WELCOME

PRESENTATION ON TOTAL ENERGY MANAGEMENT

CATTLE FEED PLANT MALAMPUZHA
GENERAL INFORMATION

• Started in the year 1970 by A H DEPARTMENT
• Capacity 60MT/Day at the time of inception
• Factory handed over to KCMMF LTD in the year 1983
• In 1989 capacity enhanced to 100Mts/day mash
• In 1996 capacity again enhanced to 200Mts/day mash
• In 2006 capacity again enhanced from 200Mts/day mash feed to 300Mts/day pellet feed.
Cattle Feed Plant, Malampuzha

Plant Capacity : 300 MT/day Pellet.
No. of shifts in operation : 3
Staff Strength :
  Total permanent staff : 100
  Staff on contract : 29
  Temporary Workers : 55
Storage :
  Raw Material : 2500 MT
  Finished Feed : 500 MT
  Grain Silo : 1200 MT
  Molasses : 2000
PRODUCTS

- CATTLE FEED MASH
- CATTLE FEED PELLET (Different Category)
- MILMA MIN (FEED SUPPLEMENT)
Presently we are producing pellet feed (300Mts/day) in our new PLC based fully automated plant with CMMT technology.

Milma Min 4Mts/day
## Performance during last 3 years

<table>
<thead>
<tr>
<th></th>
<th>06-07</th>
<th>07-08</th>
<th>08-09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production</td>
<td>51,643</td>
<td>56,294</td>
<td>47,295</td>
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<tr>
<td>Sales</td>
<td>51,420</td>
<td>56,302</td>
<td>47,325</td>
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(Qty in MT)
Performance during 09-10

Production : 53,640
Sales : 53,591

( Qty in MT )
### Profit/Loss during 09-10

<table>
<thead>
<tr>
<th>Month</th>
<th>Prof/Loss</th>
<th>Month</th>
<th>Prof/Loss</th>
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<tbody>
<tr>
<td></td>
<td>Lakhs</td>
<td></td>
<td></td>
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<tr>
<td>April</td>
<td>29.95</td>
<td>Oct</td>
<td>6.43</td>
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<tr>
<td>May</td>
<td>30.37</td>
<td>Nov</td>
<td>8.26</td>
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<td>June</td>
<td>10.39</td>
<td>Dec</td>
<td>3.55</td>
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<tr>
<td>July</td>
<td>-0.69</td>
<td>Jan</td>
<td></td>
</tr>
<tr>
<td>Aug</td>
<td>-13.94</td>
<td>Feb</td>
<td></td>
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<tr>
<td>Sept</td>
<td>-13.31</td>
<td>Mar</td>
<td></td>
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The Cumulative profit during the year is Rs 61.01 Lakhs
Analysis of Data
Raw Material Consumption, Production and Sales 2010

[Bar chart showing raw material consumption, production, and sales for each month from April to February, with data in Mt.]
Analysis of Data Energy Cost per MT Year wise

Energy Cost Rs/MT

- 2006-07
- 2008-09

0 50 100 150 200 250

Energy Cost Rs/MT
Analysis Data of Energy Consumption

- Production in Qtl
- Total KWH in tens
- Total Energy cost in tens
Analysis Data of Energy Consumption

- Production in Qtl
- Total KWH
- Total energy cost in tens
Analysis Data of Energy Cost

- Production in 100 Mts
- Kwh con/Mts
- Energy Cost/Mts
Monthly Sales Turn Over 09-10

Rs in Lakh

Mar | May | July | Sept | Nov | Jan
--- | --- | --- | --- | --- | ---
50,000,000 | 50,000,000 | 50,000,000 | 50,000,000 | 50,000,000 | 50,000,000
60,000,000 | 60,000,000 | 60,000,000 | 60,000,000 | 60,000,000 | 60,000,000
70,000,000 | 70,000,000 | 70,000,000 | 70,000,000 | 70,000,000 | 70,000,000
Analysis Data of Energy Cost

