DAIRYING IN PUNJAB

Production and consumption of ghee, milk and butter milk has considerably reduced as compared to 1900-1914 and this has affected the general standard of health amongst the people of rural areas. The average bodily stature and strength have suffered a deterioration. The preceding generations possessed impressive physique and stature and its capacity to bear hardships and put in hard work entailing great physical strain, undertake long journeys and endurelement weather were remarkable. The capacity of its members to consume ghee, milk, butter milk as ordinary part of dietary and sugar and sweets on the occasions of marriages and festivals in large quantities was also extraordinary judging from the standards of now-a-days. The lowered standard of health tend to lower the physical vitality and thus impairs the productive faculty and hence results in the lowering of the birth rate and increase of death rate.

Effect of the partition of India on Punjab dairying.

The economics of Punjab dairying faced a serious set back, as the cream portion of good productive breeds, i.e., Sindhi, Nili, Ravi, Dhani, Dhajal and piutwahri has gone to the share of Pakistan thus debarring East Punjab from the productive capacities of such excellent breeds.

Inspite of the effect of partition of the country and the last two world wars which affected the economic status of considerably, and hindered the development of agricultural economy, still the East
Punjab's cattle kept under its village conditions compare with the cattle in some of the most advanced dairying countries in their relative importance.

Comparison of the East Punjab cattle with cows of Australia and Canada. **

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual milk yield/animal (lbs)</th>
<th>Average butter-fat (%)</th>
<th>Annual yield of butter-fat in lbs per animal.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>East Punjab</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cows</td>
<td>2320</td>
<td>5.0</td>
<td>72</td>
</tr>
<tr>
<td>Sheep, buffalo</td>
<td>2320</td>
<td>7.0</td>
<td>162</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cows</td>
<td>4408</td>
<td>3.8</td>
<td>167</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cows</td>
<td>4802</td>
<td>5.0</td>
<td>182</td>
</tr>
</tbody>
</table>

* in some cases the fat content is even less than it.

Intensity of milk production in the district of Amritsar and in Denmark.

<table>
<thead>
<tr>
<th>Place</th>
<th>Area in sq. miles</th>
<th>P.B.R. SQUARE MILE</th>
<th>No. of milk production animals</th>
<th>of milk/day of milk/day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amritsar</td>
<td>1575</td>
<td>124</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Denmark</td>
<td>16575</td>
<td>99</td>
<td>23</td>
<td>3</td>
</tr>
</tbody>
</table>

The above table suggests that there is every possible chance to improve the production which favourably compares with the most advanced countries in the act of scientific feeding, breeding and management where as Indian Union.

** Dairy information by H.B. Cronshaw.
still has not taken the initiative.

The progress made by Denmark is the result of past 80 years. The following statement is self-explanatory and offers a way for improvement.

**Trend of milk production in Denmark.**

<table>
<thead>
<tr>
<th>Year</th>
<th>1870</th>
<th>1900</th>
<th>1924</th>
<th>1932</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of dairy cattle (in thousands)</td>
<td>808</td>
<td>1075</td>
<td>1716</td>
<td>1842</td>
</tr>
<tr>
<td>Annual milk yield (in Lbs) per cow</td>
<td>2976</td>
<td>4850</td>
<td>7055</td>
<td>8067</td>
</tr>
</tbody>
</table>

The progress of dairy industry as noted above emphasizes how urgent it is for our country also to take suitable steps to step up the milk production through every possible measure.

**SURVEY**

This responsibility of conducting surveys should be entrusted to the Dairy Development Section whose main efforts should focus on revealing the following facts:

(a) Consumption of milk in ozs by various classes of people.
(b) Classification of dairy tracts according to potentialities.
(c) Revealing quality of market milk.
(d) Prices prevailing in different areas.

The object of survey is to know the position of our dairy industry and suitable measure to be adopted for its development. The general problems connected with our dairying industry are of technical nature:

1. Feeding  
2. Breeding  
3. Management  
4. Disease control  
5. Marketing.
Feeding. The data on various feeding standards should be collected and this work should be thrust upon the regional National Research Organisation in Nutrition run under Indian Council Agriculture Research to collect information on existing feeding standards and their feeding value, and their cost of producing milk in important dairy tracts of Punjab. Further feasibility of balanced rations should be explored for cow and buffalo separately under Punjab's regional conditions.

Breeding. (1) Extensive carrying out of key village schemes in selected villages for breed quality is recommended.
(2) Feasibility of A.I. should be considered.
(3) Animals should be bred at farms for their economic performances, eg, disease resistance, milk and draught qualities etc.

