KCMMF Ltd.
CENTRAL PRODUCTS DAIRY
ALLEPPEY

WELCOME TO THE PRESENTATION OF TOTAL ENERGY MANAGEMENT

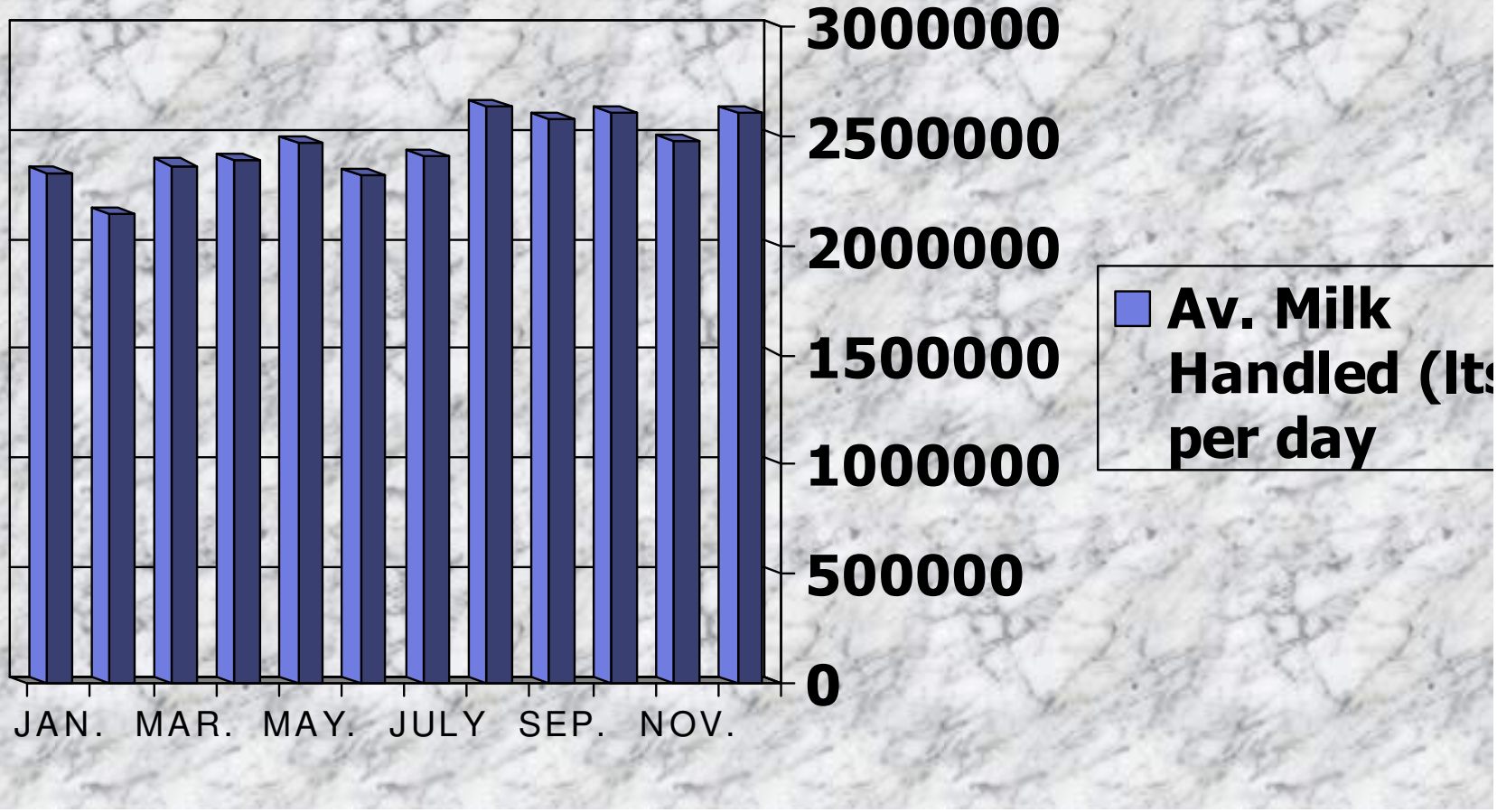
GENERAL INFORMATION

- Started in 1974, Capacity: 2000 LPD
- Expanded to: 60,000 LPD on Dec 1987
- Aseptic Packing station commissioned on Dec 1988
- Milk Powder Factory commissioned on Sep 1996
- Capacity enhanced to 1,00,000 LPD in 2005
- Mango Juice Production Started in Pet Bottles on 2007.

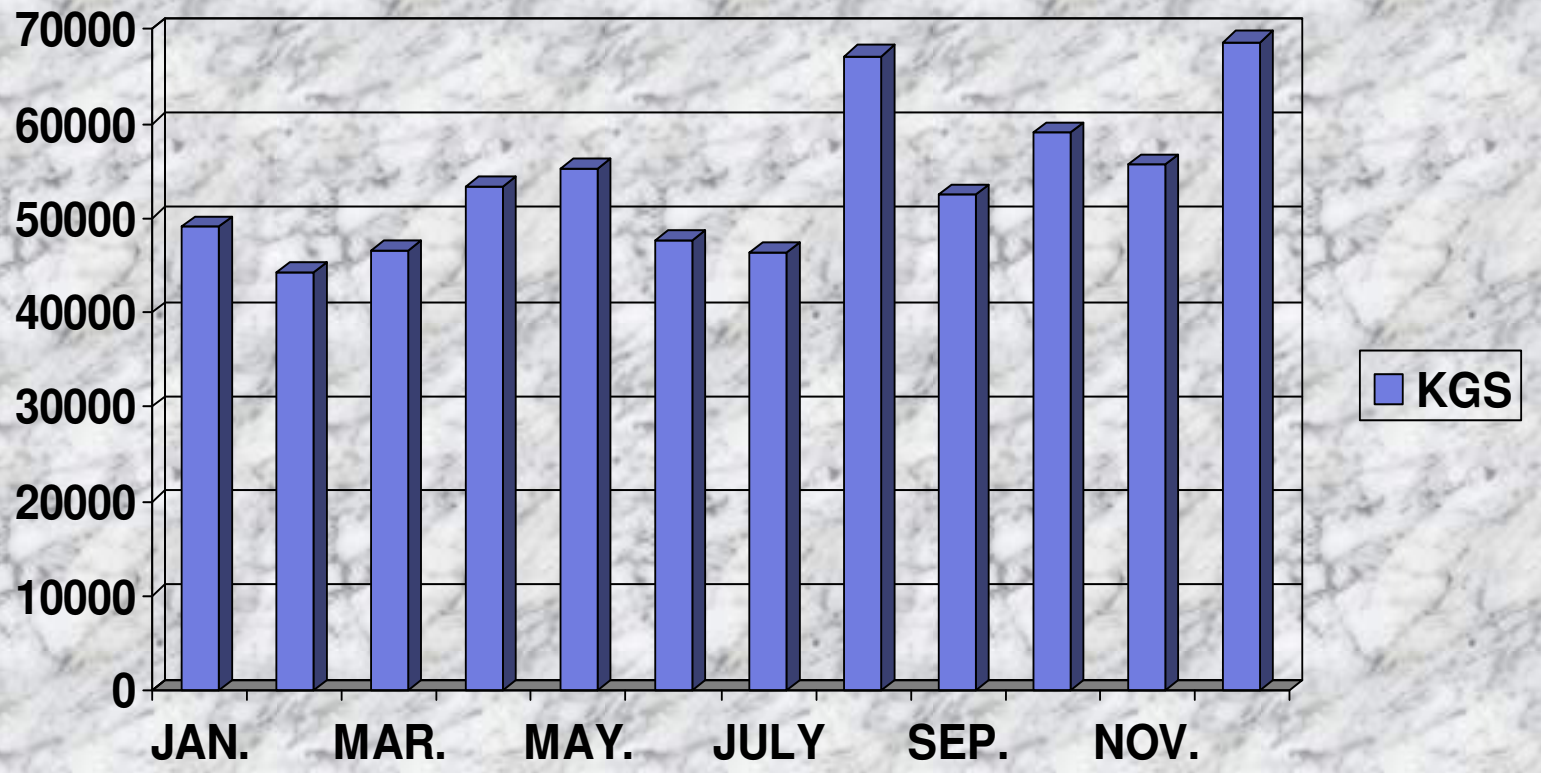
PRODUCTS HANDLED

- **TONED MILK**
- **DOUBLE TONED MILK**
- **CURD**
- **GHEE** in 2 Brands
- **PEDA**
- **STERILIZED FLAVOURED MILK**
- **MANGO DRINK** in Tetra packs & Pet Bottles.
- **DAIRY WHITENER**

