REPORT OF THE MILK BOARD

on the

REGULATION AND CONTROL OF THE SUPPLY OF MILK TO MELBOURNE

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY COMMAND OF HIS EXCELLENCY THE LIEUTENANT-GOVERNOR

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W. J. McVeigh, Esq. . . . . Representing consumers of milk in the metropolis.
J. T. Packer, Esq., J.P. . . . .

Secretary—Mr. M. H. Rankin.
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THE MILK BOARD, 1933.

To His Excellency Sir William Hill Irvine, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George; Doctor of Laws; Lieutenant-Governor of the State of Victoria and its Dependencies in the Commonwealth of Australia, &c., &c., &c.

MAY IT PLEASE YOUR EXCELLENCY:

We, the Members of the Milk Board appointed by Order in Council under the Milk Board Act 1932, No. 4104, to inquire into—

(a) the regulation and control of the supply of milk to the metropolis; and
(b) the better and more economic collection, transportation, treatment and distribution of milk, including the prices paid to producers and the prices paid by consumers,

have the honour to report as follows:—

INTRODUCTION.

1. Appointment and Terms of Reference.—Appointed by Order in Council, in accordance with the provisions of section 3 of the Milk Board Act 1932, on the 4th April, 1933, we commenced to function on the 11th idem. Under the provisions of section 5 of the Act, we were asked to furnish a report containing such recommendations as we think wise or expedient with respect to—

(a) the regulation and control of the supply of milk to the metropolis; and
(b) the better and more economic collection, transportation, treatment and distribution of milk, including the prices paid to producers and the prices paid by consumers.

2. Procedure.—We considered it necessary, as outlined in our Preliminary Report submitted on the 31st May, 1933, to take evidence from persons representing all sections of the community interested in the production, transportation, treatment, distribution and consumption of milk. We have held 44 meetings, of which 18 were in public, and have heard evidence from 96 witnesses, comprising 44 producers, 25 retailers, 7 producer-retailers, 5 experts on milk hygiene, 5 milk carriers, 2 representatives of shops from which milk is sold, 2 retail dairy business agents, 2 representatives of the Federated Carters and Drivers Union, and 4 others.

To meet the convenience of producers in Gippsland, public sittings were held at Dandenong, Koo-wee-rup and Drouin.

So that we might acquaint ourselves with certain conditions of the industry, we made inspections of dairy farms, milk depots, dairies and milk shops, and visited the Milk Laboratory at the Veterinary Research Institute, Parkville, where the methods of testing milk for bacterial content and disease were outlined by the Director of the Institute. We also availed ourselves of an opportunity of inspecting various types of milk-treatment plants and of witnessing many stages in the construction of same.

3. Outline of Report.—Part I. of our Report is confined to a review of the liquid milk industry as we find it to-day and a survey of the existing legislation relating to same. In Part II. we have set out our findings and have made what, in our opinion, are the necessary recommendations for placing the industry on a more stable basis. Part III. indicates the necessary legislative amendments required to enable those recommendations to be carried out.
PART I.


CHAPTER 1.

SURVEY OF EXISTING LEGISLATION DEALING WITH THE PRODUCTION AND DISTRIBUTION OF MILK.

4. Milk and Dairy Supervision Act 1928.—The production and distribution of milk for consumption in the metropolis are regulated by the Milk and Dairy Supervision Act 1928, the administration of which is carried out under the Minister by the Department of Agriculture. This Act is a consolidation of the Dairy Produce Act 1919, the Dairy Supervision Act 1915, and the Milk Supply Act 1922; these Acts now being designated Parts I., II., and III., respectively, of the Milk and Dairy Supervision Act 1928.

5. Part I.—Provisions Applicable throughout Victoria with respect to Testing, Grading and Manufacture of Dairy Produce.—Part I. of the Act deals essentially with the testing, grading and manufacture of dairy produce (butter and cheese), and therefore does not come under review in this inquiry.

6. Part II.—Provisions Applicable in Milk Areas and other Proclaimed Districts with respect to Dairy Supervision.—Part II. relates to the production of milk for sale whether for consumption as liquid milk or for manufacturing into dairy produce. This Part applies to approximately half of the State. It includes certain areas designated "Milk Areas" and in respect of which its provisions have applied since the original Dairy Supervision Act was passed in 1905, together with municipal districts which have at various periods since been brought under the Act by proclamation. Of the 196 municipal districts in the State, 128 are at present under the Act. These include the principal centres of population and, with two or three exceptions, the chief dairy-farming districts in the State.

As regards those portions of the State where Part II. of the Milk and Dairy Supervision Act does not apply, the registration and inspection of dairy farms and dairies are regulated by the local municipal authority under the Health Act.

An important provision under Part II. of the Act is that which automatically brings thereunder any dairy farm outside a "Milk Area" from which milk is sold within any "Milk Area."

7. Licensing and Licence Fees.—Under this Part, owners of dairy farms, dairies and factories are required to hold an annual licence in respect of their premises, and no person shall sell milk unless he or the person for whom he sells milk is the holder of a licence.

The annual amount payable for a licence is as follows:

For a dairy farm—at the rate of 6d. per cow on the greatest number of cows milked in any consecutive seven (7) days.

For a dairy outside the metropolitan area—an annual fee of £1, and for a dairy within such area not less than £2 nor more than £5 according to the number of carts employed in delivery of milk.

For a factory where milk or cream is received but not manufactured into butter or cheese, a sum not exceeding £5.

The issue of a licence and its continuance in force or annual renewal are contingent on receipt of a report from the Dairy Supervisor for the district that the premises concerned and the plant and utensils are suitable and maintained in a sanitary condition so as to ensure the production of clean milk.

The issue of a licence and its continuance in force or annual renewal are contingent on receipt of a report from the Dairy Supervisor for the district that the premises concerned and the plant and utensils are suitable and maintained in a sanitary condition so as to ensure the production of clean milk.

In the case of a dairy farm the production of milk for sale is also dependent on the health of the dairy herd being satisfactory. In the event of disease or any departure from the normal in health appearing in the dairy herd, the production of milk for sale from such herd, or any individual cow affected, is prohibited until all danger to the milk supply that may arise therefrom has been removed.

8. Part III.—Provisions Applicable in the Metropolitan District and other Proclaimed Districts with respect to Milk Supply.—Part III. of the Milk and Dairy Supervision Act deals specifically with the milk supply to the metropolitan area and such other areas as may be proclaimed.

The principal object is to effect improvement in the production, treatment, keeping, carriage and delivery of milk for consumption in the metropolis.
9. Milk Supply Committee.—For this purpose provision is made for the appointment of a Milk Supply Committee of eight (8) persons, comprising the Chief Veterinary Inspector as Chairman, 1 representative each of producers and distributors of milk, the Public Health Commission, the Medical Profession, the Victorian Railways and 2 Councillors of Municipalities under this Part of the Act. The first Committee was appointed in 1923, for a period of three years. With some changes in personnel it was re-appointed on 1st July, 1926, and continued to function until 30th June, 1929, when it expired by effluxion of time. No new Committee has since been appointed, for reasons which are indicated in paragraph 13.

10. Powers and Duties of Committee.—The powers and duties of the Committee as set out in sections 90-94 of the Act include the following:—

1. To prepare Regulations under Part III. for submission to the Governor in Council.
2. To publish reports, information and advice on all matters relating to the handling and treatment of milk and the prevention of the deterioration and contamination thereof.
3. To report to the Minister upon matters affecting the supply of milk and upon any amendments in the law relating thereto and upon any matter referred to it by the Minister.

Provision is also made for prescribing grades of milk which may be supplied for sale or sold, and the issue of certificates to producers and retailers specifying the grade or grades of milk which they are authorized to supply or sell.

11. Recommendations of Committee.—Regulations submitted by the Milk Supply Committee were approved and came into operation on the 23rd January, 1924. These regulations provide for the cooling of milk by a retailer to a temperature below 40° Fahrenheit immediately on receipt of same from the producer, and also for a maximum temperature beyond which milk may not be delivered to consumers. Provision is also made for the pasteurization of milk to be carried out in an efficient manner, and where bottled milk is sold, for such bottling to be carried out at a dairy. (For full text of regulations see Appendix "A."

12. Grades of Milk.—The regulations also provide that milk as received by a retailer from a producer shall contain not more than 500,000 micro-organisms per cubic centimetre by microscopic count, and no retail dairyman shall sell milk containing more than 2,000,000 micro-organisms per cubic centimetre.

No pasteurized milk may be sold which contains more than 300,000 micro-organisms per cubic centimetre before pasteurization and 500,000 micro-organisms per cubic centimetre thereafter.

The extent to which the milk supply of the metropolis complies with these grades is shown in Table I., as furnished by the Live stock Division, Department of Agriculture, for the year ended 30th June, 1932.

**TABLE I.**

**BACTERIAL COUNT SUMMARY.—1931-32.—Showing results of tests of samples taken by officers of the Live Stock Division, Department of Agriculture, from milk intended for consumption in the Metropolitan Area.**

<table>
<thead>
<tr>
<th>Organisms per Cubic Centimetre</th>
<th>Dairy Farms</th>
<th>Deposits</th>
<th>Dairy Farms and Dairies</th>
<th>Dairies</th>
<th>Shops</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Samples</td>
<td>Percentage of Total</td>
<td>Samples</td>
<td>Percentage of Total</td>
<td>Samples</td>
</tr>
<tr>
<td>20,000 and under</td>
<td>178</td>
<td>4·24</td>
<td>3</td>
<td>1·33</td>
<td>3</td>
</tr>
<tr>
<td>20,001 to 100,000</td>
<td>1,642</td>
<td>39·09</td>
<td>68</td>
<td>30·22</td>
<td>92</td>
</tr>
<tr>
<td>100,001 to 250,000</td>
<td>1,098</td>
<td>26·14</td>
<td>76</td>
<td>33·78</td>
<td>86</td>
</tr>
<tr>
<td>250,001 to 500,000</td>
<td>478</td>
<td>11·39</td>
<td>27</td>
<td>12·00</td>
<td>31</td>
</tr>
<tr>
<td>500,001 to 1,000,000</td>
<td>383</td>
<td>9·12</td>
<td>24</td>
<td>10·67</td>
<td>35</td>
</tr>
<tr>
<td>1,000,01 to 2,000,000</td>
<td>159</td>
<td>3·79</td>
<td>14</td>
<td>6·22</td>
<td>13</td>
</tr>
<tr>
<td>2,000,01 to 4,000,000</td>
<td>161</td>
<td>3·83</td>
<td>9</td>
<td>4·00</td>
<td>11</td>
</tr>
<tr>
<td>4,000,01 to 10,000,000</td>
<td>56</td>
<td>1·33</td>
<td>...</td>
<td>...</td>
<td>7</td>
</tr>
<tr>
<td>Over 10,000,000</td>
<td>45</td>
<td>1·07</td>
<td>4</td>
<td>1·78</td>
<td>3</td>
</tr>
<tr>
<td>Totals</td>
<td>4,200</td>
<td>100</td>
<td>225</td>
<td>100</td>
<td>281</td>
</tr>
</tbody>
</table>
Percentages of Compliance with Present Standards Prescribed for Milk.
(See Appendix "A.")

<table>
<thead>
<tr>
<th>Class</th>
<th>Maximum Number of Organisms Allowed per Cubic Centimetre</th>
<th>Number of Samples Examined</th>
<th>Number Complying with Standard</th>
<th>Per Cent Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm milk</td>
<td>500,000</td>
<td>4,200</td>
<td>3,396</td>
<td>80-86</td>
</tr>
<tr>
<td>Depot milk</td>
<td>500,000</td>
<td>225</td>
<td>174</td>
<td>77-33</td>
</tr>
<tr>
<td>Producer-retailers</td>
<td>2,000,000</td>
<td>281</td>
<td>260</td>
<td>92-52</td>
</tr>
<tr>
<td>Dairies</td>
<td>2,000,000</td>
<td>4,224</td>
<td>3,711</td>
<td>87-85</td>
</tr>
<tr>
<td>Shops</td>
<td>2,000,000</td>
<td>2,962</td>
<td>2,421</td>
<td>81-73</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>11,892</td>
<td>9,962</td>
<td>83-77</td>
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13. Proposed Higher Grades for Milk.—From information obtained from departmental sources it would appear that these regulations were regarded as the minimum to be put into operation at the commencement of the Act, and that the Committee desired to make its recommendations for grades progressive. Further draft regulations were submitted in 1927 providing for the establishment of three grades in respect of both raw and pasteurized milk. The full text of the proposed regulations was placed at our disposal, and is set out in Appendix "B."

Under the Milk Supply Committee’s proposed regulations all milk sold to householders would be delivered only in bottles properly sealed, though provision was also made for hospitals, restaurants, hotels, cafes, &c., to obtain one or more of the proposed grades in bulk, provided the milk was supplied in approved sealed containers.

We have ascertained that these proposed regulations were not adopted, and in this regard have assumed that, in the absence of any statutory price control, there was a fear that the cost of more exacting requirements regarding production, treatment and bottling of milk of the grades specified would in a large measure have to be borne by the producer without a commensurate increase in returns for his milk, or that such extra cost entailed would have to be passed on to the consumer. The fact that, as a result of requests from producers and retailers for legislation to stabilize the liquid milk industry, a Bill to create a Milk Board for this purpose was submitted to Parliament in 1927 (vide Part III.) may also have had some bearing on the matter.

Evidence has also been given before us that repeated requests have since been made by producers and retailers during the past six (6) years for such a measure to be introduced. It is not unreasonable, therefore, to assume that the re-appointment of the Milk Supply Committee and reconsideration of the proposed new regulations have been deferred pending Government decision on the policy of creating a Milk Board.

14. Power to Establish Municipal Milk Depots.—Under Part III. of the Act (section 87), the Council of any Municipality to which this Part applies may establish depots for the purpose of buying, treating, delivering and selling milk whether by wholesale or retail. No municipal council, however, has availed itself of this provision. The unwillingness to embark on such enterprise is, no doubt, in some measure due to the fact that there is no provision to exclude competition from established proprietary and private milk interests.

15. Establishment of a Milk Laboratory.—As provided under section 95, a milk laboratory has been established under Part III. of the Act at the Veterinary Research Institute, University of Melbourne, at which researches are conducted into the chemistry and bacteriology of milk and such other researches as may be required, including the collection of data for the determination and maintenance of grades of milk.

The cost of maintaining the laboratory is borne equally by the Government and the combined municipalities to which Part III. of the Act applies.

Approximately 12,000 samples of milk are examined annually at the laboratory for bacterial content, the data from which is most valuable for determining future grades to be adopted for milk.

Investigational work on milk infection generally, on the farm or at the dairy, is also regularly undertaken for the purpose of enabling appropriate action to be taken to safeguard the consumer.

An interesting summary of the results of examination of samples of milk collected during the twelve months ended 30th June, 1932, will be found in Table I., reference to which has already been made in paragraph 12 dealing with grades of milk.
16. Summary of Survey of Existing Legislation.—From the review of the legislation governing the milk supply to the metropolis as furnished in the preceding paragraphs, it will be observed that the Milk and Dairy Supervision Act 1928 (Parts II. and III.) is essentially a measure for the protection of public health in that it is designed in the main to ensure the production of clean milk and its appropriate treatment, storage, and handling, until delivered to the consumer.

Wide powers are also given in the Act for the purpose of effecting any improvements that may be deemed necessary from time to time in hygienic standards for milk, and we are satisfied that with the full exercise of these powers the Act so far as public health is concerned is a sound measure.

There is, however, no statutory provision for the control and regulation of the milk supply in its economic aspects. It is in this connexion, as will be shown later, that a most unsatisfactory position exists, which position, in our opinion, can only be rectified by new legislation providing for the regulation of the milk supply from the economic as well as the public health stand-point.

CHAPTER 2.

THE LIQUID MILK INDUSTRY AS APPLIED TO THE METROPOLIS.

17. The Importance of Liquid Milk.—Under our terms of reference we were asked to report on the supply of milk to the metropolis. In defining the term "Liquid Milk," which we have adopted in preference to "Whole Milk," we have in mind all those interests which are engaged in the production, carriage, treatment and distribution of milk which is intended for consumption as such by the people of greater Melbourne.

This industry, providing as it does, a daily supply of milk to a population exceeding one million in number must be regarded as one of the most important of the services affecting the public welfare. As will be more fully explained in another part of our report, the value of milk to the community cannot be over-estimated. Not only is it the ideal food for infants, but medical authorities throughout the world are continually advocating its greater use as an article of diet for persons of all ages.

It is difficult to estimate how much milk is consumed daily in various ways, but, from recent investigations made by the Department of Agriculture, it would appear that the daily consumption in the metropolitan area is approximately one half-pint per head. Accepting this figure, the requirements of the metropolis at the present time are approximately 257,500 quarts per day, which, based on an average of 5d. per quart, involves payment by consumers of nearly £2,000,000 per annum.

It may be asked why milk should be subject to any more strict control than certain other foods. The reply is that milk is not only the most nourishing and digestible of foods, but also the most delicate and perishable. Its peculiar physical properties render it especially susceptible to rapid deterioration and decomposition from the activities of bacteria. It is, therefore, most essential that it be so treated and handled as to ensure its safety and wholesomeness for the protection of public health.

