deposit from individual or to request PI for an advance to facilitate quick payment in the beginning.

- All these aspects shall be governed by the State Cooperative Societies Act, Rules and the PI's policy of organisation and registration of DCS.

c. Registration of DCS

- A performance review of the functioning of proposed DCS is carried out by PI and if found satisfactory in terms of growth and sustainability, PI proposes for its registration to the concerned office of Registrar, cooperative societies of the State (as applicable to legal form of PI). The DCS is considered registered only when a registration certificate is obtained by

DCS/PI with a registration number along with date of issue by the registering authority.

- It may be noted that under the SMPI Sub-project implementation, DCS level activity can be undertaken even while the procedure for formal registration of DCS is in progress, i.e. soon after forming the DCS.

d. First Annual General Meeting of registered DCS

Once the DCS is registered, a general body meeting of all the members is convened by the Secretary of the proposed DCS with the permission /consultation of the Chairman for following agenda:

- Election to the regular Managing Committee and Chairman of the Society as per bye-laws. *In this case, the PI shall ensure fair and transparent election process for the regular Management committee and Chairman of the society promoting equal access to women, smallholders/vulnerable groups of society as per the State cooperative societies act, rules and bye-laws.*
- Regularizing / terminating the existing staff / appointing new staff, if required.
- Finalizing the statements of accounts for the period it functioned as a proposed DCS.
- Informing the bank about the registration of DCS and request them to make the account of the proposed society in the name of the registered society.
- Regularization of membership according to the bye-laws. Enrolment of new members and affiliation of DCS with the PI and other related organizations.
- Appointment of local internal auditor, etc.
- Records to be maintained about details of members.

2.6. Functioning of a DCS/MPP

- PI shall also facilitate smooth functioning of DCS/MPP with reference to accounts, audit, regularization of membership etc. by providing regular/ refresher training to DCS/MPP and the Management committee members.
- For each new DCS/MPP formed, PI shall help identify or recruit a Secretary/Functionary to look after the day to day activities & proper operations at the DCS/MPP level. Prior to

actual milk procurement, a tester shall be selected, trained and positioned.

- During selection of the Secretary/Functionary and Tester for the new DCS/MPP, the PI Supervisor as well as the MCM shall ensure selection of the duly qualified candidates following a fair process of selection. The PI shall also arrange to provide necessary training to the Secretary/Functionary on function of DCS/MPP for a period of 21 days, and to the tester as per standard procedure.
- The Management committee shall be informed about financial assistance to be provided as management grants for village level functionaries on tapering basis.

2.7. How a DCS/MPP grows and consequently functions change?

A DCS/MPP at infancy stage generally collects milk in cans twice a day through basic milk collection accessories. The DCS/MPP dispatch the milk to the nearest BMC or Chilling Centre (CC) or the Dairy plant by deploying the optimum mode of transportation. When the number of milk pourers and volume of milk collected goes up, the DCS/MPP could be equipped with Data Processor based Milk Collection Unit (DPMCU) or Automatic Milk Collection Unit (AMCU) so as to provide fair and transparent milk collection system where the milk producer members would get an instant acknowledgement of milk payment receivable. A further up-gradation of the DCS/MPP would be provision of a Bulk Milk Cooler so as to chill milk closer to point of production, in the shortest possible time after milking to preserve its bacteriological quality. In such a case, milk from surrounding village DCS/MPP (Satellite DCS/MPP) would be brought to the BMC DCS/MPP through head load. Each DCS/MPP has its own area of operation in procuring milk.

3. Standard Operating Procedures for putting in place infrastructure and start of operations under SMPI

3.1. Different Components of SMPI

3.1.1. An approved Sub-Project Plan would have all or some of the following activities depending upon the requirement identified by the PI for strengthening of its milk procurement operations:

i. Assistance to village producers' institution

   a. SS milk collection accessories, testing equipment, DCS board, furniture etc.

b. DCS/MPP building

c. AMCU (Automatic Milk Collection Unit)/ Data Processor based Milk Collection Unit (DPMCU)

d. Management grant to village level functionary

ii. Support for BMC

a. Bulk Milk Coolers

b. Building for BMC

c. Tanker for milk transportation

3.2. Funding pattern

3.2.1. Funding pattern for various items proposed under this component are given as under:

Table 1: Item wise funding pattern

No.	Particulars	Funding Pattern		
		Loan	Grant	PI's / State's Contri.
A	**Assistance to Village level Producers' Institution**			
A1	Building for Village Producer Institution	50%	50%	--
A2	SS milk collection Accessories, testing equipment, DCS board, furniture etc.	--	90%	10%
A3	AMCU/DPMCU	50%	50%	-- 0%
A4	Management grant to Village level functionary *(tapering over 2 years - 100%, 50%)*	--	90%	10%
B	**Support for BMCs**			
B1	Building for Bulk Cooler	50%	50%	--
B2	Bulk Milk Coolers	50%	50%	--
B3	Tankers for milk transportation	50%	50%	--

3.2.2. Item wise unit cost approved by Project Sanctioning Committee (PSC) will be used for calculation of financial outlay of the sub-project plans.

3.2.3. In case, the unit cost of any item is in excess of the provision made under the project, then the excess amount will be borne by the PI from its own resources.

3.3. Activity wise pre-requisites to avail fund

i. <u>SS milk collection accessories, testing equipment, DCS/MPP board, furniture etc.</u>

a. Applicable only for new DCS/MPP.

b. The new DCS should be the proposed for registration under the State Cooperative Societies Act.

c. Village should fall in the area of operation (as specified in the bye-laws) of the Union/PC.

d. The new DCS/MPP should have minimum number of milk producers (members) required to register DCS/MPP and are willing to pour milk.

e. Village which has a potential to procure minimum average quantity of milk so as to make it sustainable in the first year of its operation. Further, where milk procurement could sustain and grow in next 5 years.

f. DCS/MPP to be strengthened - DCS/MPP where infrastructure for milk collection/testing is being upgraded or a DCS/MPP which is part of the BMC cluster/satellite villages

g. **SS milk collection accessories, testing equipment, DCS/MPP board, furniture etc.**: SS milk collection accessories, testing equipment, board, furniture etc. will be provided to DCS/MPP as per list provided at **Annex I**) & Furniture (1 no. set) to be given to all new DCS/MPP/DCS under strengthening/Satellite DCS for BMC cluster, proposed for coverage under the SPP.

ii. <u>DCS/MPP Building</u>

a. DCS/MPP are eligible for this activity.