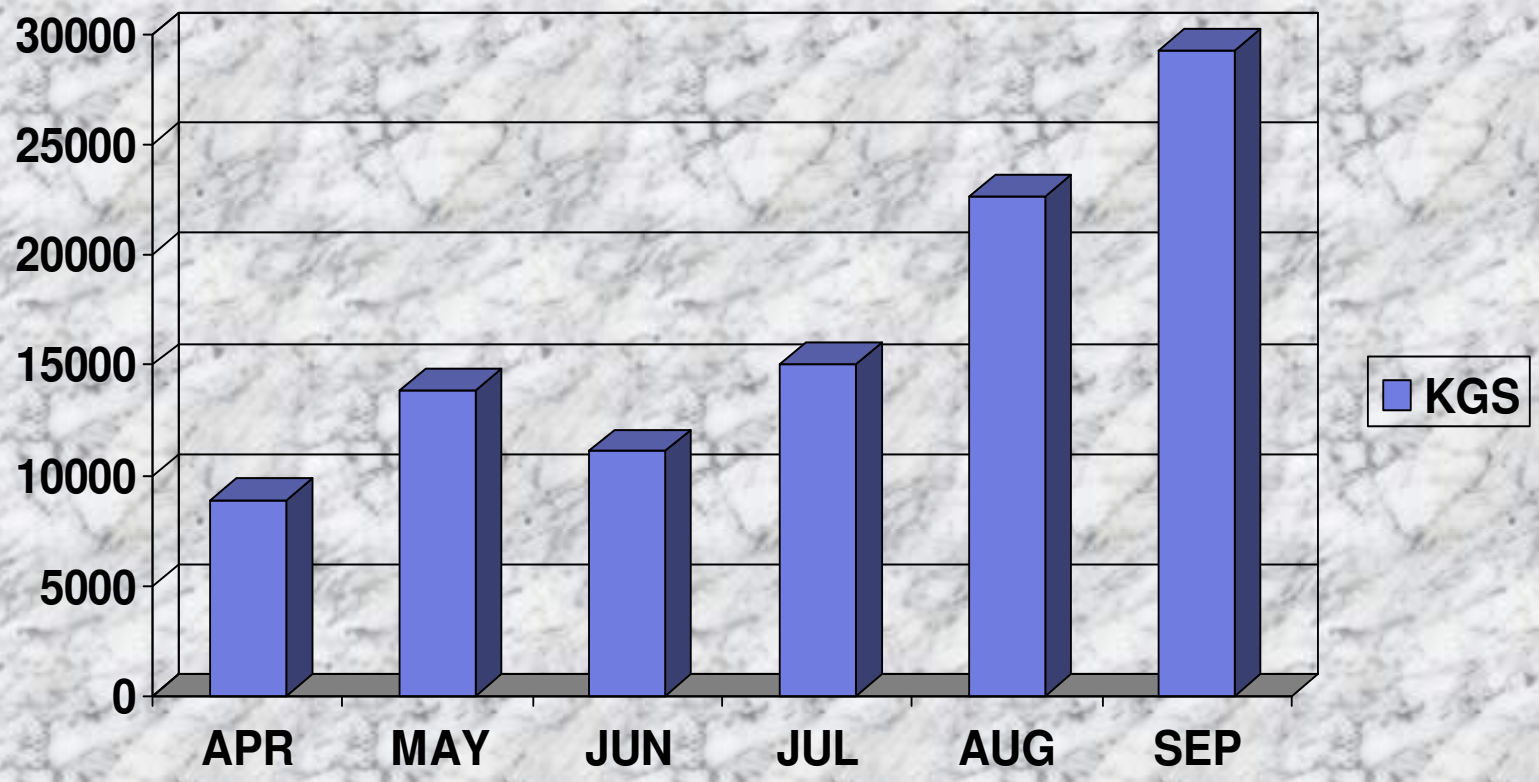
AVERAGE MILK HANDLED 2009



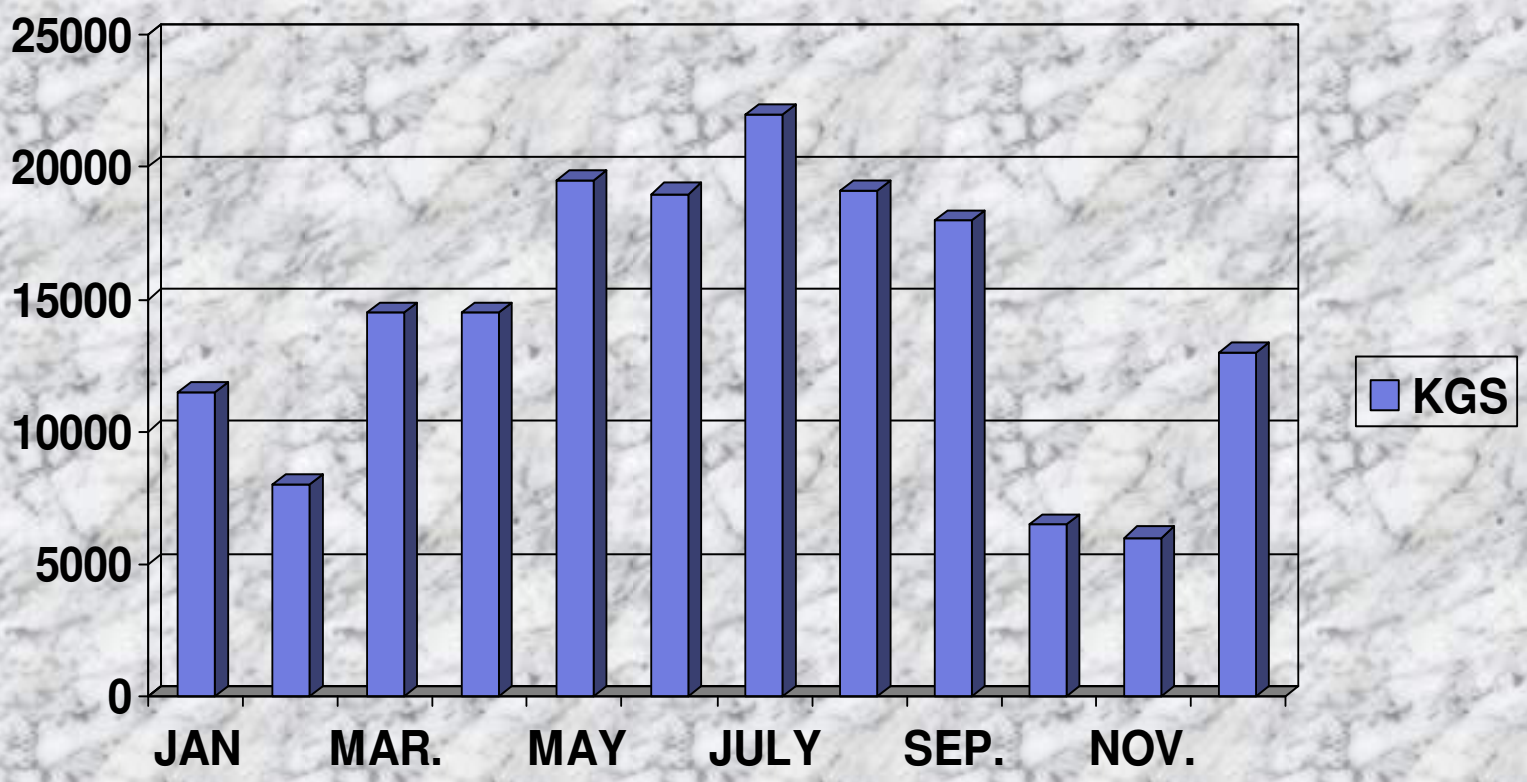
PRODUCTION DETAILS CURD 2009



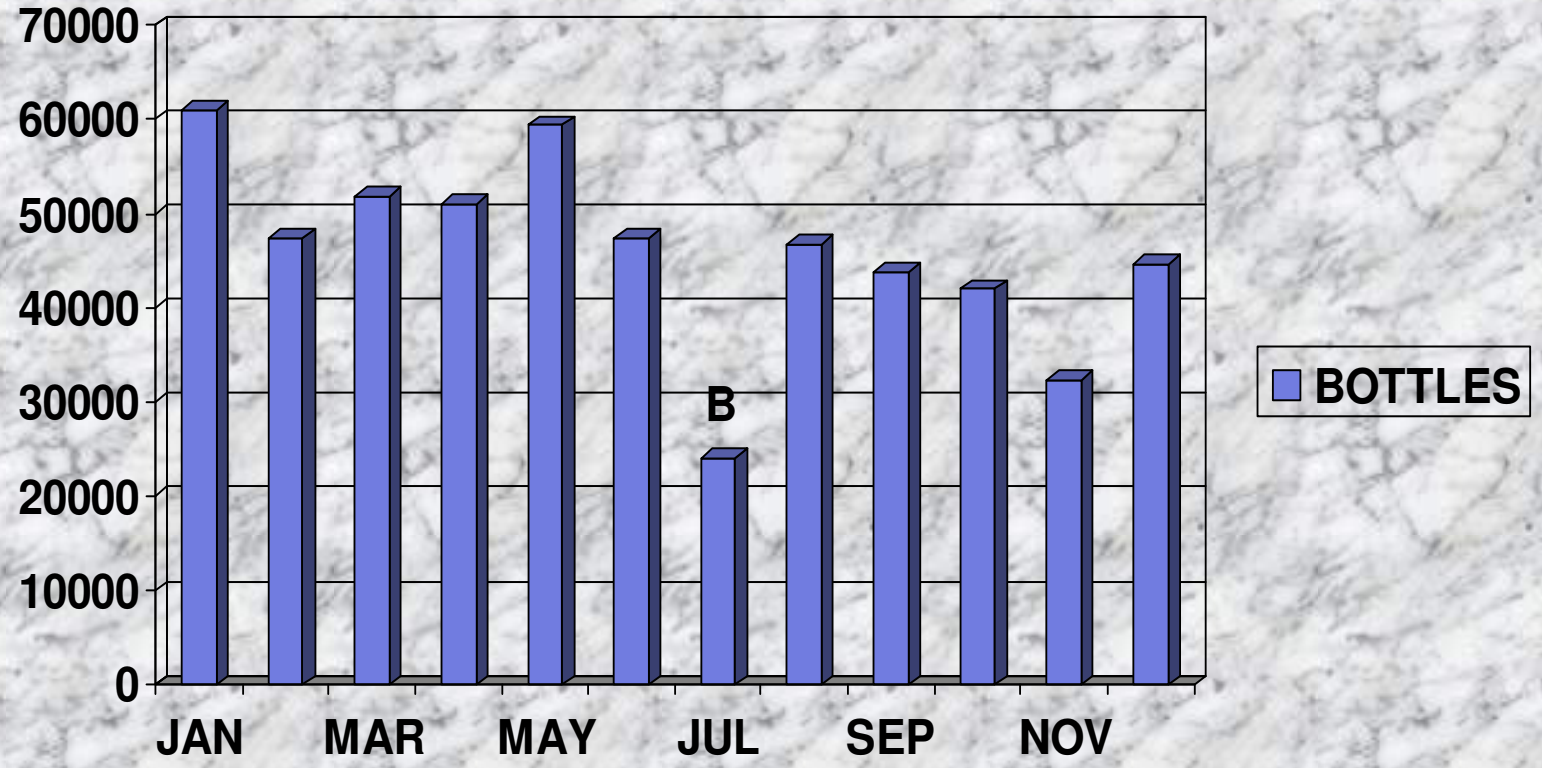