18. Interests Engaged in the Industry.—The interests engaged in the liquid milk industry are varied and may be summarized as follows:—

Producers,
Wholesalers,
Retailers,
Milk shops,
Milk carriers.
19. The Producer and his Position with regard to Liquid Milk Supply.—In the early period before the growth and population of the metropolis reached their present stage, most of the milk consumed therein was produced from dairy farms within a distance of 20 to 40 miles from the city. A considerable quantity was also produced within the suburban areas.

Apart from the fact that it is general for cities and towns with relatively small populations to be supplied with a large proportion of the milk required from the immediately surrounding districts, it was also essential in the early period of the development of the metropolis that the sources of milk supply should be near at hand owing to there being at that time no suitable means of treating milk to prevent rapid deterioration. Prompt delivery twice a day over short distances after production had thus to be effected to ensure the milk reaching the householder in a fit state for consumption.

Parallel with the growth of population and expansion of the dairying industry generally, there have been evolved efficient plants for the treatment of milk to prevent deterioration and improve the keeping qualities. In recent years factories and depots equipped with the requisite plant for refrigerating and pasteurizing milk in bulk have been established by co-operative and proprietary companies and by private individuals at various centres in dairying districts at distances up to 80 miles from Melbourne. In times of shortage it is not unusual to find milk being transported from even greater distances. Similar plants have been established on a smaller scale by some retailers at their own dairies within the metropolis.

One of the important results of this development is that nowadays dairy farmers in the more distant areas can and do supply milk for the metropolitan milk market through these depots and factories in competition with producers within easier distances.

It was disclosed in evidence that, by reason of the establishment of milk depots and factories at distant country centres from which milk could not otherwise be delivered in the metropolis in a suitable condition for consumption, the producer who is conveniently situated to the metropolis and who devotes himself to providing a regular supply of liquid milk direct to a retailer is at a serious disadvantage in having to sell his product in competition with that forwarded through milk depots and factories.

The disadvantage is shown thus. Assuming that the land is suited to dairy farming, it may be accepted as a general rule that it is more costly to produce milk in a district conveniently situated to the metropolis than in more distant areas. This applies particularly where the producer aims at maintaining level supplies, which necessarily involve winter as well as summer production to satisfy the requirements of the retailer, an aim which can only be achieved by constant feeding at heavy cost, regulating calvings, or by replacements with fresh autumn calving cows from other sources, usually at an advanced price per head.

In contrast with this there is the producer who confines his output of milk to the spring and summer months by having all or most of his cows calving in the normal period of the year when, under ordinary conditions, there is ample pasturage available. Such circumstances enable him not only to produce his seasonal output cheaper but in greater quantity than the producer of level supplies. Since also the majority of producers in the distant areas carry on their operations in this way, and a considerable proportion of their supplies is now drawn upon by depots and factories, the adverse influence such supplies have on wholesale milk prices will be readily realized.

Evidence was given by producers showing that farm milk is, as a general rule, purchased at these depots and factories on its butter fat content as determined by test on delivery. This is supported by returns furnished to the Board by certain co-operative and proprietary depots and factories. It was found that, with the cost of treatment and freight to the metropolis added, retailers were able to obtain this milk at rates appreciably below those demanded on the gallon basis by producers with whom they had previously been dealing direct.

The effect of this has been to force the regular or level whole milk producer dealing direct with retailers to accept a price per gallon more or less in conformity with the current price for butter fat as received by the producer who supplies milk or cream for manufacturing purposes.

20. Number of Producers.—It is difficult to arrive at the actual number of producers supplying liquid milk to the metropolis, for the reason that in areas where milk depots have been established supplies are diverted from many farms only when the vagaries of the season have created a shortage in the usual channels. To maintain the regular supply required, however, it is estimated that at least 2,000 dairy farmers are suppliers of liquid milk during some part of the year. Included in this number are many Soldier Settlers and occupiers of Closer Settlement blocks.

21. Costs of Production.—Considerable evidence was taken from dairy farmers supplying milk to the metropolis as to their production costs. From this it was made abundantly clear that there is a conspicuous absence of any standard method used by producers of arriving at the cost of production.
Many of the witnesses did not adopt any regular system of accounting in their dairy farming operations. In anticipation, however, that they would be requested to give evidence before the Board they had made some attempt to compute their production costs.

Where estimates were furnished even by producers in the same districts there was shown a considerable variation in the costs, which is not unnatural having regard to the differing methods of carrying on the business of milk production. This applies more especially where one producer aims at producing both winter and summer supplies whilst another confines himself to seasonal production in the spring and summer period.

The estimates of costs submitted to the Board ranged from 7d. to 1s. 4½d. per gallon.

In dissecting the evidence in these extremes, we could not avoid coming to the conclusion that in the case of the lowest estimate there had been attempts made to set the costs down at a low figure in order to advance the interests of the producers concerned in securing a regular outlet for their milk in the metropolis by accepting a price which the great majority of producers claimed is below the cost of production.

As regards the other extreme which was given by one producer, we are of opinion that this is indicative of a lack of efficiency in the farm operations and, therefore, cannot accept it as a reasonable figure on which to base production costs.

Another factor which influences the cost of production is the average yield of the cows comprising a herd. Here again we had presented to us a wide range, the figures varying from 350 gallons to 800 gallons per cow.

The costs furnished by the majority of the witnesses were set down between 9d. and 1ld. per gallon. In some instances, however, these did not allow for full wages, management and living expenses, and in others for interest on capital invested.

Allowing, however, for the varying conditions under which milk is produced in different districts, the degree of efficiency exercised, the extent to which the individual producer carries on his operations, and whether aiming at level or seasonal production, as also for the more exacting standard of sanitation required to produce milk not exceeding the bacterial count laid down in the law, for consumption in the metropolis, it would appear that the costs fall somewhere between 9d. and 1s. per gallon for level supplies all the year round.

22. Prices Paid to Producers.—The outlet for the producer varies in different localities and at different times of the year. In like manner are prices affected. We received much evidence from producers and retailers on this question—which is the crux of the situation so far as the producer is concerned. This evidence indicated that producers were divided into three groups. viz. :

(1) Those who sell direct to consumers.
(2) Those who sell direct to retailers.
(3) Those who sell to wholesalers and wholesaler-retailers (including factories and milk depots).

The first group—the producer-retailers—comprises only a small number of the total engaged in the industry, and, as shown in Table 7, the number is steadily decreasing. Prices received are, of course, consumers’ prices, and these will be referred to when dealing with retail milk prices.

Producers who sell direct to retailers are, generally speaking, situated within easy distance of the metropolis and may be regarded as regular suppliers of a level supply throughout the year. Sales are made on the gallon basis. This class of producer must first find a market for his milk and then come to some agreement as to payment and continuity of supply. Whilst there was evidence that in some cases individual agreements were entered into, there was nothing to indicate that this was done on an organized basis.

The evidence given disclosed the fact that these producers received the highest returns for liquid milk supplied to the metropolis. Prices were based on the ruling rates quoted by the daily newspapers. In some instances the actual price quoted was paid, but very often a small margin above or below was agreed upon. Prices submitted in evidence were from 7½d. to 9d. at the metropolitan dairies. Transport charges varied from 1d. to 1½d. per gallon, thus giving a net return of 6d. to 8d. per gallon on the farm.

Suppliers to wholesalers and wholesaler-retailers (including depots and factories) are situated in the more distant districts from which the liquid milk supply is derived, and are not as a general rule regarded as regular suppliers. They are paid for their product, in the majority of cases, on a butter fat basis. Prices are based on the ruling price being paid for butter fat with, in some instances, a small margin above when milk is diverted to the liquid milk market. Some wholesalers forward practically the whole of their daily intake to the metropolis, but the majority divert only portion of their supply according to demand.
From evidence submitted and from returns furnished by the proprietors of factories and milk depots (see Table 2) we have ascertained that, with two exceptions, prices received by producers in this group during the twelve months ended 31st March, 1933, were from 5d. to 7d. per gallon at the factory or depot and from 11½d. to 1s. 2d. per lb. on a butter fat basis. Based on 4 per cent. milk, the butter fat prices are equivalent to a payment of 4½d. to 5½d. per gallon.

The exceptions referred to were farmers' co-operative organizations, where the prices paid for butter fat were from 1s. 2d. to 1s. 5½d. per lb., equivalent to 5½d. to 6½d. per gallon.

### TABLE 2.

- (a) Average daily quantity of milk received at country milk depots and factories;
- (b) Average daily quantity forwarded to the metropolis as liquid milk;
- (c) Average daily quantity of milk pasteurized;
- (d) Percentage of daily intake forwarded to the metropolis, and
- (e) Average monthly prices paid to producers, during the twelve months ended 31st March, 1933.

<table>
<thead>
<tr>
<th>Period</th>
<th>Average Daily Intake</th>
<th>Average Daily Supply to Metropolis</th>
<th>Average Daily Quantity Pasteurized</th>
<th>Percentage of Daily Intake Supplied to Metropolis</th>
<th>Average Monthly Price Paid to Producers (½d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1932—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>22,730</td>
<td>10,578</td>
<td>8,783</td>
<td>46·53</td>
<td>5½ to 7 1 2½ to 1 5</td>
</tr>
<tr>
<td>May</td>
<td>21,622</td>
<td>10,753</td>
<td>8,942</td>
<td>50·57</td>
<td>5½ , 7 1 1½ to 1 5</td>
</tr>
<tr>
<td>June</td>
<td>19,708</td>
<td>11,485</td>
<td>9,534</td>
<td>58·27</td>
<td>6 ½ to 7 1 2½ to 1 5</td>
</tr>
<tr>
<td>July</td>
<td>19,358</td>
<td>13,061</td>
<td>11,264</td>
<td>67·41</td>
<td>5½ , 7 1 2½ to 1 5</td>
</tr>
<tr>
<td>August</td>
<td>21,061</td>
<td>12,626</td>
<td>10,607</td>
<td>59·94</td>
<td>6 ½ , 7 1 2½ to 1 5</td>
</tr>
<tr>
<td>September</td>
<td>27,996</td>
<td>12,573</td>
<td>10,497</td>
<td>44·91</td>
<td>5½ , 7 1 2½ to 1 5</td>
</tr>
<tr>
<td>October</td>
<td>29,424</td>
<td>12,945</td>
<td>9,461</td>
<td>35·56</td>
<td>5½ , 6½ 1 1½, 1 5</td>
</tr>
<tr>
<td>November</td>
<td>34,429</td>
<td>13,804</td>
<td>10,340</td>
<td>40·09</td>
<td>5½ , 6½ 0 11½, 1 4½</td>
</tr>
<tr>
<td>December</td>
<td>35,374</td>
<td>15,341</td>
<td>11,442</td>
<td>43·86</td>
<td>5 ½ 0 11½, 1 3½</td>
</tr>
<tr>
<td>1933—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>28,548</td>
<td>15,125</td>
<td>11,266</td>
<td>52·98</td>
<td>5 , 6 0 11½, 1 3½</td>
</tr>
<tr>
<td>February</td>
<td>26,229</td>
<td>15,542</td>
<td>11,378</td>
<td>59·25</td>
<td>5 , 6½ 0 11½, 1 2½</td>
</tr>
<tr>
<td>March</td>
<td>24,240</td>
<td>17,588</td>
<td>12,817</td>
<td>72·59</td>
<td>5 , 6½ 0 1 0 , 1 3</td>
</tr>
</tbody>
</table>

### 23. Defaults in Payment for Milk Supplies.

During inquiries as to the difficulties under which producers of milk labour, it was stated in evidence that instances had occurred where producers had been unable to secure payment for milk supplied to a certain class of retailer at various times. Evidence was given by the Secretary of the Metropolitan Milk Producers Association to the effect that hundreds of pounds had been lost to dairy farmers, and specific instances furnished to us confirmed his statement.

It appears that the usual practice of this class of defaulting retailer is to canvas the producer personally, offering a more attractive price for his milk than that being paid by the honest retailer and promising regular payments weekly or at such other periods as are arranged. Occasionally the first payment or two is made. The next sum due may be paid either in part only or not at all, some convenient explanation being given to the producer which encourages him to continue supplying milk. Eventually the arrears mount up sufficiently to alarm the producer, who then ceases to supply, and attempts to secure the payment outstanding, usually without success.

Whilst satisfied that such unscrupulous practices are exceptional, we are of opinion that they justify some means of protection being afforded to producers against such defaulting retailers. It may be held that the producer must take the same business risks as persons engaged in other industries, but we think the milk producer is in a somewhat different position. He is engaged in an enterprise which occupies him every day in the year, so that he cannot personally attend to his interests at a distance from his own location without considerable inconvenience and expense, and it is most difficult, owing to the widely distributed areas from which the milk supply is drawn, for him to co-operate with his fellow producers for purposes of protection against such exploitation as is indicated.

### 24. The Wholesaler in Relation to the Liquid Milk Trade.

As previously indicated (vide paragraph 19), during recent years the milk depot has become an important factor in the liquid milk trade. There are at present ten of these depots from which milk is regularly forwarded, seven being located in Gippsland and one each at Bacchus Marsh, Sunbury and Werribee. In addition, when a shortage of milk occurs, supplies are occasionally obtained from as far afield as Maffra and Warrnambool. Seven of these depots are controlled by large milk retailing firms, which
are able to maintain a regular supply for their own business and to supply the requirements of many smaller retailers. The others are controlled by direct wholesale vendors. Many of these depots are equipped also for the manufacture of butter or other milk products, and are thus able to convert surplus milk at the centre of production. As already indicated, the milk depots exercise a considerable influence both on the regulation of supplies of milk and on the price paid to producers.

Reference to Table 2 shows that for the period covered therein from 16 per cent. to 27 per cent. of our daily requirements was supplied by depots, and present indications are that the percentage is likely to increase.

Included among wholesalers are the large retailers who have established treatment plants in the metropolis but who, with few exceptions, have no provision for the treatment of surplus milk. Many small distributors prefer to obtain their supplies from these sources rather than from country depots, and as the demand is practically uniform, the wholesaler is able to regulate his supplies to meet the daily requirements.

25. Milk Distributors and their Position in the Industry.—Figures supplied by the Department of Agriculture show that on the 30th June, 1933, 2,278 licences to sell milk by retail were in force. These were made up as follows:

- Producer-retailers
- Retail dairies
- House-trade dairies
- Shops

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of Premises</th>
<th>Average Daily Distribution (Quarts)</th>
<th>Percentage of Estimated Daily Requirements of Metropolis (257,500 Quarts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producer-retailers</td>
<td>171</td>
<td>214,776</td>
<td>88·41</td>
</tr>
<tr>
<td>Retail dairies</td>
<td>625</td>
<td>6,322</td>
<td>2·46</td>
</tr>
<tr>
<td>House-trade dairies</td>
<td>259</td>
<td>15,835</td>
<td>5·37</td>
</tr>
<tr>
<td>Shops</td>
<td>1,223</td>
<td>22,500</td>
<td>8·76</td>
</tr>
</tbody>
</table>

A classification of the construction and equipment of the various premises (not including the premises of producer-retailers) is given in Table 3, hereunder.

TABLE 3.
Classification of Dairy Premises in Metropolitan Area as at 30th June, 1933.

<table>
<thead>
<tr>
<th>Construction</th>
<th>Equipment (All Dairies)</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery</td>
<td>House Trade</td>
<td>Can Room</td>
</tr>
<tr>
<td>Brick</td>
<td>Wood</td>
<td></td>
</tr>
<tr>
<td>463</td>
<td>162</td>
<td>110</td>
</tr>
<tr>
<td>Wood</td>
<td>Brick</td>
<td>140</td>
</tr>
<tr>
<td>339</td>
<td>234</td>
<td>14</td>
</tr>
<tr>
<td>363</td>
<td>241</td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>261</td>
<td>163</td>
</tr>
<tr>
<td>211</td>
<td>1,380</td>
<td>1,054</td>
</tr>
<tr>
<td>169</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No fewer than four distinct classes are engaged in the retail distribution of milk, and there is a vast difference in the methods employed by each class. All, however, are compelled to comply with the conditions laid down by the Department of Agriculture as set out in Appendix "A." Table 4 shows the percentage of milk which is sold by each class of retailer.

TABLE 4.
Showing Average Daily Distribution of Milk from Various Classes of Retail Premises.

<table>
<thead>
<tr>
<th>Class</th>
<th>Number of Premises Registered 30th June, 1933</th>
<th>Average Daily Distribution (Quarts)</th>
<th>Percentage of Estimated Daily Requirements of Metropolis (257,500 Quarts)</th>
</tr>
</thead>
</table>
26. Retailers with Country Depots.—Reference has already been made to the retailers who have established depots in country districts (vide paragraph 24), thus ensuring for themselves a regular supply of milk for their own retail requirements and enabling them, in many cases, to build up a large wholesale trade. Although the quantity of milk handled by these retailers is approximately only 11.9 per cent. of the total requirements of the metropolis, they, together with the proprietors of depots who sell wholesale only, exercise a great influence on the prices paid to producers.

27. Retailers with City Premises only.—By far the most numerous, and handling the greatest quantity of milk, this class of retailer deals, with a few exceptions, solely in the distribution of liquid milk. A large number have premises equipped with cooling plants and obtain supplies direct from the producer, although in abnormal seasons they are compelled to obtain accommodation supplies from country depots or city wholesalers. The remainder obtain supplies either from depots or semi-wholesale retailers.