b. Construction of the DCS/MPP building has to be as per Design, and layout provided by the NDDB/PI.

c. DCS/PC/PI should own the encumbrance free land or have taken on lease for minimum 25 years.

d. PI should ensure that the building will be used for designated purpose even after the project period.

e. PI would be responsible for construction of DCS/MPP building.

iii. <u>AMCU/DPMCU</u>

a. DCS/MPP are eligible for this activity.

iv. <u>Management grant to village level functionary</u>

a. Only new DCS/MPP formed under the project will be eligible for receiving management grant.

b. The management grant will be provided on tapering basis for 2 years i.e. Yr.1- 100% & Yr.2 – 50%, the PI will have to make arrangement for filling up the gap from 2nd year onwards.

v. Bulk Milk Coolers (BMC)

a. BMC would be considered for a DCS/MPP/PI, provided the milk procurement (peak month) in the village/villages under consideration has been reported during the previous year/current year (projected volume) at a value so as to ensure at least 50% capacity utilization at peak procurement (avg. of peak months).

b. BMC shall be planned either on an existing Tanker route or a new route formed by a set of BMCs.

c. The BMC cluster DCS/MPP shall preferably be within a radius of 3 km and with preferably 5 satellite DCS/MPP.

vi. Building for Bulk Milk Coolers:

a. DCS/MPP/PI are eligible for this activity.

b. Construction of the DCS/MPP/PI building has to be as per Design, and layout provided by the NDDB/PI.

c. DCS/MPP/PI should own the encumbrance free land or have taken on lease for minimum 25 years.

d. PI should ensure that the building will be used for designated purpose even after the project period.

e. PI would be responsible for construction of building for housing BMC.

vii. Tanker for milk transportation

a. PI should own the vehicle.

b. PI should ensure that the tanker will be used for designated purpose even after the project period.

c. All recurring cost for running & maintenance of the vehicle to be borne by the PI.

3.4. Implementation Arrangement

3.4.1. Selection of PIs

The Organisations eligible to receive assistance under this component are - Milk Unions, Multi-state Milk Cooperatives, State Dairy Federations, Milk Producer Companies.

3.4.2. Technical eligibility criteria

The PIs will have to satisfy the following criteria for availing assistance for this component:

- Should have its own milk processing facilities or have a forward linkage with an existing milk processing facility.
- Should have the land/ premises for setting up DCS/MPP building and housing Bulk Milk Coolers free from any encumbrances.
- Have in place IT based reporting and monitoring systems.
- Should be capable in organising producers' institutions, maintaining transparency in the processes of milk collection at village level, milk quality testing, timely payments to milk producers and grievance redressal system in place.

3.4.3. Sub project implementation

All the activities proposed under this component would be implemented by the PI and it will be the responsibility of the PI to ensure that the activities are being implemented as per the approved sub-project plan. NDDB will provide necessary technical support to the PI for successful implementation of this component.

3.5. Understanding targets for each year and ensuring that they are met

3.5.1. The PI shall ensure that the yearly targets w.r.t the numbers, phasing, zones/locations where the activity has to be taken up, are clearly understood. The annual targets for each component/activity shall be sub-divided into quarterly targets and responsibilities and timelines for office staff in milk procurement operations and equipment procurement operations as well as field staff at different levels are clearly defined in the beginning of each year so that the synchronization of various functions is achieved and timelines duly met. The PI shall also ensure that quality of work done is up to the mark and SOPs properly followed so as to attain the desired output.

3.6. Milk Procurement operations and testing

3.6.1. Preparatory aspects related to milk procurement infrastructure

- Much before milk procurement begins, the PIs shall ensure that all the pre-requisites for initiating milk collection from the DCS/MPP are duly met and essential equipment and registers

of physical and financial records required for the initiation of milk collection shall be purchased and delivered. For DCS/MPP the milk collection accessories shall be provided as per approved plan. For this, the equipment procurement procedure has to be initiated much in advance so as to synchronise all installations in time with the initiation of milk procurement. The indicative list of items under SS milk collection accessories, testing equipment, DCS/MPP board, furniture etc. included under the approved Sub-project plan is given at **Annex I**.

- The PI shall ensure that price chart is communicated to DPMCU/AMCU supplier which would be suitably incorporated in the system before delivery.
- In case where the DCS/MPP are to be upgraded with installation of DPMCU/AMCU as part of the Sub-Project Plan, the PI shall arrange to create awareness among the members regarding the need for such change and advantages thereof. Subsequently, when the DPMCUs are installed, on-the-job training of the Secretary and Tester shall be taken up through the equipment suppliers – a process to be coordinated by the field staff of the PI, resolving initial teething problems and creating confidence among the milk producers about the system to enable a sense of ownership of the system among the members.
- The PI shall ensure that during the training of the tester, she/he shall be technically equipped with details regarding the maintenance, calibration and standardization of the testing equipment so as ensure accurate testing of the milk samples. She/he shall also be sensitized to the need for fairness and transparency in testing of samples and transaction so as to gain member faith in the system.

3.6.2. For sustainable and successful implementation of the BMC Single/Cluster DCS/MPP system, the PI shall ensure that:

- For the DCS/MPP which are to be upgraded with installation of Bulk Milk Coolers, the system of milk collection, quality checks, reconciliation of quantity and quality and payment in case of the cluster DCS/MPP are properly put in place. For this to happen, the PI shall preferably deploy personnel with prior experience.
- The location where the BMC is to be installed meets all the technical pre-requisites for BMC installation, e.g. in existing/

potential tanker route, accessibility by tanker, space for tanker maneuvering, and space for placing equipment & safe working etc.

- Sufficient potable water supply is available for cleaning of the BMC and other equipment, preferably arranged prior to the installation of the BMC.
- Necessary arrangements are made for sanitary treatment and hygienic disposal of waste water, without creating any problem in the vicinity. PIs shall therefore ensure that,
    - The effluent generated from BMC shall be discharged as per statutory norms into municipal/village common drain or in absence of such an arrangement a soak pit is duly constructed to meet statutory norms
    - DG set operation shall not affect environment in vicinity and health of neighboring residents, nor create a problem.
- Land/premises for setting up the BMC and DCS/MPP building is free of any encumbrances.
- Further, under the approved Sub-project Plan, at the BMC DCS/MPP, in addition to a Bulk Milk Cooler of the capacity as planned and included, an AMCU and SS milk collection accessories, testing equipment, board, furniture etc. will be provided as per list of items provided at **Annex I**. In this case too, BMC, AMCU and other equipment procurement procedure has to be initiated much in advance so as to synchronize all installations in time. Further to this, the DCS/MPP shall be equipped with all other essential items by the PI.
- All equipment procured and installed under the project are maintained regularly through preventive maintenance checks and practices. Beyond the warranty period, the PIs shall ensure that the equipment is covered under Annual Maintenance Contract with reliable service providers so as to ensure consistently effective operations.
- An asset register shall be maintained at the DCS/MPP recording details of present stock and movement of assets.
- Milk bill payment by DCS/MPP to be encouraged through the individual bank accounts of milk producers to maintain the transparency in transaction.