PRODUCTION DETAILS CURD 2009



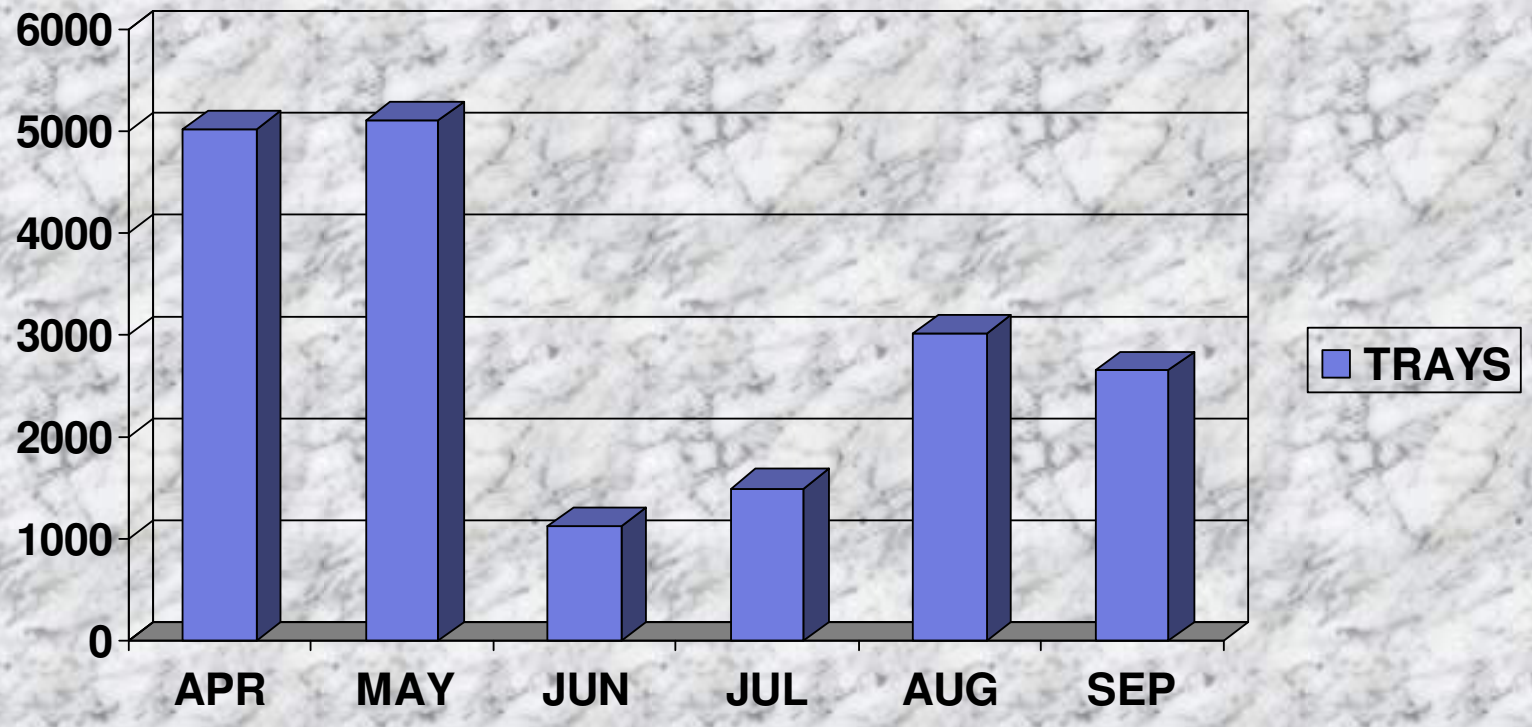
PRODUCTION DETAILS GHEE



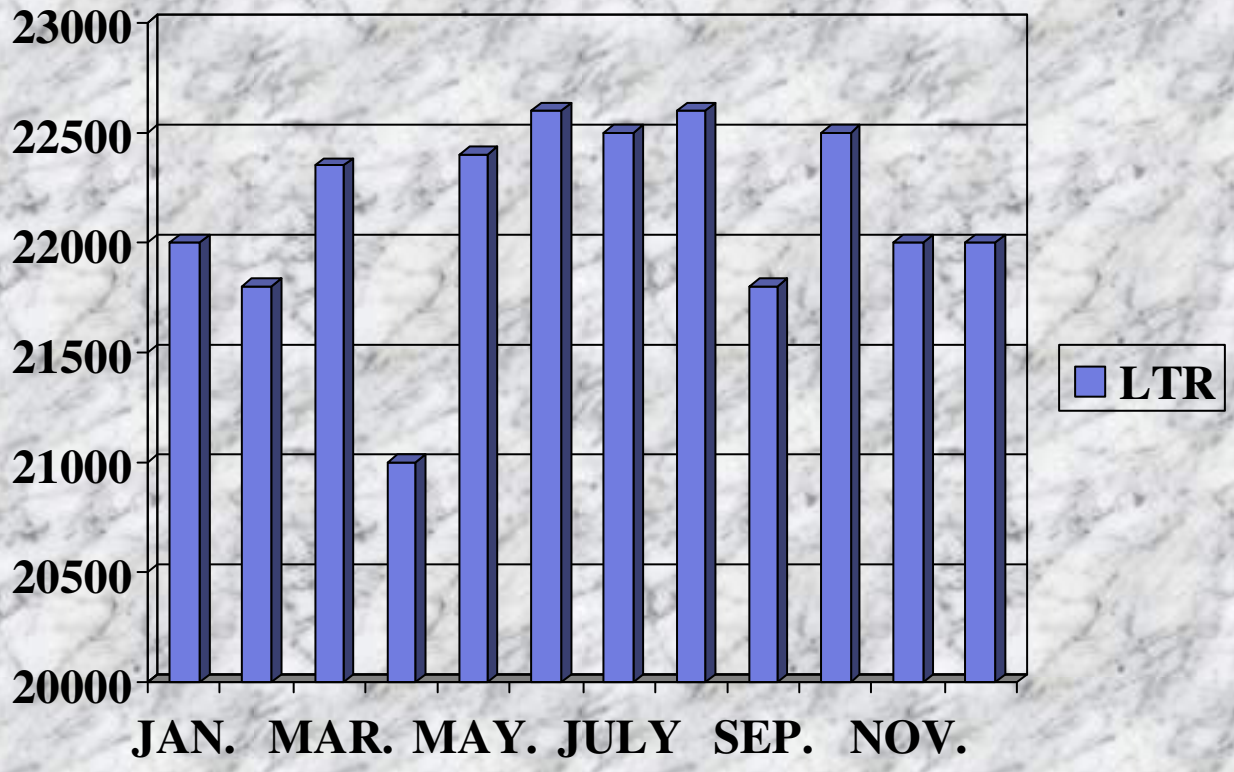
PRODUCTION DETAILS MILMA PLUS 2009