28. House-trade Retailers.—There are in the metropolitan area 259 house-trade dairies. Distribution from these premises is made at the dairy, no carts being employed. The daily sales of milk average only 6,300 quarts.

29. The Producer-retailer.—The producer-retailer is a distributor of milk who is dependent wholly or mainly on the milk produced from his own herd, which is maintained either within the outer areas of the metropolis or in close proximity thereto. The total quartage delivered is small, being 5.37 per cent. of the total distribution, and with the extension of building operations and by reason of the tightening up of municipal by-laws, the number is gradually diminishing. As will be shown later, however, the producer-retailer exercises some influence on retail milk prices.

30. Milk Shops.—The adoption of the system of once-a-day delivery has resulted, in recent years, in a considerable increase in the number of licences issued for milk shops. At the 30th June, 1933, there were 1,223 licences in force, this being an increase of 127 over the number in force three years ago. A small proportion of these premises is equipped with electric refrigerators. The remainder are compelled by the authorities to have efficient ice chests installed.

The quantity of milk sold averages 22,500 quarts per day, and there can be no doubt that the milk shop meets a public need. There is reason to believe, however, that in many cases the sale of milk is a draw for other business. Further reference to the milk shop will be found in that section of our report dealing with retail prices.

31. Retail Distribution of Liquid Milk.—As indicated in Table 3 there were on the 30th June last, 625 delivery retailers registered in the metropolitan area. Approximately 249,000 quarts of milk are distributed from these premises daily, the number of carts engaged being 1,380. Included in the total distribution are those quantities that are sold wholesale to other retailers and shops, and in bulk to public institutions, schools, &c. The amount delivered by cart to consumers is estimated at 214,776 quarts.

From evidence submitted by representative retailers (both large and small), it was ascertained that the daily retail delivery per cart was from 80 to 180 quarts, with an average in the residential areas of 130 quarts. The time taken by roundsmen is from five to seven hours, as the distance travelled on milk rounds varies considerably. Most of the larger retailers have widely scattered rounds necessitating the travelling of distances up to 20 miles.

The intense competition existing to-day compels retailers to be continually on the alert to obtain new customers wherever possible, and, what is more important, to hold them. In this connexion little regard is paid to any extra distance that may have to be travelled to effect delivery. No extra price can be charged, as obviously they must compete with local retailers.

There are retailers who have created a special demand by widely advertising the purity and high quality of their milk, thereby catering for a section of the public which considers guaranteed high quality before price. The rounds of such retailers, invariably, are widely scattered.

On the other hand, many retailers asserted in evidence that an influence of the prevailing depression has been for a large section of the public to be more concerned in obtaining milk of usable quality at a low price rather than to demand special high grade quality.

The development of the existing widespread delivery is also influenced by the fact that the saleable goodwill value of a retail milk business is based on its average daily quartage turnover. Evidence was submitted that during the past ten years dairies had changed hands
at prices ranging from £2 to £6 per quart for goodwill, irrespective of the value of plant and premises, which were paid for on a valuation. The present goodwill value for a well-established business is stated to be approximately £5 per quart.

32. **Special District Survey.**—With a view to obtaining further definite evidence as to the spread of retail milk deliveries, the Department of Agriculture, at our request, made a survey of certain residential and industrial districts. So far as was practicable, compact blocks or zones were selected, and in each district one hundred householders were interviewed. This survey, a summary of which is given in Table 5, revealed many interesting features.

Proof of the intense competition that exists is shown by the fact that in each block more than twenty retailers were engaged in delivering milk. In one instance eleven consecutive houses were being served by eleven individual retailers. Other instances of six to nine adjoining houses being served by a like number of retailers were numerous in each district. It may be accepted that these examples are common to the greater part of the metropolitan area, and they furnish an excellent idea of the overlapping which exists in the retail trade.

| TABLE 5. |
| SUMMARY OF SURVEY OF 100 HOUSES IN EACH OF FOUR MUNICIPAL DISTRICTS. |

<table>
<thead>
<tr>
<th>Dist.</th>
<th>Number of Houses to which Milk was Delivered.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not Delivered.</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>In District.</td>
</tr>
<tr>
<td></td>
<td>Outside District.</td>
</tr>
<tr>
<td></td>
<td>Total.</td>
</tr>
<tr>
<td></td>
<td>Retailers Licensed in District.</td>
</tr>
<tr>
<td></td>
<td>Number of Householders who obtained Extra Milk from.</td>
</tr>
<tr>
<td></td>
<td>Average Price Paid for Milk (per Quart).</td>
</tr>
<tr>
<td></td>
<td>Average Household Purchase per day (Pence).</td>
</tr>
<tr>
<td></td>
<td>Average Consumption per head per day (Pence).</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Collingwood</td>
<td>82</td>
</tr>
<tr>
<td>Essendon</td>
<td>98</td>
</tr>
<tr>
<td>Malvern</td>
<td>100</td>
</tr>
<tr>
<td>Northcote</td>
<td>100</td>
</tr>
</tbody>
</table>

33. **Costs of Distribution of Milk.**—During our inquiry into prices paid to producers by retailers for milk whether purchased direct or through country milk factories and depots, as well as those charged by retailers to consumers, it was admitted almost without exception by retailers who were examined that the producers were not receiving a fair and reasonable price for their milk. The main reason advanced by these retailers was that the costs of distribution under the conditions which have existed, more particularly in recent years, together with the lower retail prices now being charged to the consumers to meet the period of financial depression, have so reduced the margin between the wholesale purchasing and the retail prices that it is impossible to pay higher rates to producers and maintain financial stability without passing the increased cost on to the consumer. It was suggested that any increase in price to consumers, especially under present conditions, to enable a better price to be paid to producers would be followed immediately by a curtailment in consumption which would react detrimentally to both producer and retailer.

We have gone, as fully as the time available would allow, into costs of distribution, and have found that, although this problem is less difficult than that of production costs, as many established retailers conduct their business on a commercial basis, it is nevertheless sufficiently complex by reason of the widely divergent classes of trade, the locality in which they operate, and the service given to consumers.

Evidence was furnished by retailers with fairly large businesses, showing the costs of treatment and distribution at 1s. 1d., 1s. 2d. and 1s. 3d. per gallon according to the number of vehicles employed in delivery, and the daily quartage distributed per vehicle varying from 90 to 125.

Lower costs were met with in what may be conveniently termed one-man businesses, where the retailer obtained his milk from depots or other retailers at semi-wholesale rates and delivered to consumers himself. Allowing, however, for wages, overhead and other incidental charges, these costs were estimated to fall between 10d. and 1s. per gallon on a daily output of 90 to 150 quarts.

As regards the producer who retails his milk direct to consumers, there is a dearth of evidence as to distribution costs. Inasmuch, however, as the producer-retailer is in comparatively close proximity to his centre of distribution and, moreover, is exempt from the necessity, under the existing regulations, to cool his milk to a temperature below 40° Fahrenheit provided it is delivered to consumers within two hours of production, he can distribute milk at a cost appreciably below that of the retailer and can consequently undersell his competitor.
In evidence submitted on behalf of producers, the spread or maximum difference between the prices received and those charged to consumers was repeatedly stressed. It was implied also that by reason of this spread some retailers were making considerable profits out of the liquid milk industry.

We, therefore, deemed it advisable to examine this matter as fully as the data available would allow, taking essential factors into consideration. The most recent prices paid to producers were stated during our inquiry to be 7½d. to 9d. per gallon delivered at the retailer's premises, or 6d. to 8d. net at the farm. The retail prices were from 4d. to 5¼d. per quart, equal to 1s. 4d. and 1s. 10d. per gallon.

On the figures the spread or maximum difference between these prices therefore varies from 8½d. to 1s. 1d. per gallon. If the retailer were to be regarded only as the medium for distributing the producers' milk to consumers, the spread of 1s. 1d. might well be regarded as excessive. It must be borne in mind, however, that under the existing laws governing the supply of milk to the metropolis, the retailer is burdened with the responsibility for the treatment and keeping of milk to ensure its safety and wholesomeness in accordance with the standard and grade laid down.

The retailer must also pay the award rates of wages to carters employed in delivering milk, which are fixed at £3 11s. 6d. per week. In many cases, however, up to £4 per week is paid. This constitutes the heaviest single item in delivery costs. In one instance where detailed costs of treatment and distribution were furnished, we found that on a delivery of 125 quarts per cart, wages at £4 per week absorbed 33 per cent. of the total costs.

Other evidence was submitted as to the cost of running carts on the daily round with one delivery per day. This was stated to be £6 to £7 per week on a 110 to 125 quart output per round. The carters in these instances were receiving the award rate of £3 11s. 6d. per week. Allowing for all other charges, e.g., treatment and general overhead, it is obvious that delivery costs are high and rigid.

In confirmation of this view, it may be stated that in the report of the Reorganization Commission for Milk in England, dated 27th January, 1933, it is shown that the wages of milk carters accounted for 30 to 50 per cent. of the total costs of retail distribution of milk in England.

With regard to variation in spread as shown from 8½d. to 1s. 1d. per gallon, it may be held that if some retailers are apparently satisfied to retail on a margin of 8½d., so should others. The former, however, can only succeed in holding their business by undercutting and selling at a price much below what the milk is really worth, and giving a lower standard of service to the consumer. On the other hand, the retailer having the greater margin generally provides a better service to the consumer.

In the matter of costs of distribution, we are of opinion that, whilst under the conditions existing the costs as ascertained are undoubtedly high, until the distribution of milk is reorganized on some sound basis whereby, inter alia, the number of distributing units can be reduced and the quartage output per round increased, it is practically impossible to reduce appreciably the present costs. We are further of opinion that, while in some instances where the spread between the prices paid to producers and those charged to consumers was repeatedly stressed. It was implied also that competition had to be met.

We are further of opinion that, while in some instances where the spread between the prices paid to producers and those charged to consumers was repeatedly stressed. It was implied also that competition had to be met.

34. Retail Milk Prices.—The matter of prices charged to consumers engaged a good deal of our attention. It was ascertained from evidence submitted by retailers, that these prices vary considerably according to the class and extent of the business conducted and the extent to which competition had to be met. In some instances a higher rate is charged for bottled milk, but this practice is not general.

Prices disclosed by retailers were from 4d. to 6d. per quart, the average being 5d. for loose milk and 5½d. bottled. There was no difference in the price charged for pasteurized as compared with raw milk.

During the survey referred to in paragraph 32, particular attention was paid to prices. These ranged from 4d. to 7d. per quart. The information gained confirmed the evidence given by retailers, as there were many instances of varying prices being charged by retailers to householders in the same locality. There were, in fact, instances of adjoining householders paying different rates to the same vendor.

Retailers have endeavoured to maintain their fixed charges, but in many cases have had to meet competition by reducing prices to the level of their competitors. Many retailers claimed that the financial depression had so reduced the consumption of milk, more especially in the industrial suburbs, that there was a marked falling off in their daily orders for delivering and the total quantity was below that distributed in more prosperous times. They stated also
that many of their customers were taking smaller quantities in the morning, and were purchasing the balance of their requirements at cheaper rates from shops or from retailers who hawk milk to catch casual custom during the day.

35. Milk Shop Prices.—So far as shop trade is concerned, where supplies were obtained at semi-wholesale rates from other retailers, it was evident that in many cases milk was sold at a lower price than that charged to the public by the supplying retailer. In other cases, however, it was stated that, as a condition to securing milk, the shopkeepers agreed to maintain the same prices as the retailers supplying them.

36. Milk Hawkers’ Prices.—In evidence given by retailers the strongest criticism was levelled against the hawker, or as he is commonly called the “yodeller.” This class of milk vendor, it was claimed, was largely responsible for the undercutting of prices, which had brought about a position of chaos in the industry and was an important factor in keeping down the price that retailers could afford to pay to producers.

In number these vendors are few, but by reason of the fact that they trade during the day and that their prices are low, they have captured a considerable portion of the trade of the established retailer. One such vendor in evidence stated that in a period of two years without purchasing the goodwill of any established business he had built up a daily distribution of approximately 900 quarts. Four carts were being employed, each averaging over 200 quarts per day. The average price received for milk was 4d. per quart, all sales being for cash.

37. Producer-retailers’ Prices.—The producer-retailer combines the operations of production and distribution. He plays an important part in milk distribution in the outer suburban areas, and on occasions extends his business into more central areas. As previously indicated the number of producer-retailers is decreasing annually, but they are still sufficiently numerous to exert an influence on retail prices within the districts in which they operate. They are not compelled to provide special treatment plants for the cooling of milk, as the regulations allow them to dispose of their product within two hours after milking without previously being brine cooled.

Being in close proximity to the centre of distribution, the producer-retailer is no doubt attracted by the margin that exists between retail prices and those paid to producers, and, therefore, undertakes retailing his own output. In order to obtain a footing, he adopts the practice of under-cutting prices, thus compelling the established retailers to reduce their prices in order to maintain trade.

38. The Transportation of Milk.—The time which elapses between production on the farm and delivery to the retailer in the metropolis has an important bearing on the condition and keeping qualities of milk. Transport, therefore, plays an important part in the liquid milk industry. The two methods most frequently used in the industry to-day are rail and motor truck.

39. Transportation by Rail.—Milk sent by rail must be taken to the station by the producer, who is expected to assist in loading his cans on the train. The time occupied varies, of course, with the distance of the farm from the station. Although provision is made by the Railway Department for protecting cans from the sun, there are occasions when such protection is not availed of. At the receiving end also milk is often left exposed on suburban platforms for a considerable time before it is picked up by the retailer. Railroad transport is still favoured by most country milk depots in Gippsland, but many individual producers have been compelled to adopt road transport by reason of the fact that some years ago the Railway Department introduced a regulation preventing the transfer of milk from one suburban line to another.

40. Motor Truck Transport.—During recent years the increased demand for milk and the action of the Railway Department, referred to in the preceding paragraph, have resulted in a large increase in the quantity of milk being brought into the metropolis by road. Most of this milk is carried by motor trucks, privately owned.

The practice generally adopted is for the producer to haul his milk to the nearest road where it is collected by the carrier, who, when his loading is completed, proceeds direct to the city and delivers the milk to various retailers.

Road transport has the advantage over rail that the time previously occupied by the producer in transporting his milk to the railway station is saved, and that the retailer is relieved of the necessity for picking up at his end.

41. Transport Charges.—Transport charges vary according to the distance from the metropolis, but there is little or no difference between the rates charged for rail and road. In evidence submitted before us the range of charges was from 1d. to 1½d. per gallon.
42. **Transport of Milk in Bulk.**—There is at present only one attempt being made to transport milk in bulk. This is by a Producers Co-operative Company which transports milk in glass-lined tanks mounted on motor trucks, from a distance of 31 miles at a cost of 3d. per gallon.

43. **Regulation of Road Transport.**—The only regulations at present in force dealing with the transport of milk are those which require the vehicles used to be kept clean at all times and to be efficiently covered so as to prevent access of the direct rays of the sun.

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**CHAPTER 3.**

**IMPORTANCE OF MILK IN THE HUMAN DIET.**

44. **Consumption of Liquid Milk.**—There appears, unfortunately, to be a misapprehension on the part of a large section of the public that milk is a luxury and, therefore, to the extent that it is so regarded, there is a very natural tendency to restrict consumption on this ground alone.

Even among that section of the community which has some appreciation of the value of milk as a food there are many who regard it in that light for infants only, and it, therefore, occupies a comparatively insignificant place in the diet of adults. It is merely stating a fact that as a community we are not milk drinkers in a corresponding sense that we are partakers of other beverages.

45. **Average Consumption per Head of Population.**—The average consumption of milk per day in the metropolis is estimated, according to statistics supplied by the Department of Agriculture, at one-half pint per head of population. One independent health authority suggests that it is no greater than 0·4 pint per head. Assuming that either of these estimates is reasonably correct, they compare favorably with the figures quoted for other cities in the Commonwealth and in England. They are, however, much lower than those obtaining in certain foreign countries. A comparison of the average per capita consumption in various parts of the world is shown in the following table:—

**TABLE 6.**

**Comparison of Estimated Average per Capita Consumption of Milk per Day in Various Places.**

<table>
<thead>
<tr>
<th>Location</th>
<th>Estimated Consumption per Head per Day.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switzerland</td>
<td>1·8</td>
</tr>
<tr>
<td>Denmark</td>
<td>1·25</td>
</tr>
<tr>
<td>United States of America</td>
<td>1·00</td>
</tr>
<tr>
<td>England</td>
<td>0·33—0·40</td>
</tr>
<tr>
<td>Hull (England)</td>
<td>0·22</td>
</tr>
<tr>
<td>Chichester (England)</td>
<td>0·71</td>
</tr>
<tr>
<td>Bournemouth (England)</td>
<td>0·68</td>
</tr>
<tr>
<td>Bradford (England)</td>
<td>0·40</td>
</tr>
<tr>
<td>Bristol (England)</td>
<td>0·37</td>
</tr>
<tr>
<td>Perth (Western Australia)</td>
<td>0·41</td>
</tr>
<tr>
<td>Sydney (New South Wales)</td>
<td>0·50</td>
</tr>
</tbody>
</table>
46. Value of Milk as a Food.—Many authorities could be quoted to show the wisdom and necessity for increasing the per capita consumption. It will suffice to set out the following:

Professor Milton J. Rosenau, Professor of Preventive Medicine and Hygiene, Harvard Medical School, United States of America, in his Standard Text Book states:

"Milk is our most important food. It is the best single food. The exceptional value of milk is due to the fact that it contains all the essentials of a balanced diet; it is rich in vitamins, the quality of its protein is especially good, the fat favours growth, and it has a high calcium content in readily usable form.