Management. This includes:
(1) Adequate supply of fresh water.
(2) Provision of protection against climatic extremes.

Disease control. It includes:
(1) Preventive Measures.
(2) Curative look. The state should/into the matters, and provide sufficient medicines, sera, vaccines etc for the timely help in case of any disease outbreak.

Marketing. It is invariably the crux of the problem and it is our central target regarding complete re-organisation in the act of collection and distribution of milk in urban areas.
A. Establishment of cooperative societies for all the cities and towns under one milk union to produce and supply:

1. Large scale supply of milk to various towns and cities.
2. Supply of quality milk.
3. Organised distribution through centres.
4. Introducing milk processing where possible.
5. Processing of milk into its products in villages.

B. Establishment of rural creameries in villages far from big towns and cities to absorb surplus milk and giving an incentive for improved production by regularising milk market through the sale of cream and thus keeping the area for its potentialities.

C. Improving the transport facilities.

Thousands of persons are engaged in this trade in transporting milk from villages to towns on head loads, bhangis, bicycles, tongas, lorries, and even through rail. Except rail and lorry all the means of transport are slow moving ones, but the nature of milk is highly perishable and demands rapid delivery to the consumers without any deterioration in quality. The only alternative to this problem is to introduce milk lorries and long distance milk trains specially designed for milk handling under cooperative organisations, eliminating thousands of workers engaged in the trade who can devote their time to some other industry.

Working of cooperative societies for the supply of milk, regulation of each town or city should be worked out.
Population of Amritsar City

Estimated requirements of milk at 8 ozs per person per day.

Estimated area of milk procurement at the rate of 7 maunds 30 seers per square mile.

Radial distance for procurement.

No. of trucks for each milk route.

326747

2000 Maunds.

266

9 miles.

1
PROCUREMENT of milk should be done from the surrounding villages in a radius of 10 miles, leaving an adequate milk tanker for each producer to carry his domestic requirements.

Milk Union. Either state should take initiative to organise milk unions or encourage cooperative department to extend its activities.

Economics of such scheme.

1. More and constant returns to the producers by eliminating middle man.

2. Reasonable price to the consumers as state or cooperatives only make nominal profit over and above the costs.

3. Quality milk ensured.

4. Rapid transport which is possible under big organisation, hardly demands any processing of milk in winter and summer if delivery done early, milk will not deteriorate in quality, provided it has been obtained under clean conditions.

Thus the Dairy leaders, producers, and consumers should realise the importance of quality milk for the growth of healthier nation, and through mutual help should undertake the cooperative schemes for the supply of quality milk which affords a great prospect in the present conditions.

FINANCE. The state should provide loans on easy terms for the set up of cooperatives.

Recommendations to improve milk production in Punjab.

In addition to the common recommendations
as suggested for Indian Union, some specific suggestions for Punjab are as follows:

1. **Place of demobilised soldiers.** For the reconstruction of Indian agriculture and dairy industry, the place of demobilised soldiers should not be overlooked. Full benefit should be taken of their experience, broader outlook, travels home and abroad, spirit of discipline, and leadership to which they are accustomed. Their services of technical knowledge for the handling modern milk machines should be taken — and they can be better in the ranks of village guides.

2. **Text book committee** should be asked to examine include books on cattle and milk in schools to make the coming generation cow-minded.

3. **Breeding of buffaloes for milk production and cows serve** as a dual purpose breed.

4. **Cross breeding of inferior animals will improve considerably**

<table>
<thead>
<tr>
<th>Breed</th>
<th>Quinquennial average yield (lb) for 1932-36</th>
<th>Quinquennial average No. of milk-days for 32-36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pure breed</td>
<td>3247</td>
<td>273</td>
</tr>
<tr>
<td>1/3 European</td>
<td>4514</td>
<td>225</td>
</tr>
<tr>
<td>1/4 &quot;</td>
<td>5076</td>
<td>310</td>
</tr>
<tr>
<td>2/3 &quot;</td>
<td>5252</td>
<td>321</td>
</tr>
<tr>
<td>1/2 &quot;</td>
<td>6359</td>
<td>324</td>
</tr>
<tr>
<td>5/6 &quot;</td>
<td>6817</td>
<td>321</td>
</tr>
<tr>
<td>2/4 &quot;</td>
<td>6772</td>
<td>329</td>
</tr>
</tbody>
</table>

**Prepared by G.N. WRIGHT.**

5. **Legislation.** The export of good breeds from important breeding areas to the big cities like Calcutta and Bombay should be stopped through "Vattle preservation Act".