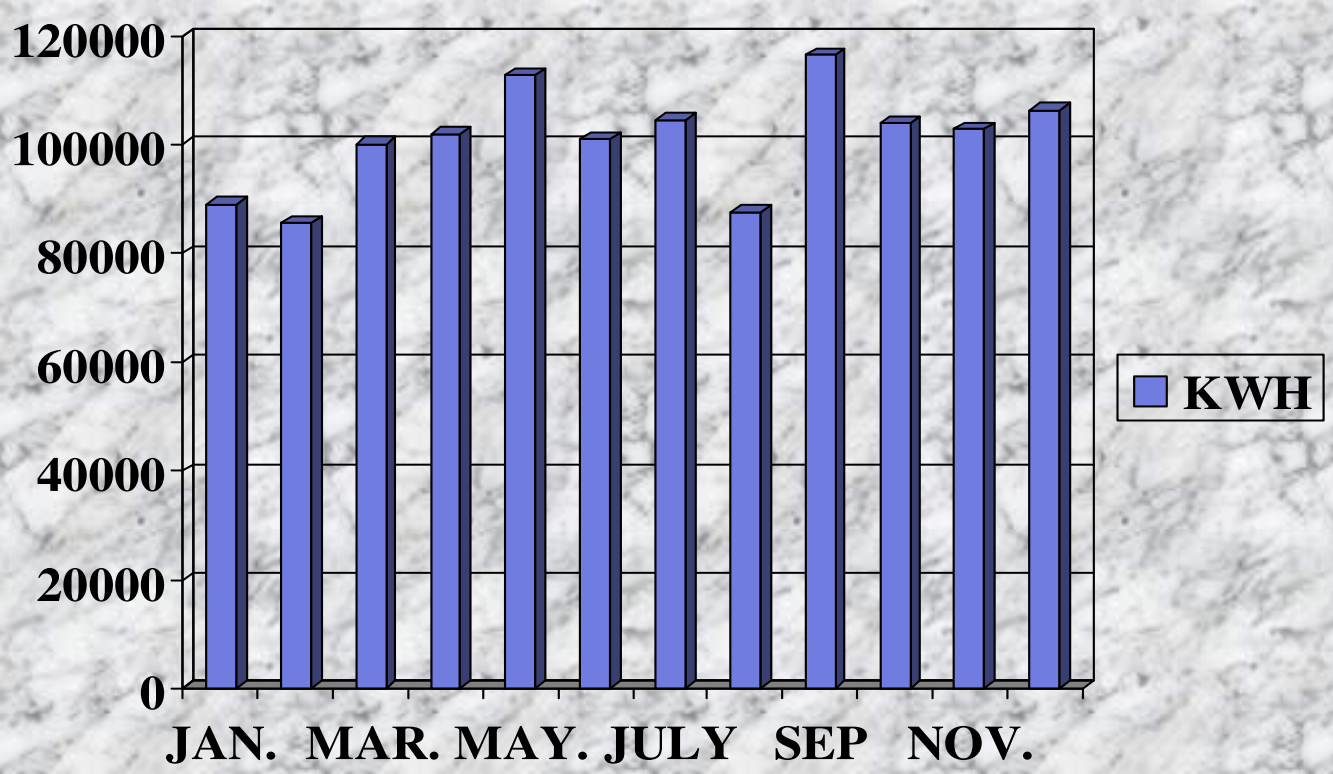
PRODUCTION DETAILS MILMA MANGO 2009



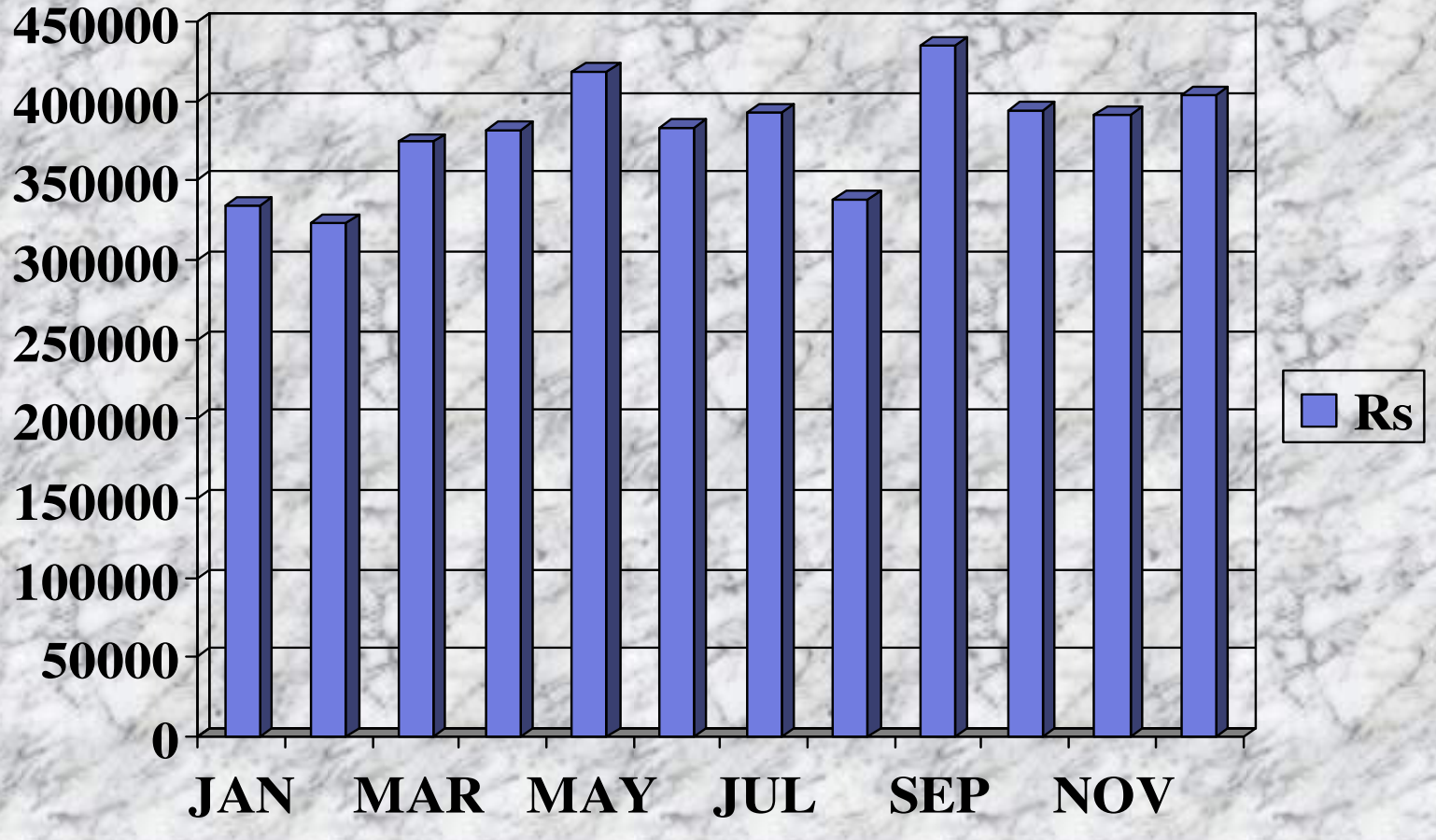
ENERGY CONSUMPTION DETAILS FURNACE OIL (2009)