Milk, furthermore, is palatable, readily digestible, and is subject to a great variety of modifications. Even at present prices it is one of the cheapest of the standard articles of diet and the most economical source of protein. Milk is a protective food in that it guards against deficiency diseases when used in combination with other foodstuffs of either animal or vegetable origin."

These views are supported by the Medical Research Council of Great Britain in the following statement:

"The nutritional value of milk as a corrective to deficiencies of various types in the diet is now generally accepted. It is valuable to the adult and probably indispensable to the child, and its increased consumption in this country should be advocated. In many diets it is the chief source of fat soluble vitamins, of protein of good quality and of calcium salts."

47. Human Requirements in Milk Consumption.—In the section of the book published by the British Medical Research Council dealing with "Vitamins in Infancy," it is stated that infants where partially or entirely artificially fed should receive cows’ milk as the bulk of the diet up to eight or nine months, and the basis of the diet for a year afterwards. At no time in the first year after weaning should an infant receive less than 1 to 2 pints of milk daily and after that not less than 1 pint.

In the United States the contention is held generally by the highest health authorities that children should receive 1 quart (32 ounces) and adults 1 pint (16 ounces) per day.

48. Price Factors Influencing Consumption.—Whilst there is little doubt that the price factor is the main consideration of the housewife in arriving at the daily supply of milk for her household, there seems to be little tendency, in normal times, to vary the consumption from time to time despite any increase in price.

Unfortunately many housewives have come to regard milk as a dear food, and having little or no knowledge of its high nutritive value in relation to the price paid, use it too sparingly in the household.

Food values generally are calculated on a calorie or energy-producing basis according to the requirements of the individual. It will suffice to state in simple terms that, based on the heat or energy-producing values of food commonly used in all households, 1 quart of milk costing sixpence is approximately equal in food value to ¾ lb. of rump steak (costing, say, 1s.), or eight eggs (costing 10d.), or 1½ lb. of fish at current prices for that article. Bearing in mind that, as already shown, its nutrient ingredients are of the highest quality, are properly balanced, and the most easily digested, milk is, without doubt, the cheapest and best of all foods, not only for infants, but for humans of all ages. So far, therefore, from regarding it as a luxury and limiting its consumption to the too modest half-pint or less per head per day on account of price, milk should be appreciated at its real value and consumed in quantities at least double those of the present day, appropriate saving being effected at the same time in expenditure on other foods and beverages.

49. Calculation of Food Values.—The following extracts from a recognized text book are quoted as indicating the value of milk in the diet, not only for infants but of older children and adults:

* "Protein and Energy Requirements of Humans.

Many studies have been made to determine the food requirements of human beings who perform various amounts of physical labour. Certain amounts of protein must be eaten to maintain the body and repair waste; sufficient carbohydrates and fats must be combined with the protein to furnish enough energy to supply body heat

* Kelly and Clement (U.S.A.), "Market Milk."
and perform muscular work. The following table, from Atwater, shows a dietary standard for American men and women."

<table>
<thead>
<tr>
<th>Dietary Standard</th>
<th>Actually Eaten</th>
<th>Fuel Value</th>
<th>Nutritive Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Protein</td>
<td>Fat</td>
<td>Carbohydrates</td>
</tr>
<tr>
<td></td>
<td>Grams</td>
<td>Grams</td>
<td>Grams</td>
</tr>
<tr>
<td>Man with very hard muscular work</td>
<td>175(a)</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Man with hard muscular work</td>
<td>150(a)</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Man with moderately active muscular work</td>
<td>125(a)</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Man with light to moderate muscular work</td>
<td>112(a)</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Man with &quot;sedentary&quot; or woman with moderately active work</td>
<td>100(a)</td>
<td>(a)</td>
<td>(a)</td>
</tr>
<tr>
<td>Woman at light to moderate muscular work or man without muscular exercise</td>
<td>90(a)</td>
<td>(a)</td>
<td>(a)</td>
</tr>
</tbody>
</table>

(a) Fats and carbohydrates in sufficient amounts to furnish, together with the protein, the indicated amount of energy.

"PROTEIN AND ENERGY FURNISHED BY MILK.

The energy furnished by a given quantity of milk can be readily figured if its percentage of fat and solids-not-fat is known. To do this subtract the percentage of ash (which is fairly constant at .72) from the solids-not-fat. The remainder will be the percentage of protein and carbohydrates in the milk. Each gram of fat furnishes 9 calories, and each gram of carbohydrates or protein furnishes 4 calories. A quart of average milk weighs approximately 975 grams. From these figures the following table has been worked out:

<table>
<thead>
<tr>
<th>Fat</th>
<th>Solids-not-fat</th>
<th>Solids-not-fat Minus Ash</th>
<th>Calories in Fat of 1 Quart Milk</th>
<th>Calories in Solids-not-fat of 1 Quart Milk</th>
<th>Total Calories in 1 Quart Milk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Cent.</td>
<td>Per Cent.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>8·33</td>
<td>7·61</td>
<td>263·3</td>
<td>296·8</td>
<td>560·1</td>
</tr>
<tr>
<td>4</td>
<td>8·79</td>
<td>8·07</td>
<td>351·0</td>
<td>314·7</td>
<td>665·7</td>
</tr>
<tr>
<td>5</td>
<td>9·10</td>
<td>8·38</td>
<td>438·0</td>
<td>326·8</td>
<td>765·6</td>
</tr>
</tbody>
</table>

A quart of milk contains between 25 and 40 grams of protein, and a fair average may be stated as 30 grams.

From Atwater's figures it thus appears that about 4 quarts of milk a day would furnish enough protein, and 5 quarts a day enough energy, for a man at moderately active muscular work. While milk is the sole or chief food of infants, it is also valuable as part of the diet for older children and adults."
PART II.

Re-organization of the Liquid Milk Industry as applied to the Metropolis.

CHAPTER 1.

OBJECTS OF RE-ORGANIZATION.

50. Introductory.—Having reviewed the present position of the industry and having closely studied the evidence given before us, we are compelled to agree with the submissions of both producers and retailers that, so far as the economic side of the industry is concerned, conditions are extremely unsatisfactory. We are of opinion that there is urgent need for a scheme of re-organization of the supply and distribution of milk to the metropolis to be effected at the earliest possible moment. Such a scheme must aim at the stabilization of both supply and distribution in order to place producer and retailer on a more satisfactory footing with each other. Since the quality and grade of milk are of vital concern to the consumer, it must also aim at improving the supply in these directions whilst keeping the price at a reasonable figure to stimulate consumption.

We propose, therefore, in this part of our Report, to indicate the direction in which we consider re-organization is essential, and to make recommendations for carrying such re-organization into effect.

51. Scope of Re-organization.—The most important economic factors in the liquid milk industry are supply and demand, and by reason of those factors we propose to give first consideration to the position of the producer. No less important is the protection of the consumer, for it is essential that the public be given some assurance that the supply of milk is produced under reasonably safe conditions. It might be thought that consideration of these two interests, whereby the producer would receive an adequate price for his product and the consumer would be provided with a good quality milk at a reasonable price, is all that is required. The distributive side of the industry, however, also demands attention, for on the retailers rests the responsibility of safeguarding the purity and standard of our milk supply after it leaves the farm of the producer.

The transport of milk, in our opinion, also needs regulating, more especially in regard to the methods adopted in transporting by road.

CHAPTER 2.

RE-ORGANIZATION AS APPLIED TO THE PRODUCER.

52. Licensing Control.—As indicated in paragraph 7, when reviewing the existing legislation governing milk supply, the issue of licences in respect of both dairy farms and dairies is, at present, mainly dependent on the suitability of premises, plant, and utensils, together with the maintenance of a proper degree of sanitation. Provided these requirements are met and the necessary fees are paid, there is no limit to the number of licences that may be issued and renewed annually.

Returns supplied by the Department of Agriculture show that there were 23,410 dairy farm licences in force for the year ended 30th June, 1932. These figures do not include all dairy farmers in Victoria, as Part II. of the Milk and Dairy Supervision Act is not operative over the whole State.

The latest estimate of the annual production of milk from dairy farms in respect of which licences are held under the Act, is 214,890,500 gallons, of which 23,496,875 gallons are supplied for consumption as liquid milk in the metropolis. Separate figures showing the annual consumption of milk in provincial cities and towns are not available, but allowing for this it is clear that by far the greater volume of milk produced on licensed dairy farms is diverted for manufacturing into dairy produce.
It is obvious that the great majority of licensed producers cannot expect to share profitably in the production of liquid milk for the metropolis, and it may be accepted, therefore, that under normal seasonal conditions those who are more favorably situated as regards proximity to the city, or who are attracted by current prices, produce the bulk of the milk that is consumed.

This situation is complicated, however, in the early spring and summer months, when milk, which is normally produced in all dairying districts in much greater quantities and at considerably less cost than in autumn and winter, is made available at low prices through country depots and factories.

For these reasons we are of opinion that the scheme of re-organization must include provision for controlling the production of the liquid milk supply, with a view to its stabilization.

53. Registration of Certificated Liquid Milk Producers.—In considering ways and means by which the position of the producer of liquid milk supplies can be improved, we have closely studied the Report of the Re-organization Commission for Milk in England, issued in January, 1933. This Commission, which was appointed under the Agricultural Marketing Act 1931, to prepare a scheme for the marketing of milk, spent several months investigating the position of milk producers in England and Wales. The report recommends a policy of accrediting producers who comply with certain conditions. Such a policy commends itself thoroughly to us inasmuch as the production of a clean, safe milk supply calls for a higher standard as regards the health of the dairy herd, sanitation, and care of utensils, milking methods, and care of milk.

Indeed, it appears to have been the intention under Part III. of the Milk and Dairy Supervision Act 1928, to bring a policy of this kind into effect by reason of the provision that, where grades of milk have been established, certificates may be issued to producers specifying the grade of milk which may be supplied. This provision, however, was never put into operation for reasons which have already been conjectured. The effect of issuing such certificates would have been to automatically exclude all producers, who did not hold a certificate, from supplying milk to the metropolis, thus tending, at least, to a partial stabilization, on the producer's side, of the liquid milk industry.

Inasmuch as appropriate grades for milk are proposed in this Report, we recommend that legislative provision be made for the registration of certificated milk producers. The qualifications for such registration should include the production of milk of the grade specified, compliance with requirements as regards construction of premises, maintenance of sanitation, provision of approved plant and utensils, clean milking methods, treatment, and care of milk.

Further important necessary qualifications, in our opinion, are adequate provision for producing level supplies of milk all the year round, and for dealing with surplus supplies.

In consideration of the more favoured position in which such a policy would, in our opinion, place the producer, and in view of the higher cost of supervision which it will necessarily entail to secure its full effect, we also recommend that a higher scale of licence fees be paid by those registered as certificated producers.

54. Position of the Producer-Retailer.—With regard to the producer-retailer, the necessity for supplying the grade of milk specified, and for compliance with all the other requirements, will apply as with the producer who does not retail milk. We, therefore, deem it advisable to include the producer-retailer in the certifying scheme.

55. Improving the Position of Producers.—In the Report of the Re-organization Commission for Milk in England, it is stated that “The crux of a milk marketing scheme is the price policy which it is proposed to adopt.” From our inquiries we are of opinion that this statement applies with equal force to the marketing of milk for the metropolis of Victoria. We have concrete evidence also, as will be shown in subsequent paragraphs, that this subject has seriously engaged the attention of other States in the Commonwealth.

We are agreed that, at present, the producer is not receiving a reasonable price, and it is essential that some means be devised whereby his position may be improved.

56. Payments to Producers.—So far as we have been able to investigate the matter of prices paid to producers it would appear that these are not determined on any defined system of appraising milk values in their relation to costs of production. In fact, the prices quoted in the daily papers during our inquiry were below the costs of production as computed from the evidence submitted by producers.
It must, of course, be borne in mind that costs of production are not the only factor affecting the question of milk prices. Equally important is the demand for liquid milk. Obviously, if prices remain for long below average costs of production many producers whose costs are higher than normal will be forced out of the industry. On the other hand, the payment of a price which exceeded the average costs of production would result in over-supply of the liquid milk market, and at the same time would encourage the inefficient producer.

If producers were in a position to control the marketing of milk themselves the position would be simplified, but under present marketing and distributing conditions it is necessary that we consider other means of meeting the situation.

57. Increased Payments by Retailers.—In the course of our inquiry definite statements were made in evidence by several retailers that if they could increase the quantity of milk delivered per cart from 120 to 130 quarts, as under present conditions, to 200 quarts or more, they could carry on their business profitably on a gross margin of 10d. per gallon instead of 1s. 2d. or 1s. 3d. as is now required. Thus a reduction of 4d. to 5d. per gallon in cost of distribution would be effected and this amount, in our opinion, should be utilized to pay a more appropriate price to the producer and possibly decrease the price to the consumer. We are satisfied that it is practicable to reduce distribution costs with full regard to the legitimate interests of retailers.

There arises from this, however, the important question as to how the producer can be definitely assured of receiving an equitable increase in price for his milk if the costs of distribution are appreciably reduced. We have no doubt that many retailers would wish to pass this saving on to their suppliers, but we cannot feel certain that all retailers would necessarily do so.

We are, therefore, of opinion that the matter of securing the general application of a reduction in distribution costs for the benefit of the producer should be removed beyond all doubt by a policy of price regulation under statutory authority. In this connexion we have endeavoured to ascertain as far as possible the position in other States of the Commonwealth and in England.

58. Policies Adopted in Other States of the Commonwealth.—New South Wales.—In other States of the Commonwealth the price question has also engaged the attention of the Governments concerned. In New South Wales the "Metropolitan Milk Act" was passed in 1929, creating the Metropolitan Milk Board. This Board was charged with the regulation and control of the supply and distribution of milk to the metropolitan area, with power to fix the minimum prices to be paid to producers, the maximum prices to be paid by retailers for the purchase of milk by wholesale, and the maximum prices to be charged by retailers to consumers. The price-fixing powers were, however, found to be defective, inasmuch as they could not be enforced, and this, together with other matters, resulted in the Act being repealed and its replacement on the Statutes by the Milk Act 1931.

The power to fix prices is retained in the new measure, and in order to make the Act effective in this respect there is the further important provision by which all milk, except that retailed direct by producers in the metropolitan area, supplied for consumption in the metropolis of Sydney, is vested in the Board. The milk is now received and treated on behalf of the Board by five (5) distributing companies in Sydney, acting in the capacity of agents for the Board.

These companies supply the Board with weekly returns showing the daily quantities of milk taken from each producer, and at the end of each four-weekly period they pay the Board for the total quantity of milk received. Payments are then made by the Board direct to the producers at the minimum price fixed.

The Milk Board has fixed the present minimum price to the producer at an average of 114d. per gallon of 10½ lb. at the country depots controlled by the distributing companies in Sydney. Allowing for the cost of cooling at the country depot and freight, the price on rail at Sydney is 1s. 1d. per gallon.

The maximum wholesale price to retailers who must obtain their supplies from the Board’s agents is at present 1s. 5d. per gallon of 10½ lb., the margin of 4d. covering the costs of handling and treatment at the city depots. The retail price of this milk to consumers is fixed at 7d. per quart, but in the case of producer-retailers in the metropolitan area a maximum of 8d. per quart is allowed. We are informed that in some suburbs competition is so keen that the retail price obtained in both cases does not exceed 6d. per quart.
Under this scheme it is claimed that payment to producers at the fixed minimum price is assured, also that the collection of milk is so organized that each producer secures an equitable share in the supply of milk and that economies can be effected in treatment and delivery.

59. Western Australia.—In Western Australia a legislative measure called the "Metropolitan Whole Milk Act" was assented to on 30th December, 1932. Under this Act a Board known as "The Metropolitan Whole Milk Board" has been constituted, which is charged with the regulation and organization of the production, purchase, treatment, sale, and distribution of whole milk for use in the metropolitan areas of Perth and Fremantle.

With particular reference to prices this Board is empowered to fix the minimum price to be paid to producers for milk. In the case of milk, other than surplus milk, the price is determined according to butter-fat content and its value, bacterial test, added value for services involving production of whole milk, and if necessary, a premium during periods of scarcity.

With surplus milk the price is arrived at in accordance with the butter-fat content at ruling butter-fat prices, less a charge for separation or other treatment carried out by the retailers.

The maximum price or prices to be charged to the consumers, by retailers, are also determined by the Board. Prices ascertained during our inquiry were 1s. 1d. per gallon to producers delivered to the metropolis, and 7d. per quart to consumers.

60. Other States.—So far as other States of the Commonwealth are concerned, we understand that a Bill has been drafted in Queensland to deal with the supply of milk to the city of Brisbane, the principles of which are in several respects similar to those in the New South Wales and Western Australian Acts.

We have learnt also that a Commission was recently appointed in South Australia to investigate, inter alia, prices paid to dairy farmers for milk and cream, and have been informed, also, that this Commission visited Victoria in connexion with its investigations and obtained data relating thereto from departmental and other sources.