3.7. Procurement of equipment/services

3.7.1. PI shall be responsible for the procurement of all BMC, AMCUs, DPMCUs, Cans and other equipment as included in the approved Sub-project Plan. Further, the PI shall ensure the proper installation, commissioning and operation of these equipment so as achieve the targets set within the timelines.

3.7.2. Participating Institution will have to follow the item wise technical specifications of items like BMC, AMCU, DPMCU, milk tankers, milk cans etc. as provided by NDDB.

3.8. Procurement Management practices

3.8.1. Procurement Management practices for all equipment under the approved Sub-project shall be followed by the PI as detailed in the Procurement (Purchase) Guidelines of the project.

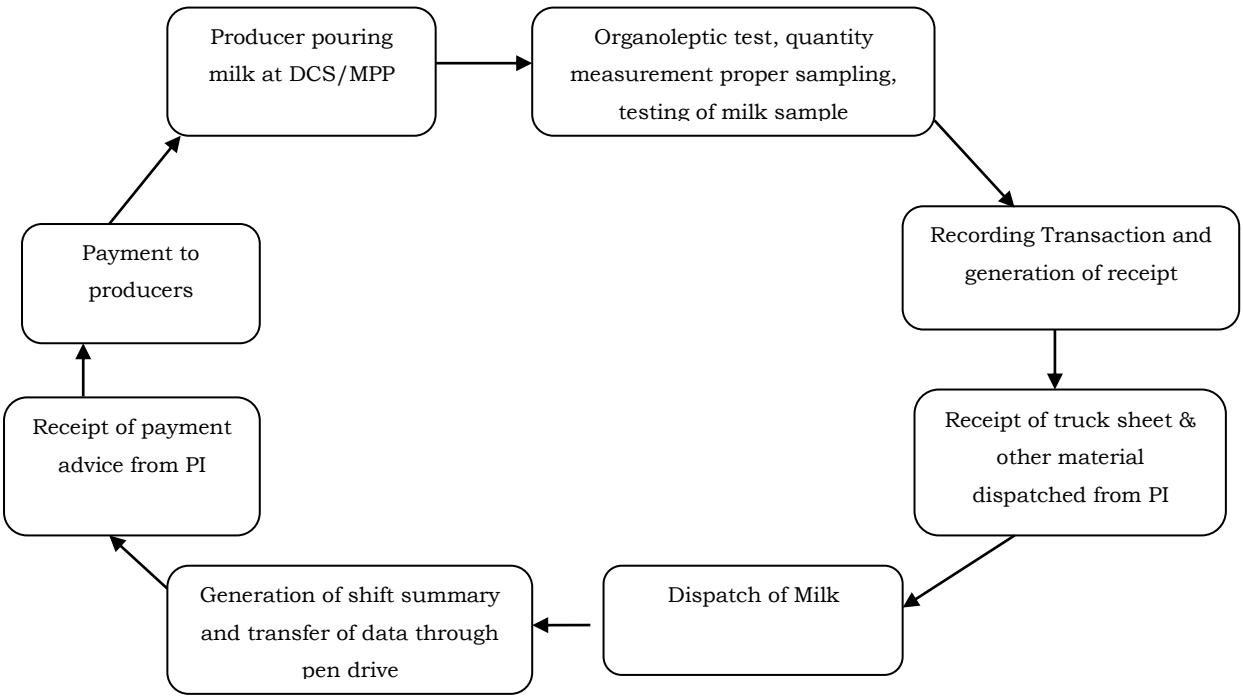
3.9. Fund flow Mechanism and financial management

3.9.1. Fund flow mechanism and financial management practices for the approved Sub-project shall be followed by the PI as described in the Financial Management Manual of the project.

3.10. Initiating milk Collection

3.10.1. Once the DCS/MPP has been supplied with Milk Collection Accessories, and milk transport logistics has been finalized, the milk collection at the DCS/MPP would begin. The process of milk collection and payment is given in Fig.1 below :

Figure 1: Milk collection process (with AMCU/DPMCU)



3.10.2. Testing and transportation of Milk

- PI shall arrange to provide suitable testing equipment's for testing of fat & SNF of milk samples, as per the approved Plan. Milk samples shall be tested as per Standard Methods for testing of Milk and Milk Products and duly recorded.
- The DCS/MPP functionary shall ensure that the measurement of milk is done carefully so as to avoid foam, shortage etc.; quantity & quality of milk supplied by each individual along with the milk sample bottle number is duly recorded against her/his name in the purchase register and the card/pass book of the pourer where DPMCU/AMCU are not provided.
- In case of a DCS/MPP with DPMCU/AMCU, a printed slip is invariably generated and given to each member with details of date, shift, type of milk, producer identification number, weight, Fat% & SNF% of milk, rate, total price, etc.
- The milk procured from the DCS/MPP village/ BMC cluster village shall be sent without time delays to the BMC/CC/Dairy for milk chilling and/or processing. In case of DCS/MPP equipped with a Bulk Milk Cooler, after the milk collection is over, before dispatch of milk, a composite sample shall be drawn from the total quantity of milk collected, following the standard sampling procedure to test for Fat, SNF and MBRT.

