MILK DISTRIBUTION

Mode of distribution to the general public—With 400 maunds of milk on 1st March 1947, the quantity has increased steadily and the scheme handles now 3000 maunds of milk per day, distributed through nearly 700 centres in the city and suburb. The value of milk distributed amounts to nearly Rs 2 crores per annum.

In the "procurement and distribution schedule" quotas are fixed for each centre for the month. These are determined by inviting demands statements from consumers between the 10th and 20th of every month. Separate quotas are fixed for morning and evening, both for the centre and the individual consumer. Two distinct milk cards are also issued to each consumer. In fixing a consumer's quota, endeavour is made to limit the off-take per card to 1 seer in the morning and 3 seers in the evening. There is a greater demand for milk in the morning than in the evening. The card holders are to produce the appropriate card and pay cash against the quota allotted. Besides government depots, private parties are also allowed to distribute milk at commissioned rates. Surplus milk of one centre is shipped to the adjoining centres to meet out the extra demand, thus ensuring the least possible amount of returned milk to central dairy.

<table>
<thead>
<tr>
<th>Year</th>
<th>Whole milk in Maunds</th>
<th>Toned milk in Maunds</th>
<th>Milk-distributing centres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950-51</td>
<td>1713</td>
<td>550</td>
<td>220  80  30  330</td>
</tr>
<tr>
<td>1951-52</td>
<td>2146</td>
<td>807</td>
<td>338  128  107  593</td>
</tr>
<tr>
<td>1952-53</td>
<td>2480</td>
<td>649</td>
<td>461  128  107  660</td>
</tr>
<tr>
<td>1953-54</td>
<td>2432</td>
<td>859</td>
<td>465  128  91  674</td>
</tr>
<tr>
<td>1954-55</td>
<td>2800</td>
<td>850</td>
<td>473  121  85  670</td>
</tr>
</tbody>
</table>
Most of the distribution centres are located in Municipal schools and Government building. Some of them are on second floor, on loading of staircases and in narrow lanes away from unloading points of trucks. All this causes delay and inconvenience. In 1947 there were only 233 centres distributing 2 maunds of milk per centre to 30 card holders. The milk handled was 440 maunds and 70000 persons used milk from the scheme. In 1954, there are now 679 centres and each one handles 5½ maunds of milk at a time, giving to 280 card holders per centre and over 3000 maunds of milk is handled daily and is used by over 1089500 persons.

The average time taken in the queue is 15 to 20 minutes, plus time taken from house to the centre. Four operations have to be performed.
1. Marking of the cards and making an entry in register.
2. Inspection of empty bottles and their receipt.
3. Taking of cash and giving of change, if any, and
4. Handing over the filled bottles.

**Difficulty in queuing**

1. Wastage of time and energy in case of breaking of queue and requeuing.
2. Certain centres offer undesirable character and results in police intervention, finally such centres are closed down.
3. Delay in queuing is often exaggerated where servants are involved. About a third of milk is taken by servants, a third by small children, and rest by grown-ups.

The authorities are aware of the delay in queuing etc but again it is matter of economics and finance to open more new centres. Though the marginal cost of each centre is however Rs 55 per month, but Rs 75 to open 50 new centres
it requires an additional fleet of 10 trucks, which would cost the scheme nearly Rs 2 lakhs extra per year. At present, 161 trucks participate in the act of distribution.

Staff for distribution.

Assistant Director of Civil Supplies is assisted by 2 Assistant Milk Distribution officers, 4 Despatch supervisors, 16 Circle inspectors, 16 Milk Despatchers, 367 Milk delivery men, 740 Centre managers, and 740 Centre Salesmen.

Time involved in distributing milk right from producer to the consumer's hand.

Average time taken by an mlk to reach at the colony.

**Evening milk:**
- Milking time: 5-30 to 6-00 p.m.
- Reception at union's dairy: 7-30
- Pasteurization: 8-30 to 10-30

Despatch for colony next day evening
- Reception at colony: 11 A.M., (reaches Borivili) 4 A.M.

Thus total number of hours required are 30.

Morning milk of colony and anand's milk thus received is pasteurized and repasteurized at colony which is distributed in the evening.

Thus anand's milk requires 40 hours till it is finally consumed whereas colony's milk requires 10-12 hours only. Milk is a perishable commodity, still milk if thus handled can be stored for further 4 days.
in the cold storage without any serious risk of spoilage
in quality and nutritional requirements.

Reducing milk prices through lowering distribution costs.
Consumer's price is equal to farmer's lot plus cost of
processing plus cost of distribution. Low cost of processing
can be achieved by:

1. Efficient lay out of plant and machinery.
2. Exclusive steps - only one dealer.
3. Large volume per route.
4. Limiting number of items handled.
5. Low prices for high quality milk.
6. Large per volume per store made possible through low
prices and aggressive merchandising.

<table>
<thead>
<tr>
<th>Distribution cost per quart (Cents) in U.S.A.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group of companies</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td>1. Least efficient</td>
</tr>
<tr>
<td>2. Most efficient</td>
</tr>
</tbody>
</table>

Net difference ------- 0.147 0.238 2.208 2.580

** Milk Industry by Roland W. Bartlett.

Moreover costing depends upon depreciation and interest
policy which followed and difference in cost accounting methods.

At colony cost of processing is Rs 4-3-2 per maund, but
in case of private agency (in its last year) it was Rs
5-4-0. In spite of the extra responsibilities of Government
to handle large volume of milk distribution, and colony
schemes, grant to Kaira District union, still processes
milk at low cost, the difference in cost may be due to
By C.N. Wright.
difference in depreciation policy etc or other inherent qualities to do the work more efficiently.

It has been observed in some of the state enterprises such as Bombay State Transport, Air India International, Bombay Milk Scheme, and other private firms such as Poisons Ltd, and the Anand Union, have been using different rates of interest and depreciation in working out transport charges but the cost accounting methods are fundamentally the same.

**Depreciation statement in %**

<table>
<thead>
<tr>
<th>Item</th>
<th>Acury</th>
<th>Anand</th>
<th>Poisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasteurising plant</td>
<td>7</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>Other equipment</td>
<td>5</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Due to lack of statistical data and relative figures available, some definite conclusion cannot be made out. The distribution and processing costs achieved at colony, due to scientific layout of plant, machinery, spacious rooms, and efficient methods of loading and unloading, of number of trucks at a time at number of chutes — which adds to convenience, economy and sanitation. There is little possibility to reduce the cost of processing and distribution further, but next step to make soaring prices less pinching is to increase the per capita income of consumers, which adds to increased consumption of milk as was worked out by Economic Advisor to the Government of India in 1848 as is shown in the slide (curv).
CRITICISM

The Government of Bombay is making substantial profits by selling Anand's milk, but the general fall in the prices of fodder and feeds (at present) is likely to lower the cost of production at the colony, whereas the price of whole milk is still Rs 14 per seer. In view of profit making, policy adopted by the Government it is advised to lower the price of toned milk from Rs 7 to Rs 6 per seer as to encourage the more milk consumption among labouring classes.

CONCLUSION

There are a few firms in India such as Bangalore Milk Distribution Scheme, Keventer's Dairy in New Delhi, who took the distribution of pasteurized milk on a small scale, but unlike Bombay Milk Distribution Scheme I never came across a scheme, working on a large scale in its entirety which can be copied in any part of India most effectively.