61. Price Policy Recommendations in England.—We have already referred to the Re-organization Commission for Milk in England. It found the position of producers so unsatisfactory as regards prices that it has recommended a policy of price control to ensure that producers who are placed on a roll of accredited producers and who comply with the conditions appertaining thereto are adequately remunerated.

Under this proposal the power to control milk prices will be vested in a Joint Milk Council comprising a Central Producers' Board, a Central Dairymen's Board, and three independent members appointed by the Government. The scheme also provides for the fixing of contract terms between producers and distributors for the sale of milk, which will govern both the quantities to be supplied and the prices to be paid. In order to ensure that the price policy will be effective and so strengthen the position of the producer, the proposals also include provision for the ownership of all milk, other than that sold by producers who retail their own milk direct, being vested in the Central Producers' Board, and for the proceeds of sale of milk to be paid to and administered by such Board.

After a close and critical study of this comprehensive report we are of opinion that many of the major difficulties instanced as applying to the production of a liquid milk supply in England also apply to the industry in this State. That the generally accepted conservative viewpoint of Englishmen should favour such a radical policy as legalized price regulating is, to our mind, further evidence in support of statutory price regulation as applied to liquid milk production for the metropolis of Victoria.

62. Price Policy for Producers.—Having fully considered this important and pressing problem in all its aspects from the data available including an examination of the policies adopted or proposed in other States of the Commonwealth, and in England, and having regard to the evidence submitted by those engaged in the industry, we have reached the definite conclusion that some statutory authority is essential for the purpose of regulating the price or prices to be paid to producers for milk supplied for consumption in the metropolis; and further, that the price or prices should be computed from time to time by such authority after taking all relevant factors into consideration (including the wholesale price per lb. of manufactured butter in Melbourne, the grade of milk, food value of the by-products in skim milk, fair and reasonable value for services, and the cost involved in producing and maintaining level supplies of the prescribed grade of milk during the whole year).
We are also of the opinion that, in view of the unsatisfactory position in regard to the low prices being received by producers as previously disclosed, relief in the direction indicated is a matter of immediate necessity.

63. Power to Fix Contracts.—We have given serious consideration to the question of devising means of ensuring that the policy of regulating milk prices, if adopted, will be fully effective. We consider it advisable that provision should be made by the proposed authority to fix contract terms governing the purchase of milk from producers by retailers and depot or factory proprietors. The contract terms would include specifications as to the quantity and grade of milk to be purchased with a reasonable percentage of daily variation above or below the quantity contracted for. It may be necessary also to include contract terms for retailers who purchase milk from depots or factories.

Assuming that such a policy as indicated is adopted the mere declaration of the price or prices to be paid to producers for milk will not be sufficient, in our opinion, to ensure that they will necessarily be paid in all cases, nor that the contract terms for milk supplied will always be faithfully observed by the parties thereto. Power must be given to the authority to fix adequate penalties for non-observance of price regulation and contract terms.

64. Vesting of Milk Supplies.—We consider it advisable also that additional power be provided to require that the ownership of all milk sold by producers for consumption as liquid milk, other than that sold by producers who retail only their own milk, should vest in the statutory authority. Such a proposal does not mean that the authority would actually handle the milk as owners in the ordinary sense by entering into the milk industry as a State trading concern, but that it would assume legal ownership most probably on delivery of the milk at the premises of the wholesaler or retailer, according to which of these purchased the milk from the producer. It may not be necessary to put the proposed vesting provisions into operation, especially if it is found that the fixing of contracts is successful in its application. Indeed it would not be wise or expedient in any case to do so until re-organization and consolidation of retail milk businesses had advanced sufficiently to render vesting practicable.

Inasmuch, however, as it has been found that in Sydney the Milk Board was unable to enforce its price regulating measures without vesting of the milk in the Board, and as the Re-organization Commission for milk in England has made vesting an important feature in its recommendations, we are firmly of the opinion that this additional power should be provided, to be exercised in the event of a situation developing which necessitated it.

Along with the proposed vesting power, provision would also be made for all sums due by retailers and wholesalers for milk purchased from producers to be paid to the statutory authority, through whom payment would be made to the producer at appropriate periods.

We are of opinion that, in addition to further protecting the interests of the producer in this direction, the foregoing provision would enable the statutory authority to maintain a close and accurate check on the buying of all milk intended for retail distribution, thus eliminating as far as practicable the possibility of collusion between the interests concerned which might defeat, to some extent, the objects of re-organization and stabilization of the milk supply.

65. Labour Conditions on Dairy Farms.—During our inquiry conclusive evidence was tendered confirming the opinion so often generally expressed that dairy farming is carried on in many districts under conditions contrary to the accepted Australian wage standards. In comparison with many other industries, where the conditions of employment and the scale of wages are regulated by Wages Board determinations or Arbitration Court awards, those engaged in the laborious work of dairy farming where the exacting service necessary entails long hours for seven days in the week, are at a decided disadvantage.

On many farms the sons and daughters of the dairy farmers provide the major proportion of the additional labour required, and other than the provision of their board and keep and at odd times pocket-money grants, the majority of these persons are in receipt of no regular weekly wages. Where such family labour is not available and hired assistance is engaged, the dairy farmer so placed is obviously at a disadvantage in regard to production costs.

Until such time as the liquid milk industry is placed on a stabilized basis there would appear to be little prospect of better conditions prevailing either to the average dairy farmer himself or to others engaged in the daily work involved. We are of opinion that this is an additional reason for immediate action to be taken to place the producer in a position to carry on his operations on a reasonably payable basis and thus enable him to pay an adequate wage to those engaged to assist in this work.
CHAPTER 3.

RE-ORGANIZATION AS APPLIED TO THE DISTRIBUTION OF LIQUID MILK.

66. Introductory.—In Part I. of our report we have referred to the various classes engaged in the distribution of liquid milk, and have given an outline of the conditions prevailing in this branch of the industry.

Retailers who gave evidence before us were unanimous in stating that these conditions were unsatisfactory, the main reasons advanced being:—

(a) The indiscriminate issue of licences to sell milk.
(b) Undercutting of prices.
(c) High costs of distribution.

We are in agreement with many of the views expressed by retailers, and have embodied certain recommendations in our general scheme for reorganization. From our own observations and inquiries, we have also indicated other directions in which, in our opinion, considerable improvement can be effected.

67. Retail Dairy Licences.—During the course of our inquiry the statement was frequently made by both producers and retailers that the prevailing disturbed state of the liquid milk industry is in a large measure due to the issuing of licences for the retailing of milk without regard to the number already in force.

Many retailers stated in evidence that persons to whom new licences were issued had usually to compete with established retailers in building up a new retail delivery business, and that this could only be done by attracting customers from their rivals through frequently undercutting the price for milk, thus forcing the established retailer to cut his prices also in an endeavour to hold his customers.

We have, therefore, given special attention to this matter, and with a view to ascertaining to what extent the absence of power to restrict licensing of retail dairies is responsible, Table 7 has been prepared from departmental figures showing the number of retail licences in force each year during a period of four years ending 30th June, 1933.

| TABLE 7. SHOWING COMPARISON IN NUMBER OF RETAIL AND SHOP PREMISES REGISTERED IN METROPOLITAN AREA DURING FOUR YEARS ENDED 30TH JUNE, 1933. |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Dairies          | 874             | 882             | 873             | 884             | + 1·14          |
| Shops            | 1,096           | 1,191           | 1,209           | 1,223           | + 11·58         |
| Producer-retailers | 213            | 203             | 190             | 171             | - 19·71         |
| Totals           | 2,183           | 2,376           | 2,272           | 2,278           | + 4·35          |

Reference to this Table shows that in respect of dairies properly so called there was an increase of 1·14 per cent., and of milk shops 11·58 per cent.

The number of producer-retailers decreased by 19·71 per cent., leaving a net increase in all licensed retail premises of 4·35 per cent.

We were anxious to obtain statistics on this question over a longer period than the one reviewed. It has been ascertained, however, that, as all premises from which milk is sold by retail are defined as "Dairies" under the Milk and Dairy Supervision Act 1928, it was not the departmental practice to prepare separate returns for dairies and shops prior to this period, and prolonged research, involving the delaying of our report, would be necessary to cover a more extended period.

So far as licences in respect of dairy premises are concerned, there appears to have been no material increase from year to year. It is in regard to shops that a pronounced increase is shown, and their incursion into the business of retail selling milk has been previously referred to. The actual position, however, is not disclosed by these figures. Evidence was given by retailers and retail dairy business agents that for a number of years many established retailers have adopted the practice of consolidating their business by purchasing the rounds of other
Irrespective of whether the increase in the number of licences issued year by year is marked or otherwise, it follows that each new licence, added to those already in force, becomes a further charge on the daily quartage of milk distributed, because of the cost involved in providing the necessary premises, plant, utensils, vehicles, wages, &c., for the purpose of carrying on the business.

There is no doubt in our minds that a serious state of disorder in the retail distribution of milk has been, in a large measure, created by the absence of power to limit the number of licences, and that this has reacted detrimentally to both producers and retailers.

68. Control of Retail Licences.—Having set out the unsatisfactory position regarding the retailing of milk in so far as it is attributable to the absence of power to regulate the number of licences that may be issued annually, we consider it essential that the statutory authority proposed in this report should have full power to determine from time to time the number of retail licences that may be issued, and to effect reductions where, in its opinion, there is definite evidence of undue overlapping in delivery and high costs of distribution by reason of the number of retailers operating in any district. We regard this matter of such importance that, in the event of our recommendations being adopted, it should be one of the first objectives of the proposed statutory authority.

69. Transfer of Licences.—We are of opinion that the sale and exchange of retail dairy businesses should be under the control of the proposed authority without in any way interfering with the financial aspect of the dealing, which should be solely a matter between the respective principals involved after the proposed transfer has been approved.

70. Compensation Provisions.—It will be accepted as a general principle that compensation should be paid to the retailer whose licence is cancelled in accordance with the law in pursuance of a policy of licence reduction if he is unable to dispose of his business to a continuing retailer. There appear to be three ways in which this may be done. One is for the proposed statutory authority to allot the quartage of the retailer whose licence is determined amongst those continuing on in the area served by the outgoing retailer. The second is for the authority to sell the quartage by auction or tender amongst the continuing retailers. After close examination we do not regard either of these methods as entirely satisfactory or practicable. The possibility must be considered of continuing retailers in some instances declining to accept any new quartage allotted by the statutory authority, or to bid or tender for the purchase on the assumption that they may ultimately secure some of it in any case without cost.

The third method of providing compensation is to give the statutory authority power to strike a levy not exceeding a certain sum per gallon on the quantity of milk purchased by retailers for distribution in the metropolis. The amount of the levy would be collected at appropriate periods and paid into a Compensation Fund by the authority. All payments for compensation would be paid direct to the outgoing retailer as soon as the sum to be awarded had been determined.

This method, in our opinion, is the most practical and satisfactory, in that it will offer security of payment to the retailer concerned.

71. Subdivision of Licences for Retailing Milk.—Under the Milk and Dairy Supervision Act 1928 a "dairy" means "any premises (not being solely a dairy farm or factory) where milk is kept for sale or where any dairy produce is prepared for sale and every milk depot under Part III. of this Act."

Thus no differentiation is made between the various classes of premises and retail milk businesses which are subject to regulation by licence. From our survey of the situation created by the great preponderance of licences issued in regard to shops over those in respect of dairies, we are of opinion that "dairies" and "milk shops" should be separately defined, and that each should have its own form and conditions for licence.

72. Qualifications for Persons Holding Licences.—The question of requiring satisfactory personal qualifications from applicants for licences for the retailing of milk, as well as the provision of suitable premises, plant, utensils, vehicles, &c., has engaged our attention. The Milk and Dairy Supervision Act gives no power to withhold or refuse a licence where an applicant is of doubtful financial stability or character, or both. We consider this an important omission which should be rectified. The health of an applicant for licence is another factor which should be taken into consideration.
Some producers, when giving evidence of unsatisfactory transactions with certain retailers, expressed the view that the issue of a licence to a retailer ought to be an indication that he is bona fide, and with this we entirely agree.

We therefore recommend that all retailers be required to produce satisfactory references as to character and to submit some approved surety of financial stability before licences are issued, and that failure to produce either should warrant refusal. We further recommend that every applicant for licence be required to produce a certificate of health from a qualified medical practitioner.

Power should also be given to the licensing authority to cancel the licence of any retailer who has been repeatedly convicted for adulterating milk and for other offences which, in the opinion of the authority, were deemed sufficient reason.

We believe that, inasmuch as the effect of these recommendations would be to uplift the standing of the retail milk industry, they would be welcomed by honest retailers.

73. Registration of Roundsmen.—As a further safeguard in protecting milk while it is being distributed and also with the view to exercising more strict control over delivery, we are of opinion that roundsmen should be subject to some form of registration by the Authority. One condition of registration should be the production of satisfactory evidence as to character.

The payment of a nominal fee should be sufficient to cover administrative expenses.

74. Concentration of Distribution Services.—It has been shown that the most costly item in connexion with the distribution of milk is the delivery service provided by the retailer for the convenience of the consumer. This question involves the wages cost in relation to the quantities of milk delivered per vehicle. In evidence it was stated that the quantities ranged from 80 to 180 quarts per round, or an average of 130, and that these figures are much lower than they were some years ago.

The reasons advanced for this decline were the large number of retailers operating, and wasteful overlapping in delivery from house to house. Abundant proof of this is indicated in the departmental survey referred to in paragraph 32. It cannot be doubted, therefore, that there is urgent need for the betterment of these conditions.

75. Block Delivery.—The block system of delivering milk is generally understood to be one in which compact areas are mapped out and allotted for the delivery of milk to the premises therein, as far as practicable in consecutive order. It aims at expediting deliveries and lowering the costs thereof by reason of the shorter distances over which milk would have to be hauled and the despatching of the vehicles loaded to their capacity.

Whilst the block system is undoubtedly ideal in these respects, a little consideration reveals the fact that it is only capable of organization and realization where there is complete monopoly control, whether by municipal or other corporate body, or by any form of private enterprise. It is necessary, therefore, to consider some other alternative.

76. Zoning of Deliveries.—In seeking a means of eliminating, as far as possible, wasteful overlapping in delivery, we have also examined the question of the zoning of areas for this purpose. In effect this is a compromise between the unrestricted methods of milk distribution at present in operation and block delivery. It involves limiting the number of retailers who may trade in a specified area, having due regard to the needs of consumers therein, and the elimination of surplus vehicles. Its objective is to reduce delivery costs whilst allowing reasonable competition amongst continuing retailers, and freedom of choice of retailer to the consumer.

We are of opinion that a scheme of zoning of milk-retailing areas would materially reduce costs of distribution, and that, although the organization of such a scheme would necessarily involve the fullest investigation into all existing retail milk businesses, together with equitable adjustments of delivery areas, it is one capable of application.

We therefore recommend that adequate power should be provided to organize, introduce, and enforce a system of zoning areas for the distribution of milk in the metropolis.

77. Hours of Delivery.—The question of hours of delivery in the retail milk industry is one that frequently came under notice during our inquiry. Evidence was given by the Secretary of the Melbourne Sub-branch of the Federated Carters' and Drivers' Union to the effect that in 1920 by agreement between the Union and the Victorian Milk Producers and Retail Dairymens' Association the practice of once a day delivery was adopted, the bulk of the milk being distributed in the early morning hours.

This system had been generally observed until the last few years when the advent of the milk hawker with his all day system of delivery caused many large retailers to extend their hours of trading.
The employees representatives strongly urged that the hours of delivery should be restricted to the morning the main reason advanced being that award rates and hours were often not observed when delivery was extended beyond that time. The majority of retailers also favoured a limit on the hours of delivery on the grounds that it would eliminate much undercutting of prices, and by reason of one delivery only being adopted would result in a saving in delivery costs.

Another aspect of the position and one which, in our opinion, is most important is that of supervision. To maintain a satisfactory system of control over the distribution of milk it is necessary to employ an efficient supervision staff. This staff would of necessity be largely increased if unrestricted hours of trading were allowed.

Having taken all these submissions into consideration, we are of opinion that some limit should be placed on the hours of delivery, and we recommend that those hours should not extend beyond 12 noon on week days and 10 a.m. on Sundays, provided, however, that exemptions be granted in the case of hospitals and public institutions.

78. Regulation of Retail Milk Prices.—The question of regulating the prices to be charged for milk sold by retail is of equal importance to the regulation of prices to be paid to producers. The one cannot well be considered without the other, nor can the position of the consumer be ignored in deliberating on these questions.

We are already assured, after the fullest inquiry, that the producer is in urgent need of a remunerative price for his milk, and have definitely recommended a price-regulating policy with the object of securing him that benefit.

There are greater difficulties, however, in the regulating of retail milk prices. The retailer is placed between the producer and consumer. He is required to provide expensive plant and equipment for the treatment and keeping of milk in accordance with the regulations, or in other ways to bear the cost thereof. He must also give the service demanded by customers, according to their several needs. Wages for employees must be paid in accordance with award rates. All these factors contribute to high general overhead and working costs, with the result that the retailer must conduct his business on a more or less fixed margin. Provided such margin is not excessive or unreasonable, it would not be equitable to compel the retailer to accept an appreciably narrower one, as would be the case if he were required to pay a higher price to the producer without a commensurate increased charge to the consumer. On the other hand, the passing of any increase in price to the producer on to the consumer may result in decreased consumption of milk.