3.10.3. Testing for MBRT

- In addition to testing of pooled milk from BMC DCS/MPP at dairy dock for MBRT, the PI shall make arrangement for testing of milk samples at BMC level for Methylene Blue Reduction Test (MBRT) and reporting of average MBRT results in the Project MIS system.
- Since the MBRT of milk at the BMC level is one of the important result indicators under SMPI, the PI shall pay due attention to this aspect.
- The PI shall make necessary arrangement for scientific collection, (preservation if necessary) and testing of the milk samples for MBRT from each of the Bulk Milk Coolers provided under the Sub-plan, as specified below.
- The number of samples to be drawn and frequency of sampling shall be as follows:

- In case of number of installed BMCs from 1 to 5 : a sample from 1 of the BMCs once a fortnight, (i.e. twice during the month from the BMC selected)
- In case of number of installed BMCs from 6 to 30 : a sample each from 5 of the BMCs once a fortnight (i.e. twice a month from BMCs selected)
- In case of number of installed BMCs from 31 to 60 : a sample each from 10 of the BMCs once a fortnight (i.e. twice a month from the BMCs selected)
- In case of number of installed BMCs over 60 : a sample each from 15 of the BMCs once a fortnight ((i.e. twice a month from the BMCs selected)

- The BMCs shall be selected for drawing samples every month in rotation so as to cover the entire spread of the installed BMCs in the project area over a period of time and the sample results depict a representative view of the MBRT of milk at the BMC level.
  - Reporting of the Results so obtained shall be based on the arithmetic average of the no of samples tested during the month. The MBRT time shall be reported in minutes.
  - The PI shall arrange to test this sample for MBRT as per laid down procedure **(Annex II)**.

4. Capacity Building

Educating and motivating the stakeholders in milk pooling operations as also the Union personnel in different functions is a continuous process which significantly impacts the operations of the dairy cooperative. This includes the milk producer members as also the DCS/MPP staff, as necessary from time to time, based on technological advancements made in the milk collection system

4.1. Training modules included under the Sub-Project plan

4.1.1. Some important training and awareness modules included in the Sub-plan based on the requirements identified by the PI would be included in each approved SPP. The overall list of Awareness and Training modules is as listed below:

Awareness Programmes:

- Farmer Induction Programme (FIP) – for farmers from new DCS/MPP

- Board of Directors (BOD) Orientation Programme –for PI Boards
- Awareness programme on Clean Milk Production (CMP) – for milk producer members

Training modules:

- Basic training for new DCS/MPP Functionaries
- Refresher training for existing DCS/MPP Functionaries
- Operation & Maintenance of BMC/AMCU/DPMCU Operators
- Business Appreciation Programme (BAP) – for procurement personnel as refresher

4.1.2. The guiding criteria for the programmes are detailed below:

- Farmer Induction Program (FIP): Five members (pouring milk to DCS/MPP) from each of newly organised/registered DCS/MPP shall be selected for this training.
- Board of Directors (BOD) Orientation Program: All the elected board of directors of PI will undergo training during the project implementation period at NDDB, Anand
- Awareness program on Clean Milk Production (CMP): Awareness program will be done at PI level.
- Basic training for new DCS/MPP Functionaries: Training to be done at PI level for new secretaries identified/selected for operation of new DCS/MPP proposed (one functionary per DCS/MPP) under SPP.
- Refresher training of DCS/MPP Functionaries: Training to be given to existing DCS (functional)/MPP functionaries at PI level.
- Training of Trainers: Training to be given to trainers/senior officers of PI who are involved in training of milk procurement field staff at PI level.
- Operation & Maintenance of BMC/AMCU/DPMCU operators: Training to be given to BMC/AMCU/DPMCU operators at PI level.
- Business appreciation program for existing procurement staff: Refresher Training to be provided to the procurement staff.

4.2. Educating cooperative societies members and staff

4.2.1. PI shall also ensure induction and orientation of selected farmers through approved training modules to improve their animal management practices and better participation in cooperatives. These trained farmers would disseminate the learnings to the fellow farmers thereby having a snowball effect.

4.2.2. In addition to the programmes discussed above, PI shall ensure adequate on-the-job training is provided to the testers identified for the new DCS/MPP.

4.2.3. In case of strengthening of the DCS/MPP with DPMCU/AMCU/BMC, the PI shall ensure that the training is duly provided by the suppliers to the DCS/MPP staff on basic operations of the equipment and troubleshooting aspects.

4.2.4. Creating awareness among milk producers on concurrent aspects of dairying is important. In case of New DCS/MPP or strengthening of DCS/MPP, PI could consider a few large gatherings (in the form of Dairy Sahakarita Jagruti Abhiyaan, Village Awareness Programmes, Village Leadership Development Programme i.e. Cooperative dairying awareness campaign) of potential milk producers of villages wherein awareness could be created on animal breeding, feeding and health aspects, as also on ongoing schemes floated by PI and Govt. schemes by the concerned officials, guidance on animal induction etc. could be provided through interaction, posters, banners and other media.

4.2.5. In case any additional training is felt necessary by the PI in the sub-project area for effective implementation of the same, it shall be separately arranged by the PI.

4.3. Other measures for Awareness creation among milk producer members

4.3.1. Extension activity and extension material are critical for the accomplishment of targets and wider outreach of the SMPI activity and fulfilment of its objectives. Under extension material expenditure, the PI could include creation of awareness on specific aspects related to cooperation/dairying. This shall be taken up by the PI through Placing/Fixing of Pictorial Slogan posters at the DCS/MPP level covering different themes under SMPI activity for dissemination of messages on Institutional values, Clean milk production, Involvement and empowerment of women in dairying etc.

5. Key rules for milk procurement to be followed for implementation of this activity

5.1. Fairness and Transparency in Milk Collection

Parameter	Fairness	Transparency
Place	Neutral venue (Preferably)	Any stakeholder can visit and observe milk collection
Sampling	Will use standard equipment to take the sample as per set procedure of sampling.	Will be done in front of the milk producers.
Milk measurement and Testing	Equipments/measures/ technologies used will accurately weigh/measure milk irrespective of who is measuring and whose milk is being measured. Will immediately acknowledge the quantity, quality and value of the milk and issue a slip. Milk testing to be done in the presence of the milk producer after following the required calibration procedure	Will show to producers the standards adopted / methodologies used to calibrate the equipment. Will give same quantity of measure by using any form of standard equipment Readiness to do re-testing for a genuine demand and show the results i.e. repeatability in case anyone asks for it.
Payment	Will be paid completely for the milk they have poured as per the declared bill cycle on the specified dates of payment during every bill cycle	Any producer can cross check the rate in the slip with the rate chart displayed in the collection plant. Payment preferably through individual bank account/Business correspondent. Cash payment last option Will show the records of shift-wise pouring to the individual producers on demand.
Grievance handling	Giving an opportunity to all milk producer members to express, record their grievances and avail timely redressal.	Every milk producer transacting with DCS funded under the sub project is to be made aware about the system of grievance handling.

5.2. Providing equal opportunity to all milk producers

5.2.1. Every milk producer irrespective of caste, creed and religion shall be given equal opportunity to become a member of village dairy cooperative society, pour milk at the DCS/MPP and participate in

the management of the DCS/MPP/PI based on his/her capability and experience, as per provisions of the byelaws. PI shall ensure that discrimination of any kind is discouraged. PI shall also ensure involvement of women as well as SC, ST members in operations of the cooperative as per the approved plan.