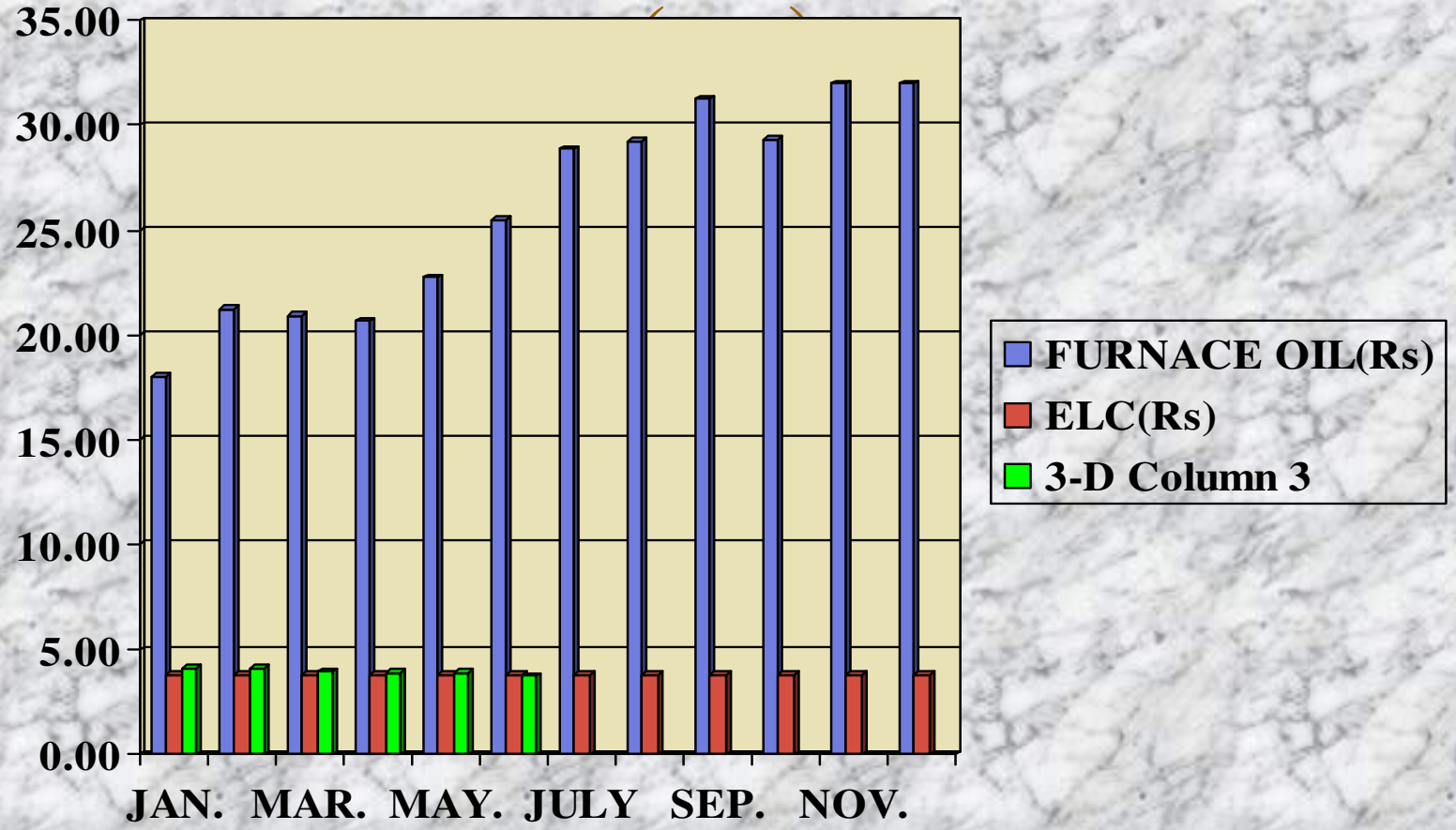
ENERGY CONSUMPTION DETAILS POWER(2009)



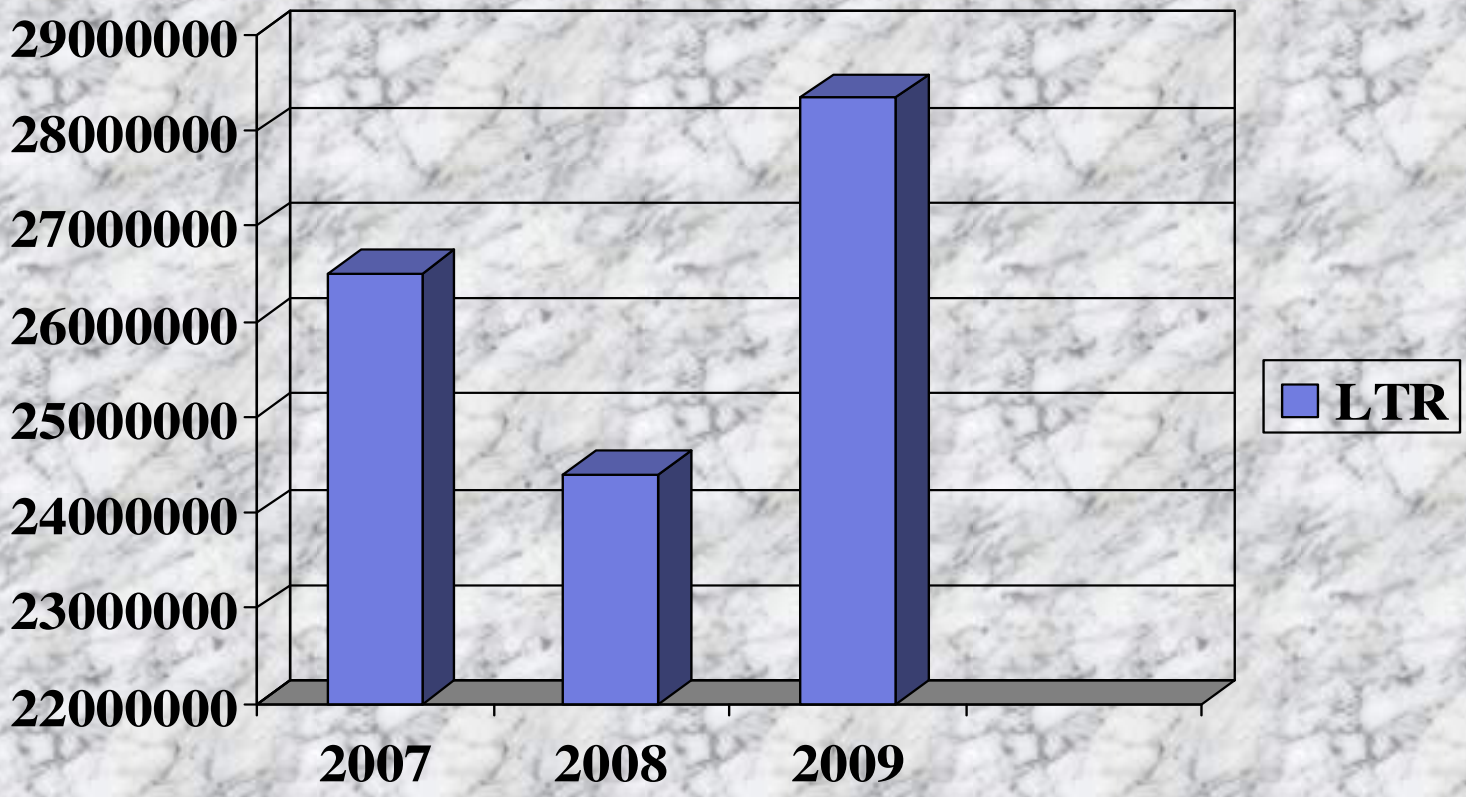
ENERGY EXPENCE DETAILS POWER(2009)