In order to reach a conclusion in this matter, we have endeavoured to ascertain to what extent the demands of customers rise or fall, according to fluctuations in retail milk prices. Evidence was given by retailers which indicated that, apart from shrinkage attributable to loss of business from excessive competition, underselling, and the incursion of so much shop trade in milk, there is undoubtedly a certain falling off in demand in some sections of the community, owing to the current financial depression and the resultant lower purchasing power.

There was no evidence that in normal times a rise or fall in the retail price for milk caused any appreciable variation in demand by consumers, though it was stated that some consumers showed more concern about the prices than others, whilst continuing to take in the usual daily quantity of milk, irrespective of the prices paid.

We infer from this that consumers, generally speaking, accustom themselves to obtaining the average daily supplies considered necessary for their households, and that any reduction which may be made in the intake, as a result of higher prices, is of a temporary character, and is sooner or later followed by a return to normal daily consumption.

The problem of regulating retail prices for milk, so as to protect the interests of consumers, would be simplified if an immediate or early reduction in distribution costs can be effected. Indeed, it would probably solve itself, provided the saving were equitably utilized by all retailers to reduce the price charged to the consumer as well as increase the price to the producer.

From our examination of the present situation regarding the retail side of the milk industry, we are of opinion that some time must necessarily elapse ever under a progressive zoning system, or any scheme of consolidating milk businesses, before a material reduction in distribution costs can be effected.

We therefore deem it essential that provision be made for the regulation of a maximum price to be charged to the consumer, as well as the minimum price to be paid to the producer. The question as to whether it may be necessary to put the former provision into force at once might well be left to the decision of the proposed statutory authority after further investigation. It may be that until a considerable consolidation of retail businesses by purchase or through reduction of licences has been effected, the existing competition amongst retailers and produce-retailers will protect consumers from price exploitation following any increase in prices which retailers may be required to pay to producers.
79. Retail Business Mergers.—From inquiries made and information received from various sources there appear to be definite indications that several retail interests in the metropolis are actively endeavouring to effect a merging of existing retail milk businesses with the declared intention of reducing overhead and delivery costs, and improving the profitableness of such business.

These efforts will be of particular interest to producers and consumers. The extent to which merging may be possible is problematical. If successfully developed it indicates the possibility that, with the reduced competition for the purchase of his milk, the producer, in the absence of any statutory price regulating, may be placed at an even greater disadvantage in the future as regards prices than under existing wider competitive conditions.

From the consumers viewpoint such merging proposals, inasmuch as they aim at reducing the costs of distribution, may make possible a reduction in the retail price of milk. Again, however, unless power is provided to regulate the maximum retail prices, consumers may be placed in a position capable of exploitation.

Under adequate control provisions with regard to prices which are outlined in our Report, we are of opinion that the merging of retail milk businesses may be of material benefit to all interests concerned. In the absence of such control, however, the results might be to the contrary.

In expressing these views we desire to support the claim that retailers who adopt legitimate modern business methods, whereby they make possible a general reduction in distribution costs, are entitled to share in the financial benefits resulting from their enterprise.

CHAPTER 4.

TRANSPORTATION OF MILK.

80. General Position.—The question of milk transport is one on which much evidence was given during our inquiry, more particularly by producers, among whom there were strong differences of opinion as to the relative merits of transport by rail or road. In our opinion both systems are suitable, always provided that certain hygienic requirements are observed.

From the producers' point of view, two main factors must be considered, cost and efficiency. It will be readily recognized that transport charges are an important item in the dairy farmers' costs irrespective of whether supplies are forwarded direct to a retailer or to a country depot.

From an efficiency standpoint, the producer is even more vitally concerned, as upon him is placed the responsibility of delivering milk to the retailer in a wholesome condition. Under the conditions proposed for the certification of liquid milk producers, it will be incumbent upon such producers to safeguard the milk until delivery is taken by the carrier. From that stage it is necessary that certain requirements and conditions be observed by the carrier so that the producers' position may be protected.

81. Railway Transport.—The question of how much milk is forwarded to the metropolis by rail or road is not one of great concern in an inquiry of this nature. What is more important is the efficiency of the services offered. It may be taken for granted that the producer will choose the method of transport that is most convenient for his needs. As indicated in Part I. dealing with this phase of the industry, the Railway Department, by its action in prohibiting the transfer of milk from one suburban line to another, has deprived itself of certain trade. Many producers, however, who are supplying retailers on a direct route still continue to forward by rail. A number of the more distant country depots also prefer this method of transport.
It is claimed that rail transport has the advantage over the present method of road delivery in that during transit the milk is adequately protected from the direct rays of the sun, and that it is reasonably secure from contamination. On the other hand there may be mentioned the extra handling required both at the sender's and the receiver's end.

We are satisfied that the present method of rail transport is satisfactory provided every care is taken by producers and retailers to protect milk prior to despatch and after its arrival at the suburban station.

82. Road Transport.—Road transport on a large scale is of comparatively recent origin. The advent of commercial motor vehicles has enabled carriers to concentrate more closely on the business of milk collection, and to largely extend the area from which it may be drawn. Although road transport is, in many cases, in direct competition with the railways it would appear that the Railway Department, so far as liquid milk is concerned, cannot in many cases compete with direct road transport either in service or costs.

Whilst admitting that motor transport can provide a rapid and comparatively cheap service, we do not suggest that present conditions are satisfactory. As indicated in the review of the present position of the industry, the only regulations to which the milk carriers are at present subjected are the necessity for protecting the milk from the direct rays of the sun, and for keeping vehicles clean at all times. The former of these requirements is from our own observations very often not complied with.

83. Registration of Milk Carriers.—We are of opinion that all milk carriers should apply for a licence to transport milk and that the granting of a licence should be conditional upon the payment of a registration fee, and compliance with certain conditions and requirements, relating to the class of vehicles to be used, the routes to be travelled, the care of milk in transit (including the time occupied), the return of farmers' cans, and the furnishing of prescribed returns.

CHAPTER 5.

IMPROVED SERVICE TO THE CONSUMER.

84. Introductory.—In Part I. of our Report we have stressed the value of milk as a food, and compared the per capita consumption with that in the United States of America and certain countries in Europe. We have also quoted leading authorities on the human requirements in milk consumption in the hope that public interest will be awakened to the importance of milk in the diet, and that a stimulus will thus be given to increased consumption. A necessary means to this end, in our opinion, is improvement in the service to consumers. The measures we think essential to effect such improvement are dealt with in the succeeding paragraphs.

85. Grades of Milk.—Grading of milk for human consumption has been in operation in other countries for many years. The object of grading is to ensure the production and distribution of clean milk, which also complies with the law in regard to solids. The number of bacteria contained in a cubic centimetre of milk is the most reliable indication of whether it is clean or otherwise. Grades are accordingly fixed with as low a bacteria content as is compatible with reasonable hygienic standards being maintained, and the maximum number fixed per cubic centimetre must not be exceeded from production to delivery of the milk.
As outlined in Appendix "B," the Milk Supply Committee under Part III. of the Milk and Dairy Supervision Act 1928, recommended several grades for milk which, for reasons previously indicated, were not adopted. We believe that a progressive policy of grading should be adopted and therefore recommend as a first step in this direction that the following grades be established:

1. **Special Grade Milk for Infants.**—Raw or pasteurized—
   
   (a) Milk of this grade or designation shall be milk obtained from a herd or herds certified free from tuberculosis, mastitis, and abortion by the Chief Veterinary Inspector.
   
   Such milk shall be efficiently cooled to a temperature below 40° Fahrenheit at the place of production, and shall contain not more than 100,000 organisms per cubic centimetre by direct count, and not more than 25,000 organisms by plate count at any time from production to delivery to the consumer. There shall be no bacillus coli in one-tenth of a cubic centimetre.

   (b) All milk of this grade shall be delivered to the consumer in bottles sealed with an approved seal. Such seal shall be of the prescribed colour with the grade clearly shown thereon, with the name and address of the supplier, and the day of the week such milk is intended for delivery.

2. **Grade "A" Raw Milk—**

   (a) Milk of this grade or designation shall be milk derived from a herd or herds certified free from tuberculosis, mastitis, and abortion by the Chief Veterinary Inspector. Such milk shall not contain more than 1,000,000 organisms per cubic centimetre by direct count at any time from production to delivery to the consumer. There shall be no bacillus coli in one-hundredth of a cubic centimetre.

   (b) All milk of this grade shall be delivered to the consumer in bottles sealed with an approved seal. Such seal shall be of the prescribed colour with the grade clearly shown thereon, with the name and address of the supplier, and the day of the week such milk is intended for delivery.

3. **Grade "A" Pasteurized Milk—**

   (a) Milk of this grade or designation shall be obtained from herds physically examined by an officer of the Department of Agriculture. Such milk shall be efficiently pasteurized, and shall contain not more than 100,000 organisms per cubic centimetre by plate count at the time of delivery to the consumer, and at no time from production to delivery shall it contain more than 1,000,000 organisms per cubic centimetre by direct count.

   (b) All milk of this grade shall be delivered to the consumer in bottles sealed with an approved seal. Such seal shall be of the prescribed colour with the grade clearly shown thereon, with the name and address of the supplier, and the day of the week such milk is intended for delivery.

It is anticipated that the greater volume of milk required for ordinary household purposes would be Grade "A" pasteurized, and that apart from the special grade for infants, the only raw milk sold would be that produced mainly by those who retailed their own milk and who, with few exceptions, have no facilities for pasteurization, but who would, of course, require to have their herds tuberculin tested.

In our opinion these grades will materially improve the milk supply, thereby benefiting the consumer, and, as they are practicable, we recommend their early adoption.

86. **Pasteurization of Milk.**—No inquiry into a milk supply would be complete without dealing with the important question of pasteurization. We accordingly gave the matter full consideration. Two main objectives are sought by this process of treating milk. The first is the destruction of harmful bacteria in milk which may be derived from a cow affected with tuberculosis, mastitis, or other disease, or from other sources. The second is the improvement of the keeping quality particularly in the case of milk produced at considerable distances from the distribution centre.

Evidence given by medical and veterinary experts strongly supported the pasteurization of milk as the only practicable means of ensuring a general supply of wholesome milk by reason of the difficulties and cost involved in producing a safe wholly raw milk supply for such a large community as the metropolis.
The danger from raw milk through infection from human agency was stressed in the medical evidence, mention being made of two outbreaks of typhoid in the metropolitan area, one in 1923, and the other in 1931, which were traced to infected milk.

The position in regard to the danger from milk infected with the organism of bovine tuberculosis is happily more satisfactory in connexion with the milk supply in Melbourne than with that of other large cities, the percentage of farm milk so infected having proved, after a most exhaustive bacterial survey, to be 1.7 compared with 8 to 13 per cent. in certain large cities in England. The fact that the comparison is so favorable does not argue that pasteurization is unnecessary.

We were informed that objection to pasteurization is raised by some medical authorities on the grounds that the nutrient value of milk so treated is lowered through the destruction of vitamin "C" (known as the anti-scorbutic vitamin). Since, however, according to the expert witnesses, this vitamin does not abound particularly in milk, whereas the other essential vitamins do, and are not harmed from the process, this objection would not appear to have much weight.

Some opposition to pasteurization has been put forward in the fear that it would conduce to a slackening in the supervision necessary to provide clean wholesome milk. No advocate of pasteurization, however, subscribes to any lowering of hygienic standards required for the production and distribution of milk by reason of such process of treatment.

From the consumers' standpoint, according to evidence given by some retailers, exception is taken by individual consumers to being supplied with pasteurized milk on account of the absence of the "cream line." It is not realized that the milk fat is merely distributed through the body of the milk by the process and that the milk is uniform in value as a food which is not so with milk in which the "cream line" is shown.

The cost has also been advanced as an obstacle to the general application of a policy of pasteurization. Varying estimates of cost were submitted in evidence. These ranged from 3d. to 2d. per gallon according to the quantity of milk treated and the capacity of the plant. It was stated in evidence, however, that the general practice amongst depot proprietors is to charge retailers an additional 1d. per gallon on the wholesale milk prices when pasteurized milk is supplied. Since this only amounts to ½d. per quart it probably explains why many retailers make no difference in their prices to consumers for raw and pasteurized milk. The cost factor, therefore, does not have much bearing on the price of milk to the consumer. In any case we believe that the costs could be appreciably reduced by the development of a general policy of pasteurization since this would result in concentration of plants and greater efficiency.

Provision would have to be made for exempting certain grades of milk from pasteurization more especially where it is desired to obtain raw milk for the feeding of infants. So far as the general supply is concerned, however, we recommend that all milk other than that derived from herds certified by competent authority as free from tuberculosis, mastitis, abortion disease, &c., should be pasteurized.

87. Bottling of Milk.—In a survey of the distributing service in connexion with the milk supply, we have gone fully into the question of the retailing of milk in bottles. Evidence was taken from a number of retail distributors both on the costs of such service and the demand for bottled milk by consumers. Evidence was also given by public health authorities as to the necessity for delivering milk in bottles to ensure a maximum of safety to the consumer from contamination and deterioration of milk subsequent to production.

The evidence from retailers was not unanimous on the question. Some were opposed on the ground of the added cost to the consumer, which tended to curtail consumption; and certain individual retailers insisted that there was no greater protection to the consumer by reason of the bottling of milk than with loose milk, despite the fact that the latter was exposed when dipped from door to door into receptacles supplied by the customers. Notwithstanding these objections, however, retailers who opposed the bottling policy admitted that they were retailing bottled milk as well as loose milk, giving as their reasons that this was in compliance with the demands of their customers. In some instances where this was being done no difference in price was charged, and in others an additional 3d. to 1d. per quart was charged for bottled milk as against loose milk delivered by the same retailer.

In support of the assertion by these retailers that delivery of milk in bottles gave no greater protection to the consumer than loose milk, it was stated that objectionable practices were adopted by unscrupulous retailers such as filling bottles from a milk cart in the street, as also the filling of customers' unwashed bottles left at the door for collection, or unlawfully acquired from other retailers.
We believe, however, from information supplied by the Department of Agriculture that these objectionable practices are by no means general, and that if a policy of compulsory bottling were adopted there would be no difficulty in devising legislation to prevent abuses.

The evidence tendered by public health authorities was definitely in favour of a policy of retailing the whole of the milk supplied in bottles or other approved containers.

It was pointed out to us that, with assured clean production and delivery in bulk in a satisfactory condition to retailers, there were many points at which contamination and deterioration of the milk could take place subsequently. It, therefore, cannot be doubted that, with proper treatment, and the filling and sealing of the milk in sterilized bottles on the premises immediately after such treatment, no contamination can take place between dairy and customer.

88. Public Demand for Bottled Milk.—As regards the public demand for milk retailed in bottles, from figures furnished by the Department of Agriculture, out of an estimated daily consumption of 257,500 quarts for the year 1931-32 in the metropolitan area 62,177 quarts were retailed in bottles, representing 24.1 per cent. of the total. This percentage is now largely increased owing to the fact that the majority of milk shops are restricted to the sale of bottled milk.

89. Cost of Bottling Milk.—The actual cost of bottling is difficult to arrive at by reason of the fact that, in practically every instance, where a retailer is selling bottled milk he is also selling loose milk. The cost, however, has been set down by different retailers at from 2½d. to 2¾d. per gallon inclusive of all costs above that for delivering loose milk. This cost is largely influenced by the replacement of bottles owing to the losses from non-returns.

It will thus be seen that since bottled milk is mostly delivered in pints with a small proportion of half-pints, the additional cost to the consumer for milk supplied in bottles is a relatively small fraction on a pint basis.

To protect the retailer who has his name or company embossed on his bottles from the unlawful use thereof by other retailers, and at the same time to assure the consumer that there is no misrepresentation, it should be made an offence for any retailer to use bottles embossed or otherwise branded with the name of another retailer.

We, therefore, recommend that, as soon as practicable, the retailing of all milk in bottles which have been sterilized, automatically filled, capped, and sealed on approved premises, be made compulsory, special provision being made for the supply of milk to hospitals, cafes, hotels, restaurants, &c., with bulk milk where required, in approved sealed containers.

90. Increasing the Consumption of Milk.—Reference has already been made in Part I. to the necessity for increasing the consumption of milk. Medical opinion is so unanimous on the virtues of milk as a food that its nutrient value need not be further stressed.

The economic effect of an increase in the per capita consumption of milk will be readily realized. For instance, if the average daily consumption were increased from half pint to three-quarters of a pint, the requirements of the metropolis would be increased by 32,000 gallons per day, thus materially improving the financial position of both producer and retailers.

Many retailers have recently adopted the practice of advertising on the screen at picture theatres. So far as the individual retailer is concerned this practice may be of some benefit, but to secure a general increase in milk consumption some combined effort by health and education authorities, producers, and retailers is required.

An example of what can be done in this way is furnished by the efforts of the Metropolitan Milk Council in arranging for supplies of milk to various State Schools.

With the introduction of a fully supervised system of grading the public will be assured of a supply of wholesome milk and will, in our opinion, be more ready to take notice of any efforts to stimulate consumption.