Production in Mts
Kwh con/Mts
Energy Cost/Mts
Analysis Data of Maximum Demand and Power Factor
Analysis Data of Maximum Demand and Power Factor

Graph showing the analysis of maximum demand and power factor from April to March. The graph includes lines for MD, KVA, and PF *100.
ENERGY POLICY

WE ARE COMMITTED TO UTILISE ENERGY JUDICIOUSLY AND EFFECTIVELY FOR OUR USE AT AN OPTIMUM LEVEL TO GET MAXIMUM OUTPUT, AIMING ENERGY CONSERVATION IN ALL LEVEL THROUGH CONTINUOUS COST EFFECTIVE METHODS ADOPTED TO ACHIEVE THE GOAL
The Energy Management Matrix
Implementation of
Energy conservation
Opportunities
Energy Conservation Opportunities Implemented

- 20 Hp Dust extraction system “A” replaced by reconnecting the lines to B and C.

Savings = 20HP x 0.746 KWH x 0.8 x 18 hrs x 24 days x 12 months x Rs. 4.2

= Rs 259880/- per year
Energy Conservation Opportunities Cont..

• 5HP Pellet Chain Conveyor replaced with Gravity line.

Savings = $5HP \times 0.746 \text{KWH} \times 0.8 \times 18 \text{hrs} \times 24 \text{days} \times 12 \text{months} \times \text{Rs}.4.2$

= Rs64970/- per year
Energy Conservation
Opportunities Cont..

- 3HP Mash Conveyor replaced by re-positioning of Molasses Mixer.

Savings = 5 × 0.746 × 0.8 × Rs.4.2 = Rs.12.5 per hr of operation for Mash feed.
15Nos of 100W incandescent lamps replaced with 38W Fluorescent lamps

Savings = \((100 - 38)/1000 \times 12 \times 24 \times 12 \times 4.2\)
= Rs.900/- per year.
• Replaced 10HP intake screw conveyor for DORB with 5HP chain conveyor.

Savings = 5HP \times 0.746 \text{KWH} \times 0.8 \times 18 \text{hrs} \times 24 \text{days} \times 12 \text{months} \times Rs\, 4.2

= Rs64970/- per year
Energy Conservation Opportunities Cont..

- Replaced 14 Nos of CRT monitors of 220w with LCD monitors of 60w

Savings = \( \frac{(220 - 60)}{1000} \times 14 \times 7 \times 24 \times 12 \times 4.2 \)

= Rs. 18966.50/- per year.
Energy Conservation

TOTAL SAVINGS PER YEAR IS AROUND

Rs.409687/-
Suggestion for reducing the specific energy consumption

- Avoid idle run of the machineries due to frequent formula change.
- Control the fiber content in the raw materials to minimum possible level to reduce the load current in Pellet Mills.
- Provide CFL lamps wherever it possible
Energy saving Installation Implemented

1. Boiler: - Installed coconut shell/ fire wood fired boilers of capacity 2Ton/hour

Energy Saving compared to FO fired Boiler
Cost per Mt in FO Boiler = 3.15litRxRs31.2 = Rs98.28
“Do” in coconut shell Boiler = 8.25KgxRs4.25 = Rs35.06
Saving – 98.28 - 35.06 = Rs63.22/Mt
Saving per year = 50000Mt x 63.22 = Rs3161000/-
Payback – 2 Years
2 APFC Panels

Installed 2 Nos of 190KVAR APFC Panels

Saving

Energy cost before installation = Rs.5.43/Unit
“Do” After the Installation = Rs.4.29/Unit

Saving per Year = (5.43-4.29)x150000x12
=Rs.2052000/-

Cost of Installation = Rs.6,01,333/-

Payback – 3. months.
3 Soft Starters

- Installed 6 nos of Soft Starters for all 100HP Motors connected to Hammer Mills and Pellet Mills.
Energy saving Installation

TOTAL SAVINGS PER YEAR IS AROUND

Rs.3762333/-
Thank You