5.3. Accountability

5.3.1. Roles and responsibility of each participant should be very clear. Every stakeholder shall be accountable for responsibility delegated to him or her. It is essential to have clearly defined roles so as to fix accountability at each and every level of the operation.

5.4. Ensuring value of milk supplied

5.4.1. Farmers should be able to realize the importance of pouring good quality milk which will provide them better price for their produce. On the other hand, milk should be tested and measured properly with duly calibrated equipment to ensure fair price to farmers.

5.5. Information Disclosure with awareness creation

5.5.1. The Milk Union shall preferably have a website containing suo moto disclosures of the sub project related information, details of the activities, area(s) where the activities are to be implemented, procurement plan etc. It will also regularly post the progress of the sub project and particulars of the person to be contacted for seeking further information.

5.5.2. Further, physical progress, important announcements, news, tender notifications, details of facilities available, type of milk product sold and details of welfare schemes being implemented by the Union can be disclosed. Relevant information may also be disclosed through annual report and specific information booklets.

5.5.3. In addition to periodic publications, following measures shall be put in place for information disclosure as well as awareness creation related to other activities:

- Display boards in the villages/DCS/MPP offices providing a monthly update of members enrolled, women members, milk collection, profitability of DCS/MPP, etc. through the SMPI activity.
- Display slogans charts in the villages/DCS/MPP containing information that describes SMPI as well as other activities under taken.

5.5.4. In addition to these following also needs to be ensured by the PI:

- PI shall ensure adequate safeguards in terms of composition of each DCS/MPP Management Committee and its proper functioning to encourage consensus based decision-making.
- Motivational actions to encourage good governance e.g. Performance based incentives and penal actions to rectify/ improve inappropriate governance and other actions as may be appropriate.
- In addition, a system of participatory governance and monitoring norms for milk producer institutions and dairy cooperative societies shall be developed to monitor the key performance indicators.
- Information, Education and Communication Campaigns.
- Adoption of common standardized IT based MIS for the sub project activity.

5.6. Grievance Redressal Mechanism (GRM)

5.6.1. "A grievance usually refers to some form of dissatisfaction by a stakeholder, which needs to be redressed in order to continue smooth implementation of the project". The sub project will evolve a system for redressal of grievances that may arise in the course of implementation. The GRM will be structured in a manner so that it can be monitored, as it provides important feedback on the sub project activities.

5.6.2. The PI shall designate an officer as GRO for grievance redressal whose contacts will be displayed on the notice boards at PI and respective societies and the website of the PI. A grievance register to be maintained by the PI at the respective societies. GRO will be made responsible to maintain a log of complaints/grievances related to the sub project and submit monthly reports to PI. The GRO shall need to:

- Maintain a computerized database of Grievances (through a unique identification number), acknowledgements and information about their disposal
- Monitor the progress of disposal of the grievances.
- Fix time limit for disposal of the Grievances.
- Deal with each Grievance in a fair manner.

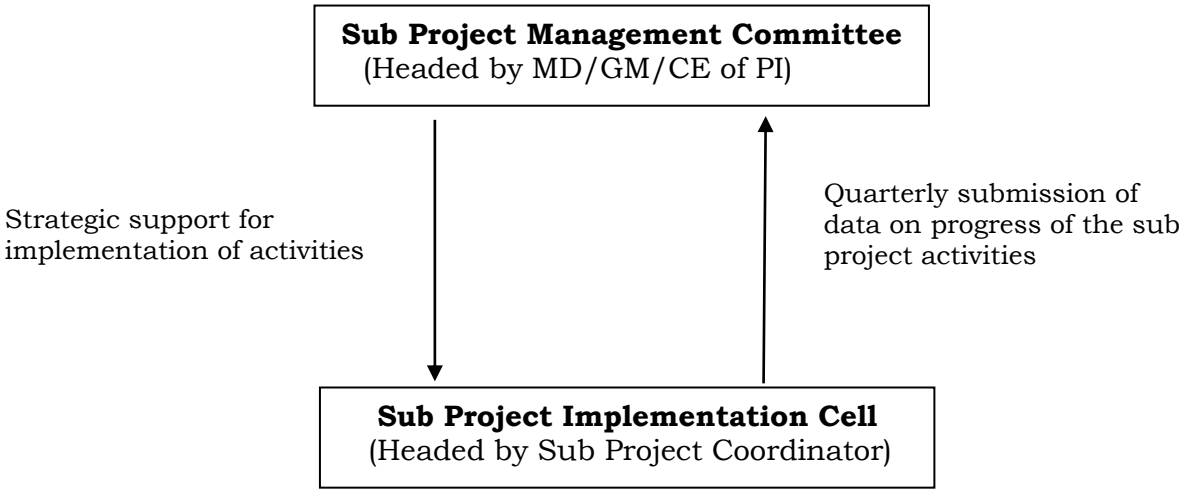
- Determine an appropriate periodicity when internal / external meetings would be held to implement the GRM in an efficient manner
- The grievance system put in shall be on continuous basis without a break during the year. The procedure to be followed for grievance handling is given at **Annex III**.

6. Project Management, Monitoring and Evaluation

6.1. Why is monitoring required?

6.1.1. Monitoring and evaluation is essential to analyse achievement against targets and to take corrective actions as and when required. Monitoring of sub project at a regular time span helps in improvement of quality of work and optimal use of available resources.

6.2. Implementation Arrangement at PI Level



6.2.1. Sub Project Management Committee

- The Sub Project Management Committee will be constituted at PI level for monitoring and reviewing activities under various components being implemented under the sub project.
- The Committee will be headed by MD/GM/CE of PI. The members of the Committee will be:
  i. MD/GM/CE of PI (Chairperson)
  ii. Section Heads/ Department Heads (Purchase, Finance & Accounts, HR & Admin, Procurement& Input Services, Plant, Marketing)
  iii. Sub Project Coordinators (all components under project)
  iv. Grievance Redressal Officer (GRO)
  v. Environment and Social Officer (E&S Officer)
  vi. IT/MIS Officer

6.2.2. Sub-Project Implementation Cell

- The Sub-Project Implementation Cell has a key role to play in management and monitoring of the Project. It shall manage implementation of the sub project under the supervision, direction and control of the Sub Project Management

Committee formed at the PI level. As the head of the cell, the Sub-Project Coordinator shall monitor it on day-to-day basis and will be accountable for achieving the targets.