This is a matter which should receive the attention of the statutory authority, and we recommend that that body, if and when appointed, should co-operate with the interests already referred to with the view to launching a publicity campaign to instruct the public as to the value of liquid milk.
91. Health Factors in Milk Distribution.—In paragraph 72 we have referred to the necessity for applicants for licences to produce certificates of health. As a further important means of improving the service to consumers as well as safeguarding the milk supply from contamination, we have considered the question as to whether it is possible to devise practicable measures to ensure that the health of all persons engaged in the handling of milk is satisfactory.

It may be in the nature of a counsel of perfection to suggest that all persons handling milk from the production to the consumption point should be medically examined periodically and required to produce satisfactory certificates as to health. No doubt such a policy would be difficult to apply in the case of producers generally, but we see no insurmountable obstacle in applying it to those who have to handle milk between the reception point and delivery to the consumer.

With pasteurization carried out there should be the greatest care exercised in preventing re-contamination before delivery is effected. We therefore suggest the adoption of a policy of medical examination of all employees and other persons engaged in handling milk in depots, factories and dairies, and in delivering milk to the consumer.

92. Standardization of Milk.—This may be described as a process whereby milk with a high or low butter-fat content is subjected to the extraction or addition of cream, as the case may be, but so as to keep it within the Pure Food Standard for milk.

It is well known that variations occur in butter-fat percentages in milk produced during the flush period in the spring months as compared with later stages of lactation as also between morning and evening milkings. For these reasons some authorities openly advocate standardization with the object of ensuring comparative uniformity in nutritive and commercial value during all periods of the year.

The subject of standardization of milk was frequently referred to in evidence given before us. Producers generally and many retailers were definitely against such a process. They claimed that they were well able to supply milk up to the legal standard in the spring months without having to resort to standardization and therefore there ought to be no necessity for anyone else in the liquid milk industry to do so.

Objection was raised by the producers to standardization by the extraction of cream when the butter-fat content of milk is high, on the grounds that those who adopted the process were enabled to obtain additional profits in their businesses from the sale of the cream which cannot be regarded as legitimate.

Although we had no direct evidence on the subject, there is little doubt that in addition to any reducing of the butter-fat content in milk that may be practised by some producers and retailers, the advent in recent years of country milk depots and factories equipped with plant for separating milk and manufacturing butter and cheese, has afforded opportunities of practising standardization as a regular policy. Thus the owners are in a position to profit at the producers expense from the sale of the extracted cream whether sold as such or manufactured into butter.

Despite the views of those who advocate it we cannot regard standardization as other than a pernicious policy. Besides the profit-earning aspect of the matter it furnishes a potent means of undercutting the price of milk to the producer and consumer.

It is further most objectionable from the consumer’s standpoint in that the value of the milk as a food is not only reduced but there is also the likelihood of the grade being inferior by reason of an increase in the bacterial content during the process of cream extraction and replacement by skim milk.

We regard quality and grade, in addition to compliance with the Pure Food Standard, as matters of paramount importance in a liquid milk supply. For these reasons and because of the objection previously referred to, we are definitely opposed to any policy of standardization other than such bulking of milk collected from various certificated milk producers as is necessary for handling and treatment, and recommend that legislation be enacted to prohibit it.
SUMMARY OF RECOMMENDATIONS.

93. A Summary of the Recommendations made under this Part is as follows:

1. That a scheme of re-organization of the supply and distribution of milk to the metropolis be effected without delay ........................................ 50
2. That legislative provision be made for the registration of Certificated Liquid Milk Producers ......................................................... 53
3. That a higher scale of fees be paid by Certified Producers .................. 53
4. That Producer-retailers be included in certifying scheme ...................... 54
5. That a Statutory Authority be immediately appointed for the regulation of prices to be paid to producers ........................................ 62
6. That provision be made for the fixing of contract terms governing the purchase of milk from producers ........................................ 63
7. That provision be made for the vesting of milk supplies to the metropolis in the Statutory Authority .............................................. 64
8. That the proposed Statutory Authority have power to determine the number of retail licences required and to reduce same .................... 68
9. That the transfer of licences be under the control of the proposed Statutory Authority ......................................................... 69
10. That provision be made for the payment of compensation when licences are cancelled in accordance with the policy of reduction ................. 70
11. That the Statutory Authority be given power to strike a levy on retailers for the establishment of a compensation fund ........................ 70
12. That licences for dairies and milk shops be separately defined .............. 71
13. That all applicants for retail licences be required to produce satisfactory personal references and submit an approved financial surety ........ 72
14. That the Statutory Authority be given power to cancel licences of retailers found guilty of certain offences ........................................ 72
15. That roundsmen (milk carters) be subject to registration .................... 73
16. That the Statutory Authority be given power to introduce a system of zoning areas for the retail distribution of milk ............................ 76
17. That the hours for delivering milk in the metropolis not extend beyond 12 noon on week days and 10 a.m. on Sundays .............................. 77
18. That provision be made by the Statutory Authority for the regulation of a maximum price for milk to be charged to the consumer ............... 78
19. That provision be made for the licensing of milk carriers .................... 83
20. That grades of milk be established ............................................. 85
21. That all milk other than that from herds certified free from certain diseases be pasteurized ....................................................... 86
22. That all milk be sold in bottles ................................................ 87–89
23. That a Publicity Campaign be launched with the view to increasing the consumption of milk ....................................................... 90
24. That all persons engaged in the treatment, handling and distribution of milk after production be medically examined .......................... 91
25. That legislation be enacted to prohibit the standardization of milk ........ 92
PART III.

Measures Proposed for Giving Effect to the Suggested Re-organization and Future Control of the Liquid Milk Industry as Applied to the Metropolis.

CHAPTER 1.

PROPOSED FORM OF STATUTORY AUTHORITY FOR CONTROL OF THE LIQUID MILK SUPPLY.

94. Introductory.—In the opening Chapter of Part II. of our report we have stressed the urgent necessity for re-organization and control of the milk supply to the metropolis in its economic aspect, and have included in the measures recommended in subsequent paragraphs to effect this purpose the creation of a Statutory Authority. It is now necessary to consider what form such Statutory Authority should take and its composition, &c. This constitutes one of the most difficult problems we have had before us, inasmuch as the establishment of a Statutory Authority under new legislation relating to the milk supply will inevitably affect the present administration of the Milk and Dairy Supervision Act.

95. Earlier Attempts to Create Authorities to Control the Milk Supply.—In 1926 a private Bill was introduced in the Legislative Council to provide for the supply, treatment and distribution of milk for the metropolitan area being vested in the Council of the City of Melbourne, and for the establishment by the Council of depots and plant for the treatment and sale of milk and the manufacture of dairy produce from surplus milk. The Bill also included provision for the Council to issue licences for the sale of milk. The Bill, however, was rejected.

A Bill cited as the Milk Board Act was introduced in the Legislative Assembly in 1927. This measure provided for the appointment of a Milk Board with similar representation to the present one appointed under the Milk Board Act 1932. The principal functions of this Board were to inquire into and report to the Governor in Council what should be the minimum rate per gallon payable to producers of milk for the metropolis, and the maximum difference between such rate and the rate per gallon of the retail selling price of milk sold in the metropolis. This Bill did not become law.

Following on the rejection of the Milk Board Bill of 1927 a further measure called the Metropolitan Milk Supply Act 1927 was submitted to Parliament. The objects of this Bill were in many respects similar to the 1926 Bill referred to above, in that provision was made for Councils of the Municipalities comprising the metropolis to take over the buying and treatment of milk for sale to the exclusion of existing retailers except those licensed by the Councils to sell milk. As in the case of the two preceding measures, this Bill was not passed by Parliament.

96. Control by Municipal Authority.—Notwithstanding the fate of the two Bills providing for municipal control of the milk supply, we have seen fit, in view of the power already given under the existing legislation for Councils of Municipalities in the metropolis to establish milk depots and to treat and sell milk by wholesale and retail, to consider first whether a scheme of complete municipal control would be practicable and successful in its application for effecting the necessary reform and re-organization of the milk supply.

During our inquiry reference was frequently made to municipal control as has been established for many years in Wellington, N.Z. The scope of our inquiry did not permit of our seeing this system in operation, but from the limited evidence before us and from literature made available from departmental sources, we have no reason to doubt that the application of municipal control of a milk supply as exemplified in Wellington has been successful. It is pertinent, however, to inquire why other cities in New Zealand which are, doubtless, comparable with Wellington in some degree or other have not adopted a similar scheme. So far as we have been able to ascertain none has done so.
Assuming the success of the Wellington system, it is problematical whether it could be applied to the milk supply of greater Melbourne. Wellington is a compact city with one Municipal Council and a population of 110,000, with a daily milk consumption of 29,200 quarts derived from areas in comparatively close proximity. Melbourne, including suburbs, has 38 civic bodies, and has a population of 1,030,000, whose daily consumption of milk is 257,500 quarts provided from many areas, some of which are long distances from the city.

It is difficult to see, therefore, how uniform control and smooth working could be secured under those circumstances even if the several municipal bodies concerned were willing to undertake control. The difficulty would, no doubt, be lessened if a Greater Melbourne Council were established; but how is the unsatisfactory position disclosed in this Report to be met in the meantime?

No evidence was forthcoming of any desire by Municipal Councils to undertake control.

After due consideration of these factors, we are of opinion that a policy of municipal control in connexion with Melbourne's milk supply is not practicable of application under present conditions.

97. Joint Control by the Department of Agriculture and a Milk Board.—Having formed a favorable opinion of the departmental administration of the Milk and Dairy Supervision Act 1928, we have examined the practicability of providing legislation to be administered by a Statutory Authority in the form of a Milk Board to deal with the milk supply in its economic aspect as apart from that of public health.

Provided the functions of such a Board were limited to dealing with matters relating to supply and demand for milk and regulating prices, there would be no difficulty in devising separate legislation for these purposes, the Department of Agriculture continuing to administer the Milk and Dairy Supervision Act as heretofore.

It has been shown, however, that reform and stabilization of the milk supply are urgently required, and that a scheme involving new legislation of a comprehensive character is necessary to bring them into effect. Amongst the most important measures suggested are the limitation of licences and enforcement of a zoning policy for the retailing of milk. Under the existing legislation as indicated previously the issue of licences is contingent on maintenance of proper sanitation as well as suitability of premises, plant, &c., and a licence is refused or not renewed, as the case may be, if there is any serious departure from these conditions. It appears inevitable, therefore, that there would be confusion if the issue of licences continued to be the function of the Department of Agriculture and a Milk Board were to have power to cancel any that were deemed surplus to requirements. This difficulty would not be obviated by one or the other authority dealing with all matters affecting licences.

Even in other respects were there attempts made to apportion the duties and responsibilities of the two authorities so that one regulated the milk supply in relation to public health and the other the economic aspect, a system of dual control would be set up, the disabilities of which are such as to need no further comment.

We have therefore reached the conclusion that both these phases of the milk supply should be combined under the control of one authority, and inasmuch as the issues involved are of such importance as to require the closest attention and concentration to achieve the desired results, we recommend that the control should be vested in a Milk Board as the most appropriate form of Statutory Authority.

98. Composition of the Milk Board.—Considerable importance attaches to the composition of the Milk Board. Whilst the evidence heard during our inquiry definitely supported the proposal for such a body, there was a difference of opinion as to its composition.

The producers, as well as many retailers, were in favour of a Board comprising five (5) persons, viz.:- Two representatives of producers, one representative each of distributors and consumers, with an independent chairman. Some of the retailers preferred a Board of three (3) independent persons with no financial interest in the milk industry.

The case advanced for a representative Board of five (5) persons is that it is considered essential for the members representing producers and distributors to have first-hand knowledge and experience of the business of milk production and distribution respectively, and to be actively engaged therein, and since the price policy is also involved, representation of consumers should be included.

With an independent Board of three (3) it was claimed that a more strictly judicial attitude would be adopted in dealing with various matters than would be the case with a representative Board. Whilst being impressed with the latter viewpoint, we cannot ignore the possibility that an independent Board might require considerable time to become sufficiently familiar with the various involved phases of the milk industry before exercising its judgment. There is also the possibility that its decisions would not be accepted with the same readiness as those given by a representative Board.
Having considered the merits of both proposals, we are of opinion that a Board representative of the chief interests concerned is the more suitable, and that it should comprise the following:

The Chairman, who should have an expert knowledge but no financial interest in the production, treatment, or distribution of milk, and who is a capable administrator:

Two (2) representatives of producers of milk who are themselves supplying milk to the metropolis:

One (1) representative of distributors of milk who is the holder of a licence in respect of a dairy and is a distributor of milk to the metropolis;

One (1) representative of consumers of milk in the metropolis.

99. Tenure of Appointment.—As the Chairman will be required to devote the whole of his time to the administration and control of the organization which is provided for in this Report, as well as directing the proceedings of the Board, it is essential, in our opinion, that the person selected for the position should be appointed permanently in order to give the security of tenure which we consider advisable for the full development and continuity of the future policy of regulating and controlling the milk supply. The salary attaching to the appointment should also, in our view, be commensurate with the importance and extent of the undertaking he will have charge of.

The tenure of appointment of the other members of the Board, it is suggested, should be three years, to ensure continuity of policy and administration, and since these members would not be required to give their whole time to the business of the Board it is proposed that they be remunerated by the payment of such fees per sitting of the Board together with travelling allowances at such rate as the Governor in Council may determine.

Whilst it is recognized as necessary to limit the total sum which may be expended in fees for sittings in any one year, it will probably be necessary to make special provision for a larger expenditure in this direction at least during the first year, in view of the extent and nature of the work which will devolve on the Board in putting the scheme of re-organization and future regulation and control of the milk supply into operation.

CHAPTER 2.

LEGISLATIVE REQUIREMENTS.

100. Introductory.—Having definitely reached the conclusion that a Milk Board should be appointed to control the production and distribution of milk to the metropolis, it is necessary that we indicate the legislative requirements necessary to enable the Board to carry out its duties.

101. Effects on Existing Legislation.—Some of our recommendations could be given effect to under Parts II. and III. of the Milk and Dairy Supervision Act, but for the majority it will be necessary either to amend existing legislation or to provide the necessary powers in a new measure. To give effect to proposals under Part III. of the present Act would necessitate the re-appointment of the Milk Supply Committee. This, in view of our recommendation for the appointment of a Milk Board, would be superfluous.

102. Provision for New Legislation.—We are of opinion that the position would best be met by the introduction of a new measure containing provisions for the enforcement of the whole of the recommendations made in our report and also for the inclusion of such portions of the Milk and Dairy Supervision Act 1928, relating to the supply of milk to the metropolis, as are considered necessary.

In support of this recommendation we submit the following outline of a "Milk Board Bill."

103. Milk Board Bill—

Part I.—Preliminary.
  Definitions, references to other Acts, &c.

Part II.—Milk Board: Officers, &c.

Part III.—Powers and functions of the Board.

Part IV.—Financial.

Part V.—Supplementary.
104. Part I. Preliminary—

Citation: References to Milk and Dairy Supervision Act 1928, Health Act 1928, Milk Board Act 1932. Interpretation, &c.

105. Part II. Milk Board—

(a) Appointment of Board; composition, &c. (paragraph 98).
(b) Period of appointment (paragraph 99).
(c) Remuneration (paragraph 99).
(d) Appointment of officers of the Board.

106. Part III. Powers and Functions of the Board—

(a) Regulation and control of the supply and distribution of milk and cream to the metropolis (paragraph 97).
(b) Powers of the Authority under the Milk and Dairy Supervision Act 1928, Parts II. and III., in respect of all matters relating to the supply and distribution of milk to the metropolis (paragraph 97).
(c) Devising economic methods for the collection, transportation, treatment and distribution of milk (paragraph 97).
(d) Expenditure of moneys out of funds of the Board in devising means for encouraging the consumption of milk, publicity, &c. (paragraph 90).
(e) Power to determine the number of licences which may be issued for the retailing of milk (paragraph 68).
(f) Provision for compensation in respect of licences cancelled as surplus to requirements (paragraph 70).
(g) Provision for lodgment with Board of fidelity bond or other approved form of surety by retailers (paragraph 72).
(h) Power to demand personal qualifications from applicants for licences (paragraph 72).
(i) Power to cancel licences for certain offences (paragraph 72).
(j) Registration of certified producers of milk for consumption as liquid milk (paragraph 53).
(k) Power to regulate milk prices (paragraphs 62 and 78).
(l) Fixation of contracts for supply and purchase of milk (paragraph 63).
(m) Vesting of ownership of milk in the Board (paragraph 64).
(n) Power to organize, introduce, and enforce zoning of milk delivery (paragraph 76).
(o) Registration of milk carriers (paragraph 83).
(p) Registration of roundsmen (paragraph 73).
(q) Registration of retail milk delivery vehicles (paragraph 114).
(r) Power to demand information, inspection of books, accounts, invoices, agreements, receipts, &c., and to take copies.

107. Part IV. Financial—

(a) Provision for advance from the Treasurer of a sufficient sum for use of the Board at the commencement of the Act and for repayment.
(b) Establishment of a Milk Board Fund, and administration of the Fund.
(c) Power to levy for purposes of compensation (paragraph 70).
(d) Power to borrow moneys.
(e) Balancing of books, and audit.

