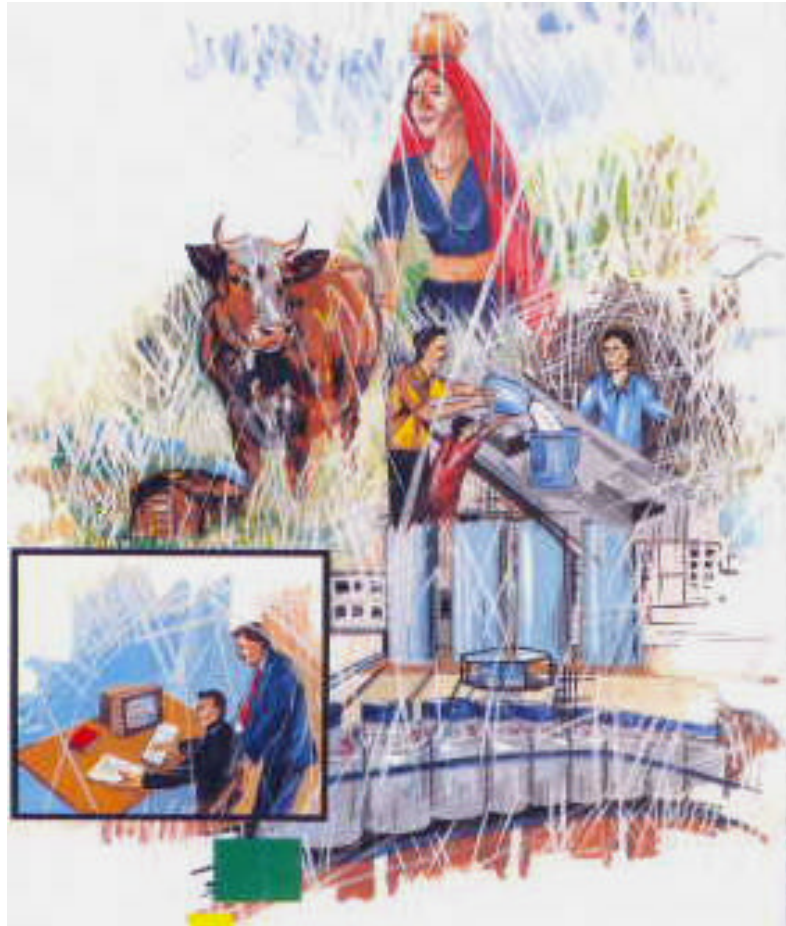# Computerised Milk Collection System

- An Ideal System for Small and Larger Milk Collecting / Cooling Centers.
- Provides accurate and un-tempered milk collection data to the Dairy Management.
- Various add on options to suit specific budget and application requirements.
- Flexible and Expandable System.
- Instant Print out of Receipts and various MIS (Management Information System) Reports.

Exported by:

ENCON Consulting Engineers

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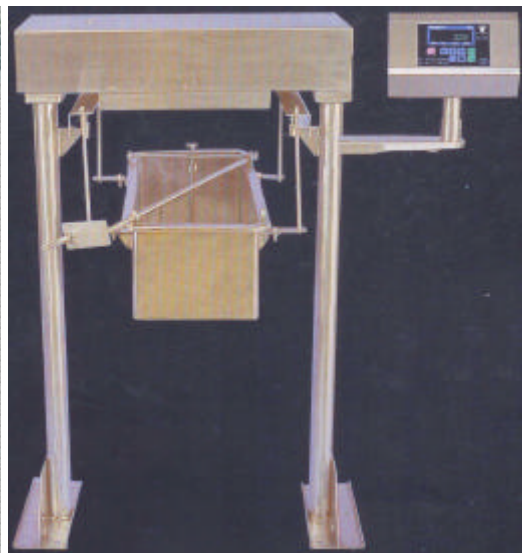
Complete Automatic Milk Collection Station

Typical Computerised Milk Collection Station

- o Computer (Optional) Std. Desktop model also available.
- o Fat Testing machine, other semi-auto options available.
- o Corrected Lactometer Reading (CLR) unit.
- o Farmer's card reader
- o Display Unit
- o Printer.