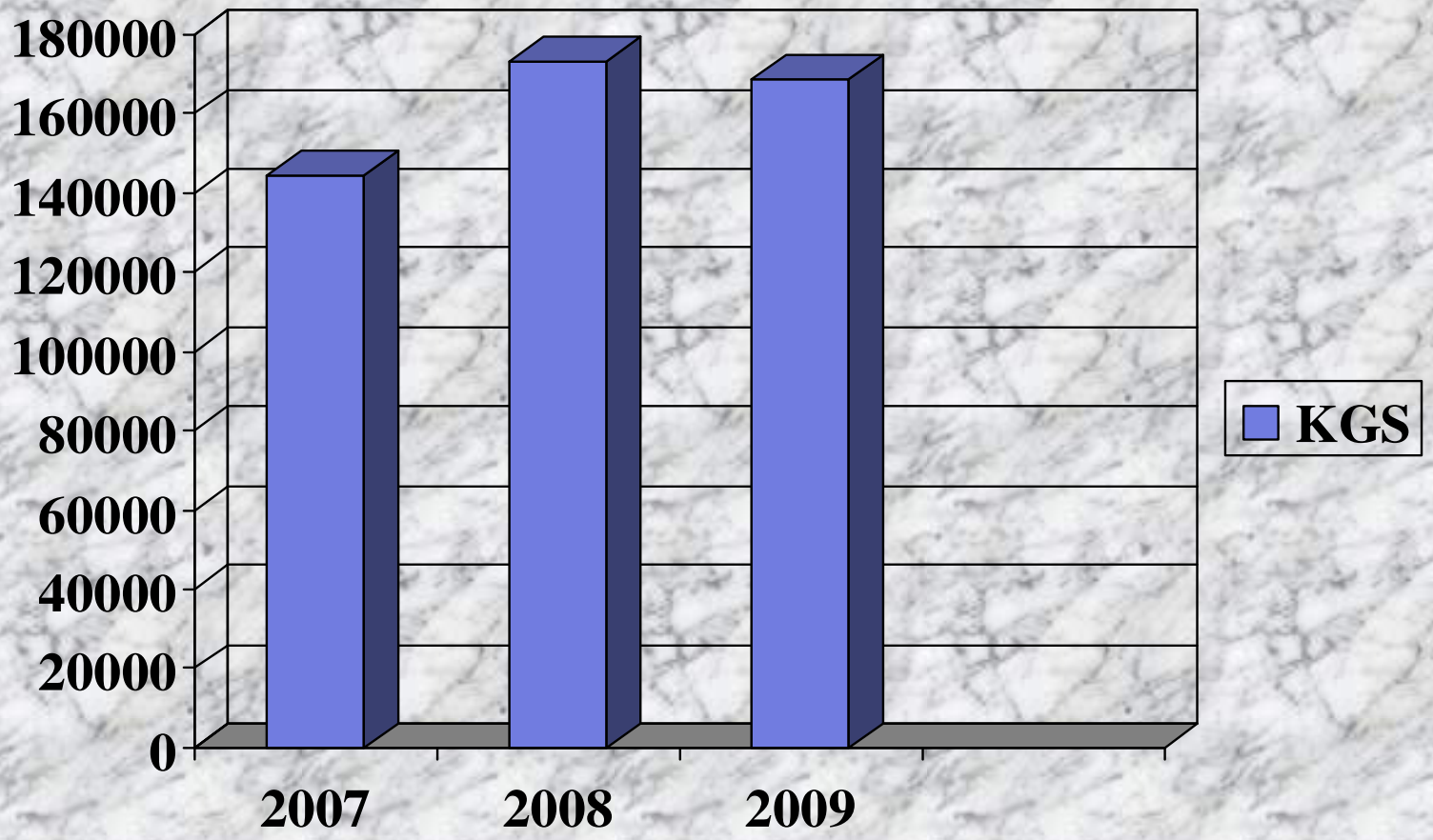
UNIT COST-,FURNACE OIL,ELC



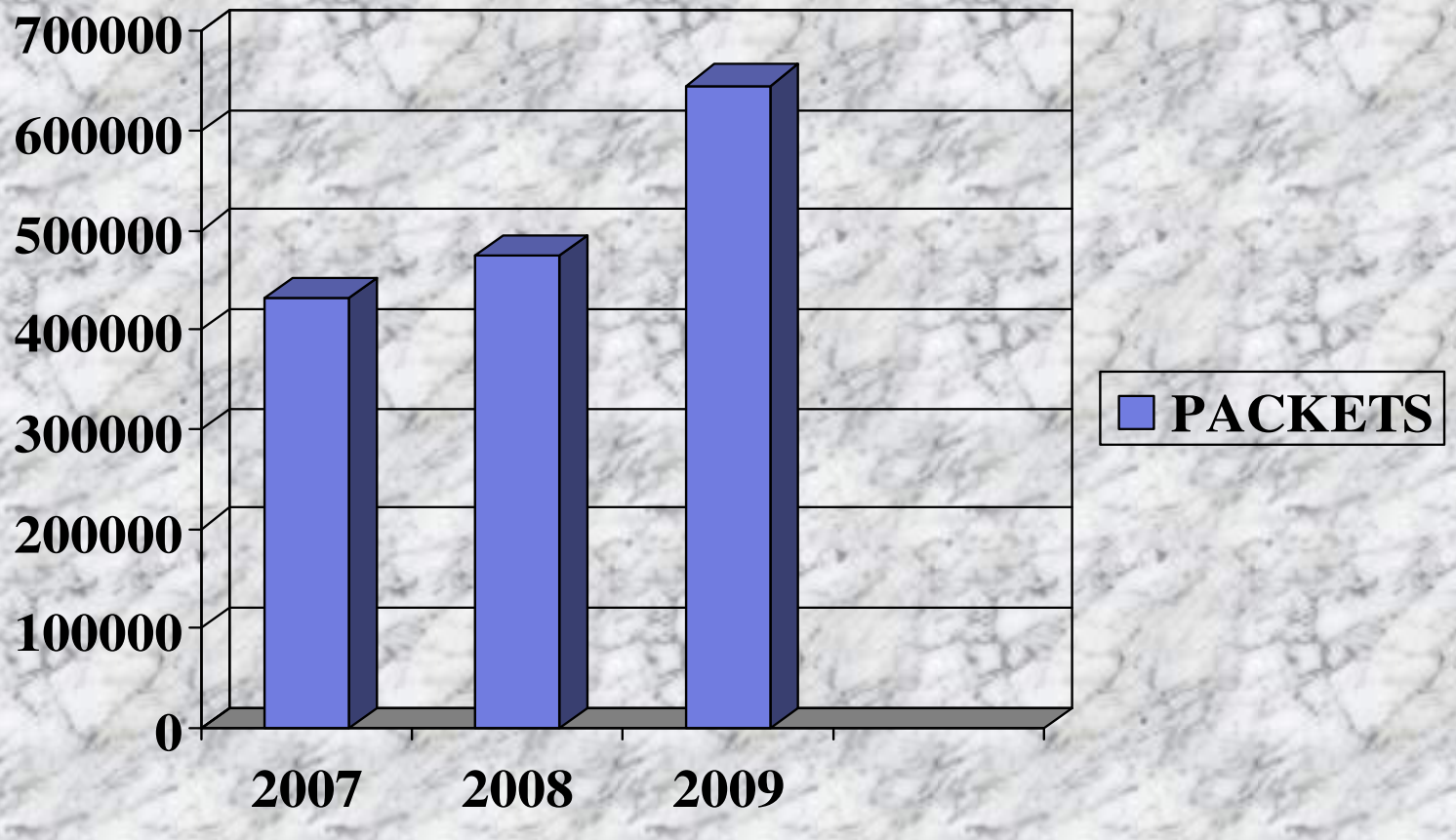
PRODUCTION COMPARISON MILK



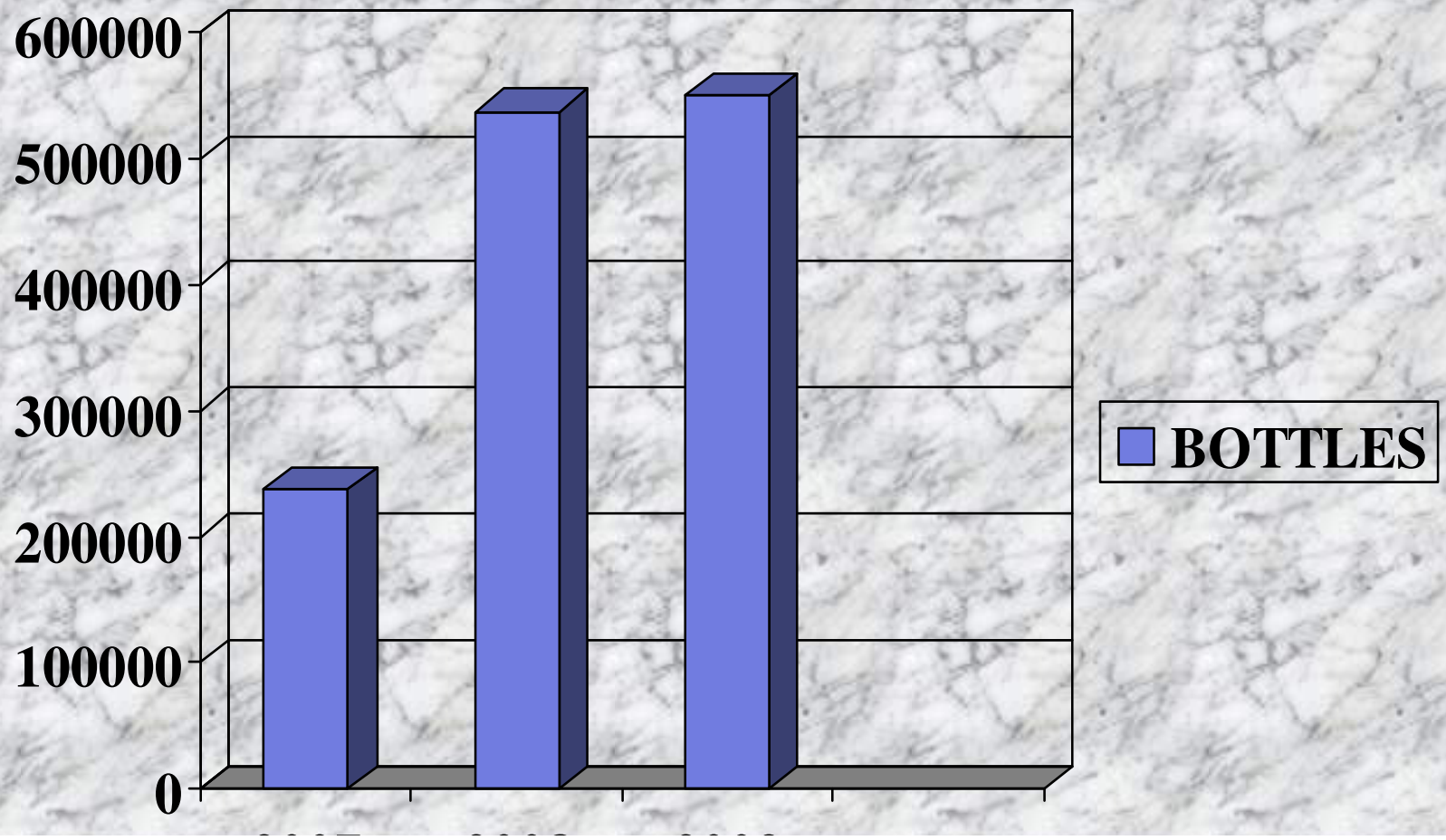
PRODUCTION COMPARISON GHEE



PRODUCTION COMPARISON CURD

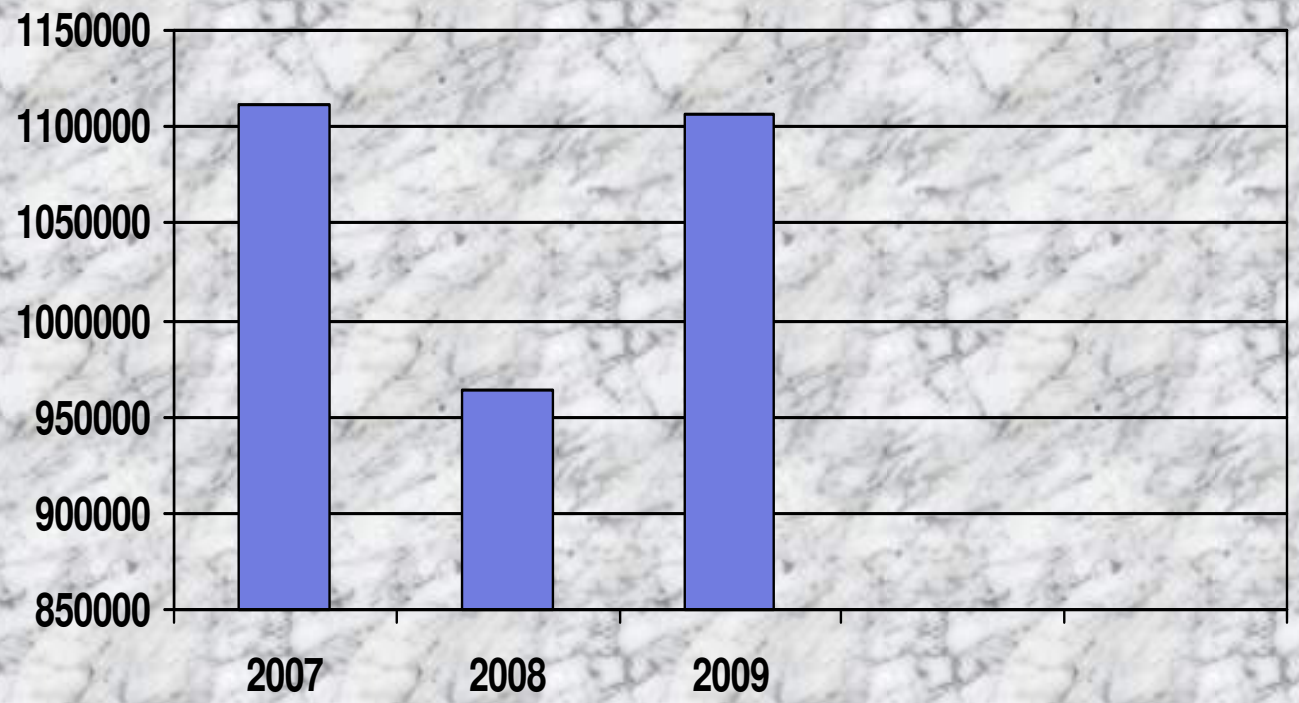


PRODUCTION COMPARISON MILMA PLUS



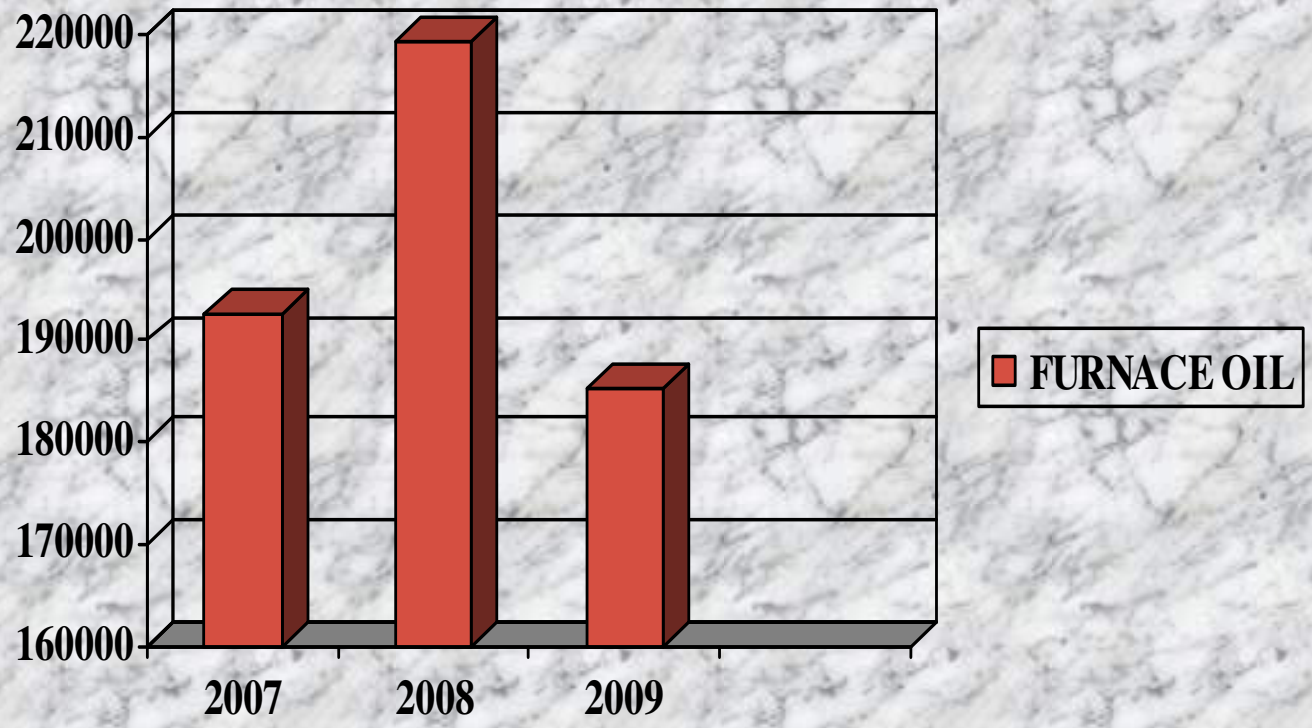
ELECTRICTY

ENERGY CONSUMPTION



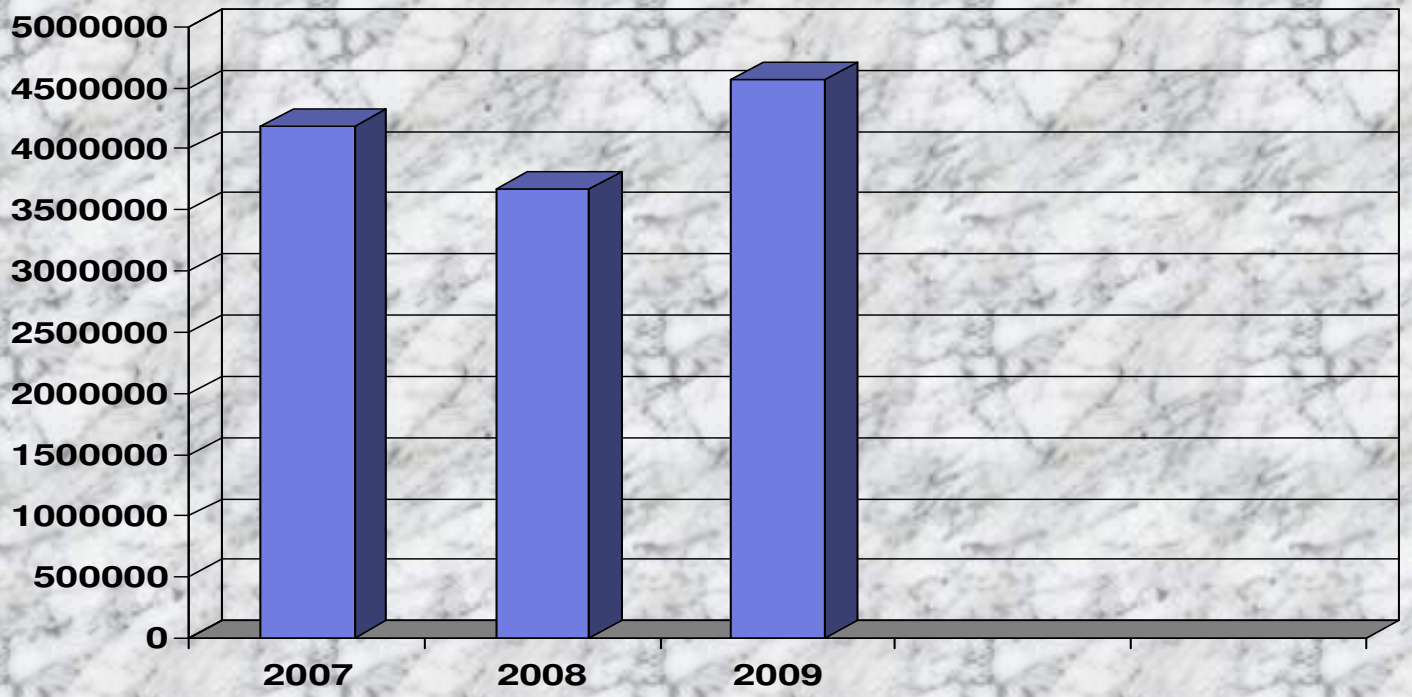
FURNACE OIL

ENERGY CONSUMPTION

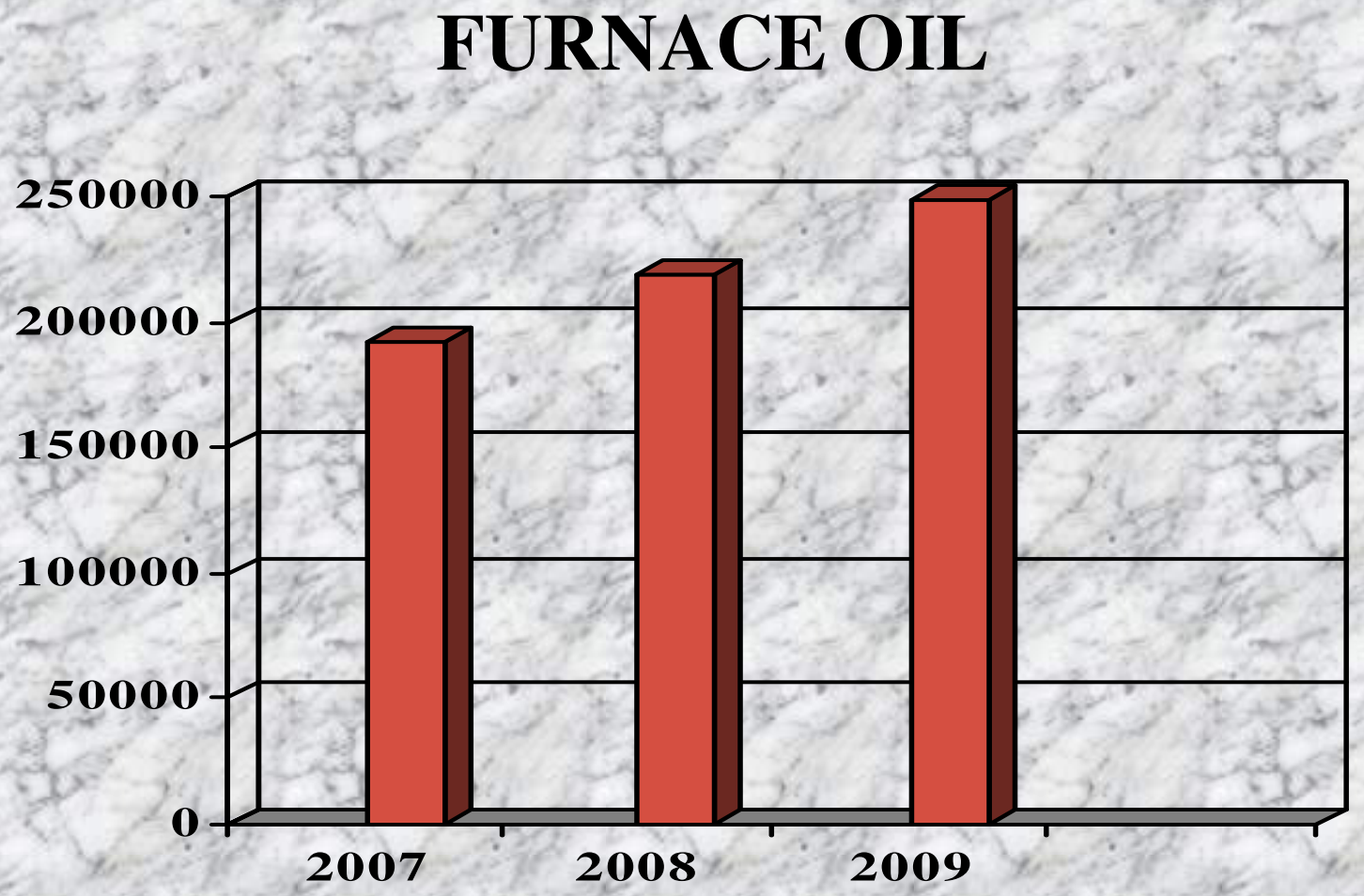


ENERGY EXPENSE DETAILS

ELECTRICTY



ENERGY EXPENSE DETAILS



Energy Saving activities undertaken

- We have replaced 4 sachet filling machines with mechanical filling machines.
- Only one Ammonia Compressor is being used in dairy
- The Head cooling water from Air Compressor diverted to Boiler feed & sump of Ammonia Condenser

SAVING ACTIVITIES cont..