- The Sub-Project Implementation Cell shall comprise of:

  i. Sub-Project Coordinator, Head of the cell
  ii. Designated Grievance Redressal Officer (GRO)
  iii. Designated E&S Officer
  iv. Area Officers
  v. MIS / IT Officer
  vi. Finance Officer
  vii. Purchase Officer

- Monitoring is to be carried out by reviewing all the activities as per approved Sub-Project Plan (formation of new DCS/MPP, strengthening of existing ones, setting up infrastructure at DCS/MPP, maintaining quality measures, payment to milk producers, grievance handling etc.) on a regular basis. Monitoring the progress of the sub project shall include monitoring and analysing each sub-component/sub-activity in the chain of milk pooling. This shall be carried out through regular internal review meetings and discussions with other stake holders as necessary. Visiting villages and interacting with producers and staff involved in the milk pooling activities shall form a crucial part of monitoring the sub project. Set of indicators against each activity may be worked out to compare target against achievement on regular basis and to revise or modify targets accordingly.

  The Roles and responsibilities of each of the members of the Sub-Project Management Cell are detailed in **Annex IV.**

6.3. Institutional arrangement for SMPI implementation

6.3.1. Stakeholders in the SMPI programme

6.3.1.1. The stakeholders of milk pooling activity may include:

- Milk producing farmers
- DCS/MPP functionaries
- Field Staff of PI
- Milk Union/Producer Company

6.4. Functions of the Stakeholder

Table 2: Functions of Stakeholders involved in Milk Pooling

Institution/ Individual	Functions
Milk producer	Regular, timely and maximum possible supply of unadulterated hygienic and good quality milk to DCS/MPP
Secretary/Village level functionaries	Coordinate overall functions of society including fair and transparent system of milk collection & testing, local sales, supply of milk to union, milk bill payment, supply of inputs and grievance handling.
BMC operator	Operation and maintenance of bulk milk cooler, including Milk collection, testing and dispatch by adopting fair practices, with/without the help of additional manpower.
DCS/MPP Management Committee members	To ensure that operations are fair and transparent, grievances are promptly attended and financial soundness of the DCS/MPP is maintained
Supervisor	As the vital link between PI and DCS/MPP, ensure that Standard Operating Procedures (SOPs) for the SMPI operations are properly followed.
Sub Project Implementation Cell	To ensure adherence to SOPs by all stake holders, people planning and implementation of each component of the SMPI at field level. This would cover facilitation in implementation of the project at field level, coordination between equipment procurement, deployment and field level activity and monitoring the overall project so as to meet physical and financial targets.

6.5. Parameters to be monitored

6.5.1. In addition to monitoring of physical and financial progress of the Sub-project and trouble shooting, routine operations and efficiency parameters, few key parameters to be monitored and evaluated in the context of SMPI may include :

- Number of villages to be covered (DCS/MPP).
- Number of new DCS/MPP formed.
- Number of existing DCS/MPP covered for strengthening.
- Additional producer members to be covered.
- Additional women producer members enrolled.
- Additional milk procurement by the PI.
- Additional chilling capacity (BMC) created under the project.
- Number of AMCU installed at DCS/MPP.
- Producer profile (membership enrolment, changes in membership profile, women members, SC/ST and small holders etc.)
- Milk collection (procurement data – DCS/MPP wise, MBRT data BMC DCS/MPP-wise, BMC/DCS building, Tanker capacity)

6.6. Monitoring & Evaluation

6.6.1. The Sub-Project Management Cell would meet every month or more frequently as required. Every month they shall review the following:

- Targets and achievements of last month with field staff.
- Reasons for any underachievement and strategy to cope with the lag.
- Targets for upcoming month, plan for achievement and arrangement of assistance required if any.
- Reporting of the progress to MD/GM/CE.
- Grievances received by GRO and actions taken thereon any issues to be resolved.
- Document minutes of meeting and review Action Taken report of previous meeting.
- Any specific instructions received from IMC (located at NDDB) regarding implementation of SMPI is to be communicated and acted upon.

6.6.2. The Cell, if it so desires, may also call special invitees to attend the meeting. The general superintendence, direction, control and management of the affairs and activities of the sub project shall vest in the Cell, which shall include preparing long term strategies, plans, taking policy decisions related to sub project implementation including approval of budget, expenditure, reimbursement and release of advances, entering into contracts with agencies and other organizations, etc. The Cell shall ensure the effective implementation of the sub project with good governance so as to achieve the objectives defined in the sub project.

6.6.3. The Cell shall also arrange to submit periodic consolidated reports to IMC (located at NDDB) for performance reviews. The report will have the following inter alia,

- periodic up-to-date physical and financial expenditure data compared to the targets;
- Regular quarterly submission of Fund Utilization Certificates on prescribed format
- Success stories and problems encountered during the reporting period with suggested remedial actions;
- Any other reports as required from time to time by IMC (located at NDDB).

7. Procurement of goods, works and services

PI shall procure (purchase) goods/works/services under the project as per the Procurement (Purchase) Guidelines.

8. Financial Management

During implementation of the sub project, PI shall follow the Financial Management practices described in Financial Management Manual.

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Annex I: Indicative list of items under SS milk collection accessories, testing equipment, DCS/MPP board, furniture etc.