Milk Weighing Platform
For 50 to 100 Liters Capacity

Milk Weight Bowl
For 100 to 500 Liters Capacity

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MILK MANAGEMENT INFORMATION SYSTEM (MMIS)
FOR
DAIRY & MILK COLLECTION CENTERS

Preface:

Conventionally, Milk collection information in the Dairy and Collection Centres are managed manually. Operators log the data manually, which are subject to error and manipulation resulting in heavy losses to the Dairies. With the introduction of Personal Computers (PC), Computer technologies and Electronic Fat / Lecto-meter Testing equipment, System is developed which helps Dairies and Milk Collection Centres to accurately monitor Milk Collection and Reception.

This accurately collected information is then combined with data stored in the computers such as Milk Supplier (Farmer's) Name, ID, Personal Address and even Financial assistance provided to each milk supplier from whom the amount loaned can be recovered either on prorate or monthly basis.

General Description:

The MMIS system is basically available in two forms with add on accessories for additional facilities,

a)   Basic Computerized System consisting of custom built Instrument with built in data entry points, software and printer unit. It's a cost-effective rugged option for remote rural area operation.

b)   PC based System consists of Std. Persona Compute with separates Printer and adds on accessories.

c)   Add on accessories are available,

    i)   <u>Electronic Milk Tester</u>:   It's meant for testing Fat content of the milk being collected. The fat data is transferred to computer system and can be used for providing "Fat Based Tariff". This means that the rate offered for milk purchase can be based on fat content of the Milk Fat. (Higher the fat content, better the rate!)

    ii)   <u>Lacto-meter</u>:   In order to determine lactometer reading and correcting value based on its temperature, Electronic Lactometer is provided with temperature measurement probe and accurate determination of Corrected Lactometer Reading called (CLR). This data will also be fed to computer for assessment of corrected Weight to Volume conversion of Milk.

    iii)   <u>Electronic Card Reader</u>:   The Basic or PC based system can also be provided with Milk Supplier (Farmer's) ID card reader. The ID Card reader is for supplier identification by the computer system. It eliminates remembering of milk supplier's identification and speeds up collection procedure.

    iv)   <u>Weigh Bowl and Dump Tank with Transfer Pump</u>:   The standard units are supplied with Platform type electronic weigh bridge for weighing milk cans or fitting small collection tank on it, however alternatively weigh bowls with dump tank and transfer pump can also be supplied at extra cost.

    v)   <u>Milk Flow Meter</u>:   For Loading or offloading of Milk Tankers, option of Milk Flow Meter can also be provided, it can accurately log data of milk received from centres.

The Milk Management System (MMIS) is a fully computerized and integrated system for milk collection centres and dairies. The basic components of this system are –

1.	<u>Weigh bowl</u>	-	The milk is collected or dispensed by weight in the weigh bowl.
2.	<u>Lacto meter</u>	-	The lacto meter measures the density of the milk, duly corrected for temperature from a reference temperature of 60 °F.
3.	<u>Flow Indicator Totaliser</u>	-	If the milk is collected or dispensed with a flow meter, the flow indicator totaliser collects and transmits the flow data to the PC.
4.	<u>Electronic Milk Tester</u>	-	The milk tester checks the FAT content of the milk.
5.	<u>RS 232/485 Interface</u>	-	The interface allows communication of the various instruments to the PC on a single COM port.
6.	<u>Personal Computer</u>	-	The PC controls the entire operations and stores the process data.
7.	<u>`Matrix' Software</u>	-	The software is the user interface for operating the entire system. It allows entry of various data in the PC and gives print outs as required.
8.	<u>Printer</u>	-	The printer actually prints the various tickets and reports for records.

Technical Features:

a)   Weight into Volume (Kg -> Litres) built-in conversion.

b)   Auto Tare Facility.

c)   Permanent Memory for 16 Days.

d)   Printer Interface.

e)   Fat Machine Interface to Milk Weigher.

f)   Exclusive Software

g)   Battery Back Up Unit

h)   100-Year calendars to show day, date, time in hour, minute, seconds.

i)   Name of the dairy on each printout.

j)   Print out of farmers milk in kg, litre Code No and Fat %

k)   Auto indexing while reprinting.

l)   Morning. evening ,separate printing & separate memory storage facility

m)   Cow milk collection facility and rates of fats provided by customer for cow.

n)   Fat interface i.e. fat machine (Electronic Milk Tester) provided by the Dairy to have parallel display of fat % appearing on milk tester and the same to have on printing.

o)   Day printing. Total printing.

p)   Individual supplier-wise printing of milk supplied during a specific day within a fortnight (code printing).

q)   16 days printout according to each farmer, 16 days total printing, 16 day-wise Printing.

r)   Memory addition facility.

s)   Memory cancellation facility.