- 30 T capacity refrigeration plant of MPF is not being operated in this flush season due to sufficient ice obtained from our Dairy refrigeration plant for MPF use also. This was achieved by maintaining 100 % efficiency in the Dairy refrigeration plant after some modification.

SAVINGS

- The temperature of Pasteurization was reduced from 79^0C to 78^0C.
- It will be further reduced to 77^0C in the next phase
- Installation of 4 mechanical filling machines has saved Rs. 2000 per day in power cost
- Due to non operation of 2nd Compressor, the energy cost saved Rs. 40,000 / month & non operation of MPF refrigeration plant during flush season 15 KWH energy saved every operational day

COMPARISON OF REFRGN HOURS

ENERGY SAVING OPPERTUNITIES

WITH INVESTEMENT

(A) Boiler

1 Installation of new Water Pump and Furnace oil Pump

2 Replacing the insulations of Boiler and Connected steam line

3 Installation of flow meter for oil and feed water

4 Utilization of fuel gas temp for feed water heating.

(B) STEAM LINES

1. providing Insulations on identified Area
2. Replace Steam traps with Good quality Steam traps.

(C) GHEE Vat.

Replace Thermo dynamic steam trap with Ball float steam trap.

(D) REFRIGERATION

Providing separate Energy meter to the Ref: plant to monitor the Power consumption

ENERGY SAVING OPPORTUNITIES

WITHOUT INVISTEMENT

(A) BOILER

Utilization of head cooling water from Air compressor in feed water (48 ^{0}c)

Energy Mngmt Committee

- K P Rajan – Manager & Chairman
- V Unnikrishnan – A.M(P&M) & Energy Manager
- V.S. Murukan- QCO
- Rajive Zachariah – Asst. Manager
- K Raveendran – Refgn Mechanic
- C S Chandralal – Boiler Operator

Energy Mngmt Committee

- V Unnikrishnan – Electrician
- Satheesan – Fitter
- K C Joseph – Plant Operator
- V K Manoharan – Plant attender

Proposed Ivestments

- Lightings to be changed to CFL.
- Continuous ghee packing machine to be purchased saving upto 80 labour hours daily
- Pasteurizer plant to be replace with a higher Capacity including Homogenizer.

THANKS