Sr. No.	Name of Accessories	Max Quantity (nos.)
A.	**Milk Collection Equipment/Accessories**	
1	Milk Collection Tray, made 1.2 mm thick SS 304, size 440x590x65 mm, Minimum weight - 4200 gm.	1
2	Milk Sampler made from 1.2 mm thick SS 304. Minimum weight -90 gm	1
3	Lactometer Cylinder made from SS 304 Pipe having 1.6 mm wall thickness. Minimum weight 270 gm	1
4	Funnel with Strainer, made from 1.2 mm thick SS 304.Minimum weight-1600 gm	1
5	Strainer Sieve for Funnel, Material SS 304	1
6	Measure100 ML, made from 1.25 mm thick SS 304. Minimum weight125 gm	1
7	Measure 200 ML, made from 1.25 mm thick SS 304. Minimum weight-180 gm	1
8	Measure 500 ML, made from 1.6 mm thick SS 304. Minimum weight- 425 gm	1
9	Measure 1000 ML, made form 1.6 mm thick SS 304. Minimum weight- 650 gm	1
10	Milk Can Plunger, made from SS 304. Minimum weight-650 gm	1
11	Milk Bucket, made from SS 200 series, seamless with bottom ring, 15 litre capacity. Minimum weight -1600gm	1
12	Lock Stoppers (rubber), Brass (Dozen)	8
13	Lock Stopper Keys (Aluminium)	5
14	Lactometer Zeal type, 0 to 40 with ½ division, Calibrated, Accuracy ± 0.25 LR	10
15	Thermometer (Alcohol), 0 to 100°C, yellow back, accuracy 100%	10
16	Pipette 10.75 ml ,ISI mark, Double tested	10
17	Graduated pipettes 10 ml	10
18	Test tubes 18 X 150 mm	24
19	Butyrometers (ISI Make),double tested, for milk 0-10% accuracy 100%	48
20	Graduated burette, 25 ml, made of laboratory grade transparent plastic, Guaranteed accurate.	2
21	Burette Stand of Iron, 8” long with clamp	1
22	Glass Beakers,100 ml	2
23	Glass Beakers,500 ml	2
24	Porcelain dish, 3 Inch	2
25	Spirit lamp, Stainless Steel ,100 ml.	2
26	Butyrometers shaking stand ,12 holes (HDPE)	2
27	Plastic sample bottles ,50 ml, with cap, made from Food grade plastic, Minimum weight-5.5gm	100
28	Plastic tray for holding 24 Nos. sample bottles securely ,made from food grade plastic, minimum weight 300gm±10gm	6
29	Tray for reagents, Size 16x12 Inches, made from food grade plastic	4
30	Plastic tilt measure 1 ml for alcohol with rubber Cork & with plastic bottle of 250 ml.	6
31	Plastic tilt measure 10 ml for acid with rubber cork & with plastic bottle of 500 ml	6
32	Test Tube Stand for 12 tubes of size18X150mm, Made from aluminium	2
33	Nylon Brush for cleaning Butyrometer, full length Bristles	5
34	Nylon Brush for cleaning pipettes, nylon length 4 Inches, total length 12 Inches	5
35	Nylon Brush for cleaning 50 ml milk sample bottles, nylon length 4",with tail & thick steel wire	5
36	Plastic measuring jug for acid dilution ,1 Litre	1
37	Plastic hammer for can opening	1
38	Acid (20 kg), Alcohol (2 litres) and Plastic Jars (10 litres and 2 litres capacity)	1 set

Sr. No.	Name of Accessories	Max Quantity (nos.)
39	Hot Plate/ Heater	1
40	Milk Collection Bowl SS 304, 80 litres capacity with butterfly valve having outlet of 76 mm, Bowl internal diameter 700mm,height 200 mm & thickness of 2 mm. the top lid with1 mm thickness	1
41	SS 304 stand to keep weighing bowl: SS 304 using 25mm square pipe , height 700 mm , 600 mm length X 600 mm width with top	1
42	Milk Cans – Aluminium/SS - 40 lit	Up to 6
43	Stationery and Calculator	1
B.	**Milk Testing Equipments**	
43	Gerber Centrifuge Machine (Auto/ Manual) with safety cover (24 tests)	1
44	Adulteration Test kit	1
45	Milk Analyser	1
46	EMT (Auto/Manual)	1
47	Electronic weighing Scale (upto 200 kg capacity)	1
48	Electric water bath	1
49	Hand Refractometer (0-20% Brix)	1
C.	**Furniture**	
50	Chair	6
51	Table	1
52	Cupboard	1
53	Wooden platform/table for testing equipment	1
D.	**DCS/MPP Board**	1
54	DCS/MPP Board (LED display)	
E.	**DCS/ MPP/BMC support tools/equipment**	
54	Flying Insect killer machine	1
55	High Pressure Jet Washer (up to 150 bar)	1

Note: The above list of item set will be applicable for DCS/MPP as well as for DCS/MPP having BMC facility. Participating Institutions will have flexibility to purchase combination of any items from the above mentioned items as per their requirement.

Annex II: Testing of milk at village level institution

In order to ensure standard and safe supply of milk and milk products to consumers, it is essential that raw milk reaching the dairy conforms to the standards set. This implies that raw milk needs to be tested at DCS/MPP and Dairy dock before it is accepted for further processing. Generally, the milk is tested at following levels:

- At the DCS/MPP level when the producers supply/pour milk.
- At the Dairy Dock on receipt of milk from the DCS/MPP.

Testing should be quick, accurate (high repeatability) and leave minimum chance of human error

At the society level, a rapid examination has to be carried out on each and every sample of milk including organoleptic tests and quantitative estimation of fat and SNF present in milk as per Standard Methods for Testing of Milk which include Qualitative Tests such as Organoleptic tests, Clot-on-boiling Test (C.O.B. Test), Alcohol Test, Acidity test etc.

At the BMC DCS/MPP level and the Dairy Dock, testing for Methylene Blue Reduction Test (MBRT) is essential. MBRT at BMC DCS/MPP level is also one of the result indicators of the Sub-project. Hence the details for the MBRT are included herein:

Methylene Blue Reduction Test (MBRT)

Principle

This test is based on the principle that methylene blue (an oxidation-reduction dye or indicator) which is blue in its oxidized state, is reduced to a colorless compound (leuco form) as a result of the metabolic activities of bacteria in milk. When a solution of dye is added, the organisms present in milk consume the dissolved oxygen and lower the Oxygen reduction potential (ORP) to a level where methyl blue or similar indicators are reduced and the milk once again retains its colour

Apparatus: (a) Test-tubes 20 ml each, 15 x 150 mm (Borosil), (b) Sterile SS bowl (to sterilize silicon bungs), (c) Silicon rubber bungs, (d) Pipette 10 ml (e) Pipette 1ml, (f) Water-bath thermostatically controlled at 35 to 37+1 deg. C,

Reagent: Methylene blue thiocyanate tablets dissolved in hot water

Procedure: Transfer 10 ml of the milk sample to the test tube in a 20 ml test tube appropriately labeled. Add 1 ml of the Methylene blue thiocyanate reagent into the test tube. Shake slowly to dissolve the

dye and ensure uniform mixing. Tubes may be placed in the water bath immediately *(or may be stored in the refrigerator at 0 to 4 Deg. C for a more convenient time of incubation. When ready to perform the test, the temperature of the samples should be brought to 35 Deg. C within 10 minutes).* When temperature reaches 36 Deg.C, slowly invert tubes a few times to assure uniform creaming. Do not shake the tubes. Record the time at the beginning of the incubation period. Cover the tubes to keep out light. Check the samples for de-colourization after 30 minutes of incubation. Make subsequent readings at 15 minute intervals thereafter. The difference between the final and initial time will give the MBRT of the sample. For raw chilled milk, the time should be noted in minutes.

Important note for PIs:

End of the Project (EOP) Result indicator for MBRT at BMC level: Minimum 90 minutes

Annex III: Procedure for submission of complaints and their Redressal

Grievance/Complaint Submission:

When a complaint is made, it can either be made orally or in writing and include the following details:

- Name of the individual or organization, address and telephone number (if any) of the complainant.
- Brief description of the matter which is the source of the grievance, including copies of any relevant and supporting documents.
- Redressal or relief sought

Grievances may also be submitted in the Complaint Box kept at reception of the office of the PI. The Complaint Box should be opened on daily basis by the GRO. Complaint can also be sent by post.

A complaint made through electronic means (e-mail, fax) should also be accepted and replied, if requested, should be sent through e- mail also.

In case the complainant is not satisfied with the response at a certain level, he/ she will be free to approach the next higher level.

Procedure for redressal of grievances:

Every application received shall be tagged with a specific reference number. Every application or petition shall be acknowledged through standard acknowledgement slips or a copy of the receipt dispatched to the complainant within 3 days of receipt of complaint or handed over to person at the time of receipt for complaints submitted in person.

Every application shall carry such a slip for future reference indicating the name, designation and telephone number of the official who is processing the case. The time frame in which a reply would be sent shall also be indicated.

The complainant shall be quickly informed of the action taken by way of redressal within the proposed response time.

A record of all complaints received and action taken till disposal shall be maintained.

A reply to any grievance shall cover all points raised and not address the grievance partially. Follow-up action if any shall be duly pursued.

No grievance is to be rejected without having been independently examined. At a minimum, this means that an officer superior to the one who delayed taking the original decision or took the original decision that is cause for grievance, shall actually examine the case as well as

the reply, intended to be sent to the complainant. If a complaint is rejected, reasons for such rejection shall be made explicit and intimated to the complainant within the time frame.

Grievance redressal mechanisms will consider the vulnerability of gender, SC/ST and other underprivileged persons.

Annex IV: Roles & responsibilities of Sub-Project Implementation Cell members for the Sub-project

Designation: Project Coordinator		**Unit: PI**
Key Responsibilities	**Performance Indicator**	**Technical Competency**
Execute legal agreements between the PI & IMC	Achievement of sub project result indicators	Basic understanding of milk business and recent trends in dairying in the area of operation.
Implementation and monitoring of the sub project targets		
Placement of requisite manpower & arrange their training		
Organise meetings of Management Committee and review of project implementation		
Behavioural Competencies		
Broad Competency	**Ability to**	
Leadership	Clarify goals, take initiatives, inspire the team, allocate resources	
Team work	Develop a common cause and build cohesiveness	
Minimum Qualifications and experience: Graduate in any discipline with minimum 10 years of experience in milk procurement operations including Managerial experience of 4-5 years.		

Designation: Grievance Redressal Officer		**Unit: PI**
Key Responsibilities	**Performance Indicator**	**Technical Competencies**
Maintain a computerized database of Grievances	Every application received tagged with a unique reference number, issued receipt in standard acknowledgement slip within 7 working days Inform complainant the action taken within the response time suggested at each level Number of meetings held	ICT based support management, coordination with different levels for resolution. Ability to collect & document critical information about the complaint
Fix time limit for disposal of grievances and monitor the progress of disposal of the grievances		
Holding periodical meetings to implement the Grievance Redressal Mechanism in an efficient manner		
Behavioural Competencies		
Broad Competency	**Ability to**	
Written & verbal Communication	Confidently & effectively communicate & respond to complainants	
Minimum Qualifications :	**Prior work exp:**	
Graduate	One of the existing Senior Officers or above in the PI	

Designation: Area Officer		**Unit: PI**
Key Responsibilities	**Performance Indicator**	**Technical Competency**
Monitoring milk procurement activities in the operational area of the milk union	Achievement of targets in his area of operation	Knowledge of milk procurement operations such as DCS/MPP management, route optimisation, DCS/MPP record keeping, milk pricing, material balancing, transport management, input services
Monitoring installation and proper functioning of BMCs and DPMCUs in the identified area of operation		
Arrange for training & awareness programs for Supervisors, BMC/CC In charge and milk producers		
Behavioural Competencies		
Broad Competency	**Ability to**	
Communication	Speak confidently to the group	
Problem-solving	Man management. Ability to go to root-cause of the problem for an effective solution	
Minimum Qualifications s and experience: Graduate in any discipline with 6-7 years of experience in milk procurement		

Designation: Field Supervisor		**Unit: PI**
Key Responsibilities	**Performance Indicator**	**Technical Competency**
Monitoring the functioning of DCSs/MPPs under his jurisdiction.	Achievement of targets in terms of villages covered, membership, milk quality and quantity and growth in no of DCS/MPP in tandem with SPP targets.	Practical knowledge of organising a DCS/MPP, DCS/MPP accounting, material balancing, milk quality and testing
Responsible for maintaining harmony in relations at DCS/MPP, BMC/CC level and Union level		
Behavioural Competencies		
Broad Competency	**Ability to**	
Communication	Speak in simple language and confidently to the group	
Problem-solving	Ability to go to the root-cause of the problem for an effective solution. Should have mature approach, and capability of conflict resolution	
Team building	Ability to work in cooperation with stakeholder	
Minimum Qualifications s and experience: Diploma holder with 5 years of experience in milk procurement or 12th pass with 5 years of experience in milk procurement.		

Designation: Secretary		**Unit: DCS**
Key Responsibilities	**Performance Indicator**	**Technical Competency**
Responsible for milk collection, testing at the DCS/MPP level and despatch of milk and Milk payments	Good quality of milk collected.	Sound knowledge of milk procurement procedures. Understanding of testing procedures and Price chart. Knowledge of basic accounting, book keeping and statement preparation. Working knowledge of operating computers.
Responsible for preparing all receipts, vouchers, annual reports, Trading and P & L account, Balance Sheet for DCS/MPP	Correct and timely payment to the pourers Ensure Timely Audit	
Provide support to Chairman in conducting MCM and AGM.	Timely circulation of agenda notes and minutes	
Behavioural Competencies		

Designation: Secretary		**Unit: DCS**
Broad Competency	**Ability to**	
Communication	Write and speak confidently to the group in local language	
Problem-solving	Should have mature approach and ability to address the grievance of pourers on milk quality, quantity and pricing.	
Minimum Qualifications : Preferably 10th pass and have completed Secretary training programme		Prior exp: Nil