108. Part V. Supplementary—

(a) Amendments in the existing legislation; licensing, &c.
(b) Penalties.
(c) Power for the Board to make inquiries; and procedure.
(d) Power to make Regulations and By-laws with regard to—

(i) The methods to be adopted in the production, treatment, and distribution of milk and cream.
(ii) Licence-fees and licensing.
(iii) Levy contributions.
(iv) Requiring books, documents, &c., to be kept and produced.
(v) Forms for use.
(vi) Application for compensation.
(vii) Statements and accounts to be prepared by the Board, and audit.
(viii) Any matter or thing required to be prescribed.
109. **Staff Changes.**—Having set out our recommendations for the creation of a Milk Board to administer the proposed legislation relating to the milk supply, we must now consider staff arrangements to provide the necessary services.

We have estimated that 2,000 dairy farms with approximately 40,000 milking cows, and, based on present figures, 2,300 premises from which milk is sold by retail, will require supervision under the re-organization scheme. Since this service, as well as office duties connected with the new administration proposed, will devolve on the Board's officers, the Department of Agriculture will be relieved of the responsibility and cost of supervising the milk supply to the metropolis. It should, therefore, be practicable to reduce the departmental staff and expenditure by transferring or seconding the appropriate supervisory and clerical officers for service with the Milk Board, with the saving of any rights to which they may be entitled as officers in the Public Service. Their salaries and expenses would, of course, be paid by the Board during their service therewith. Any other costs arising out of the transfer of these officers, together with that for any additional officers that may be required to carry out the provisions of the proposed new legislation, would be borne by the Board.

The proposed transfer of staff does not include Veterinary Officers for supervision of the health of the dairy herds. We think it is practicable to make satisfactory arrangements for such veterinary services being rendered by departmental officers when required, thus avoiding duplication.

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**CHAPTER 3.**

**LICENCE AND REGISTRATION FEES.**

110. **Introductory.**—A matter of paramount importance to enable the scheme outlined in this Report for the re-organization and future regulation and control of the milk supply to the metropolis to be put into operation effectively is the provision of adequate revenue. Under this scheme the whole of the costs of administration must be borne by the Statutory Authority to be created and, therefore, the necessary revenue for that purpose will have to be provided by the liquid milk industry itself.

We have been informed that the revenue from licence-fees in respect of dairy farms, factories, and dairies contributes less than half the cost of administration of the *Milk and Dairy Supervision Act* 1928, the balance required being provided from Consolidated Revenue. Provision must, therefore, be made for the licence-fees to be increased. We think this revenue should also be supplemented by charging fees for the registration of milk carriers, roundsmen, or milk cart drivers and vehicles.

111. **Licence-Fees for Producers.**—In paragraph 53 of our report we have suggested that higher licence-fees should be paid by producers under the proposed policy of certification for the production of milk for sale within the metropolis. We consider this is warranted by reason of the improved position in which producers will be placed under such a policy, and of the closer and more regular supervision which will be necessary to ensure that the conditions governing the issue of certificates are observed and maintained.

We therefore recommend that in lieu of the present fee of 6d. per cow an annual fee not exceeding £1 should be payable in respect of premises, and a further annual fee computed at a rate not exceeding 1s. per cow on the average number of cows milked in seven consecutive days.

112. **Licence-Fees for Factories and Depots.**—The present fee for a licence in respect of a factory under the *Milk and Dairy Supervision Act* 1928 is £2. We are of opinion that, in view of the increasing importance of the place occupied by factories and depots in the purchase and treatment of milk for distribution in the metropolis, the licence-fee should be increased to £5.

113. **Licence-Fees for Retailers.**—We have suggested that Dairies and Milk Shops should be separately defined, and that the licensing of each should be governed by different conditions.

Not only is the present scale of fees for retail premises inadequate, in our opinion, to meet the costs of administration, but it is also inequitable by reason of the insufficient variation in the fees payable according to the class of premises and volume of business conducted thereon. Allowance must also be made for the reduction in the number of premises which will follow on the adoption of a zoning policy.

We therefore recommend that the scale of fees should be amended to provide that the amount payable in respect of a milk shop or house trade dairy should be such sum as is prescribed but not exceeding £3, and in the case of a dairy from which milk is delivered to the premises of the consumer such sum as is prescribed but not exceeding £5, plus an additional sum computed at a rate not exceeding 1/16d. per gallon on the milk purchased for resale.
114. Registration Fees for Retailers' Vehicles.—In view of our recommendation that all vehicles used by retailers in the delivery of milk to the premises of consumers be registered for purposes of identification, we suggest that an annual registration fee of £1 per vehicle be also charged.

115. Registration Fee for Milk Carriers.—With regard to the development of road transport for the delivery of country milk to the retailer in the metropolis, we have recommended that the carrying of milk by road should be regulated and to this end have suggested that milk carriers should be registered with the Statutory Authority. Since this policy will necessarily involve special supervision, we suggest that the cost thereof would be met by imposing an annual registration fee of £1 per vehicle.

116. Registration Fees for Roundsmen.—Having considered it advisable that roundsmen or employees of retailers who deliver milk to consumers' premises should be registered, we recommend that an annual registration fee of 5s. be charged for each person so employed.

117. Costs of Administration.—We are of opinion that the licence and registration fees suggested in the preceding paragraphs together with the additional gallonage charge recommended in paragraph 113 will provide sufficient revenue to ensure that the costs of administration of the proposed Milk Board will be borne by the industry itself, and that there will be no charge upon consolidated revenue as is the case at present.

CHAPTER 4.

CONCLUSION.

118. General Observations.—Having completed our Report in accordance with the terms of reference, we now desire to add some general observations in conclusion.

So far as we have been able to ascertain, this appears to be the first occasion on which a comprehensive and detailed survey has been made by a Board created under an Act of Parliament in regard to the economic aspect of the Milk Supply to Greater Melbourne. In the absence of such an investigation, it is doubtful whether the many involved phases of the milk supply could have been fully realized, and the difficulties of placing it on an improved footing appreciated.

Our inquiries have furnished us with ample proof of the urgent need for re-organization and stabilization, and we are confident that the scheme outlined will achieve these ends. We deem it advisable, however, to point out that it is hardly to be expected that such scheme, if adopted, can be made fully effective for a considerable time after it has been put into operation.

Several of the changes suggested will necessarily require further close investigation by the proposed Milk Board before they can be made operative. It must also be realized that a scheme of re-organization must not disorganize by reason of its abrupt introduction and enforcement. This has a special application to so important and vital a service as a milk supply to such a large community as that of Greater Melbourne.

Despite the difficulties which will be encountered, we have no reason to doubt that, with the willing co-operation and interest of all concerned, the scheme we have submitted will, in due time, result in the much desired improvement in the milk supply to the metropolis.

119. Acknowledgments.—During the course of our inquiry we were greatly assisted by the several organizations interested in the Milk Supply, as well as many individual producers, distributors, milk depot proprietors, and others.

In particular we desire to record our appreciation of the services rendered by R. A. James, Esq., Secretary of the Metropolitan Milk Producers Association, in arranging for evidence from producers at the various centres where the Board held sittings, also for evidence in person, and the submission of data, estimates, &c.

In like manner we were much indebted to J. Shinkfield, Esq., Secretary of the Victorian Retail Dairymen's Association, in the arrangements made for evidence from distributors, and for collecting valuable data submitted in evidence.

We also desire to acknowledge the assistance given by L. Parry, Esq., Secretary of the Retail Dairymen's Defence League, and representatives of the Federated Carters and Drivers Union.

On matters relating to milk hygiene we were most fortunate in having the eminent services of Dr. J. Dale, Medical Officer to the City of Melbourne; Dr. H. N. Featonby, District Health Officer, Public Health Department; Dr. J. A. Gilruth, Council for Scientific and Industrial Research; and Dr. H. E. Albiston of the Veterinary School, University of Melbourne, who is in charge of the Milk Laboratory established under the Milk and Dairy Supervision Act.
We also desire to acknowledge our indebtedness to the Department of Agriculture in placing the services of Mr. D. Rutledge, Senior Supervisor in charge of the Metropolitan Milk Area, and other officers at our disposal. Mr. Rutledge rendered exceedingly valuable service in collecting and furnishing important data relating to the milk supply, and in arranging for visits of inspection to dairies, milk depots, &c.

ADDENDUM.

120. We wish to refer particularly to the excellent service given by Mr. M. H. Rankin of the Department of Agriculture. In his capacity as Secretary to the Board, Mr. Rankin was entrusted with the exacting and onerous task of making all arrangements for the sittings of the Board, appointments for witnesses, the collection of files, and preparation of statistical matter, the sifting of evidence covering upwards of 1,700 pages of transcript, and generally assisting in a large measure in the drafting of our Report.

In the discharge of these duties, Mr. Rankin displayed ability and zeal of an order which merits the highest commendation and our best thanks.

We have the honour to be,

Sir,

Your Excellency's obedient servants,

E. A. KENDALL, Chairman.
E. G. FINCH
W. J. McVEIGH Members.
J. T. PACKER
A. V. WOOD

M. H. RANKIN, Secretary.

Melbourne, 28th August, 1933.

FURTHER ADDENDUM.

121. As members of the Board having no direct association with the Department of Agriculture, we have pleasure in recording our keen appreciation of the specially valuable services rendered by Colonel E. A. Kendall, C.M.G., B.V.Sc., Chief Veterinary Inspector and Head of the Live Stock Division (Stock and Dairy Supervision) of the Department of Agriculture.

As Chairman of this Board, Colonel Kendall readily made available at all times departmental officers, official records, and technical information when required. His complete concentration during the whole of this inquiry, and his wide knowledge of all branches of the dairying industry very materially assisted in the compilation of this comprehensive Report.

E. G. FINCH Members.
W. J. McVEIGH
J. T. PACKER
A. V. WOOD
APPENDIX A.

REGULATIONS UNDER THE MILK SUPPLY ACT 1922.

(Published in the Government Gazette of the 23rd January, 1924.)

At the Executive Council Chamber, Melbourne, the twenty-second day of January, 1924.

Present:

His Excellency the Governor of Victoria.
Mr. Lawson Mr. Goudie
Mr. Allan Mr. Wettenhall.
Dr. Argyle

WHEREAS by section 15 of Part I. of the Milk Supply Act 1922 it is enacted that the Governor in Council, on the recommendation of the Milk Supply Committee, may, by Order published in the Government Gazette, make Regulations for the purpose therein mentioned and generally for the carrying into effect the provisions of the said part of the said Act: Now therefore His Excellency the Governor of Victoria, with the advice of the Executive Council thereof, doth by this Order, on the recommendation aforesaid, make the following Regulations (that is to say):

1. These Regulations may be cited as the Milk Supply Act 1922 Regulations 1924.

2. Interpretation—

"Bottled milk" means milk sold in glass, metal, or other approved containers.

"Consumer" means any person, whether as principal or agent, directly or indirectly receiving milk from a dairy-farmer, depot, or dairy, intended for consumption by himself or another.

"Dairy-farmer" means any person who holds a licence for a dairy farm issued under the Dairy Supervision Act for premises upon which cows are milked for the purpose of producing milk for sale as milk within the metropolitan area.

"Dairyman" means the owner or person in charge of premises within the metropolitan area for which a licence under the Dairy Supervision Act has been issued and from which milk is sold or delivered retail.

"Metropolitan area" means the municipal districts of the municipalities specified in the schedule to the Act.

"Milk" means the normal product of the udder of an animal without addition or subtraction.

"Pasteurized milk" means milk which has been heated to a temperature of not less than 145 degrees Fahrenheit and held at such temperature for not less than thirty minutes and immediately after reduced to a temperature below 40 degrees Fahrenheit.

3. The maximum temperature at which milk shall be kept forthwith after production until disposed of by the producer to a depot, dairy, or consumer shall be the temperature of the coolest water available on the farm upon which such milk is produced.

4. Every dairyman shall, on receipt of any milk, cause the same to be immediately and efficiently cooled to a temperature not greater than 40 degrees Fahrenheit. Provided that if the milk has been efficiently cooled below 40 degrees Fahrenheit at the centre of production and is received by a dairyman below a temperature of 50 degrees Fahrenheit, further cooling to 40 degrees Fahrenheit or under shall not be necessary.

5. When any dairy-farmer produces milk for sale within the metropolitan area and sells such milk direct to the consumer, the cooling of such milk to 40 degrees Fahrenheit or under shall not be necessary, provided that all such milk is sold within two hours of the time of production.

6. No person shall hold or store any milk for sale unless the same has been efficiently cooled to a temperature below 40 degrees Fahrenheit and is held or stored in a cool chamber or ice chest, and no milk shall be sold unless the same is below a temperature of 60 degrees Fahrenheit.

7. The lowest grade of raw milk which may be received by any dairyman from any dairy-farmer shall be milk containing not more than 500,000 organisms per cubic centimetre.

8. The lowest grade of raw milk which may be sold by any dairyman within the metropolitan area shall be milk containing not more than 2,000,000 organisms per cubic centimetre.

9. No milk which has been pasteurized in any dairy or factory situated outside the metropolitan area and which is intended for sale within the metropolitan area shall contain more than 300,000 organisms per cubic centimetre at any time before pasteurization.

10. No pasteurized milk shall be sold within the metropolitan area which contains more than 500,000 organisms per cubic centimetre.

11. No person shall sell as bottled milk any milk unless the same has been bottled at a dairy and is delivered to the customer in the state in which it leaves such dairy.

And the Honorable Francis Edward Old, His Majesty's Minister of Agriculture for the State of Victoria, shall give the necessary directions herein accordingly.

F. W. MABBOTT,
Clerk of the Executive Council.
SUGGESTED REGULATIONS UNDER THE DAIRY SUPERVISION ACT 1915 AND MILK SUPPLY ACT 1922, AS SUBMITTED BY THE MILK SUPPLY COMMITTEE IN 1927 (vide paragraph 13 of this Report).

1. Regulations of 22nd January, 1924, and 12th February, 1924, to be rescinded.

2. Interpretation—

"Approved container" means a container approved by the committee.

"Approved seal" means a seal approved by the committee.

"Bottle" means a glass bottle or metal or other container approved by the committee.

"Consumer" means any person other than a dairyman, whether as principal or agent, directly or indirectly receiving milk from a dairy-farmer, depot, or dairy intended for consumption by himself of another.

"Dairy-farmer" means any person who holds a licence for a dairy farm issued under the Dairy Supervision Act for premises upon which cows are milked for the purpose of producing milk for sale as milk within the metropolitan area.

"Dairyman" means the owner or person in charge of premises within the metropolitan area for which a licence under the Dairy Supervision Act has been issued and from which milk is sold or delivered.

"Metropolitan area" means the municipal districts of the municipalities specified in the schedule to the Act.

"Milk" includes skim milk.

"Pasteurized milk" means milk which has been heated to a temperature of not less than 145 degrees Fahrenheit and not more than 150 degrees Fahrenheit and held at the former temperature for not less than thirty minutes and immediately after reduced to a temperature below 40 degrees Fahrenheit.

"Sell" includes barter and also includes offering or attempting to sell or receiving for sale or having in possession for sale or exposing for sale, or sending, forwarding, or delivering for sale, or causing or suffering or allowing to be sold or exposed for sale, and refers only to selling for human consumption.

3. On every dairy farm supplying milk to the metropolitan area—

(a) The hands of the milkers must be washed prior to milking each cow and kept clean during the process of milking.

(b) The udders and flanks of the cows shall be washed with clean water or cleansing with a damp cloth shortly before milking.

(c) There shall be an adequate supply of boiling water or steam for the efficient sterilization of utensils in manner as hereinafter prescribed.

4. The maximum temperature at which milk shall be kept forthwith after production until disposed of by a dairy-farmer to a depot or dairy shall be the temperature of the coolest water available on the farm upon which the milk is produced.

5. Every dairyman shall on receipt of any milk cause the same to be immediately and efficiently cooled to a temperature not greater than 40 degrees Fahrenheit. Provided that if the milk has been sufficiently cooled below 40 degrees Fahrenheit at the centre of production, and is received by the dairyman below a temperature of 50 degrees Fahrenheit, further cooling to 40 degrees Fahrenheit or under shall not be necessary.

6. No person shall hold or store any milk for sale unless such milk has been efficiently cooled to a temperature below 40 degrees Fahrenheit and is held or stored in a cool chamber or ice chest, and no milk shall be sold unless it is below a temperature of 60 degrees Fahrenheit.

7. All milk sold by any dairy-farmer to any dairyman shall be milk which will comply with one of the grades hereinafter provided.

8. No person shall sell any milk in any bottle unless such milk has been placed in such bottle and sealed in a dairy.

9. No person shall sell in any bottle any milk which is not of the same grade as such milk was in when it left the dairy at which it was placed in such bottle.

10. No person shall remove or interfere with the seal which has been placed as prescribed on any bottle containing milk intended for sale to a consumer prior to delivery of such bottle to the consumer.

11. No person shall permit any milk to be transported through any street or streets within the metropolitan area unless the same is protected by an efficient cover from the direct rays of the sun and from contamination by dust.

12. No milk shall be sold as pasteurized milk unless it has been pasteurized in accordance with these Regulations, and the temperature and time prescribed have been recorded by an automatic recording thermometer.

13. No milk shall be sold by any dairyman which has been heated or treated in any manner other than by efficient cooling unless the treatment such milk has been subjected to is clearly and legibly indicated to the purchaser by notice or by endorsement on every invoice or account.

14. No milk shall be subject to pasteurization a second time.

15. No person shall have upon any vehicle used for the transportation and delivery of milk any container to which is attached any tap or any dipper or other utensil which may be used for the purpose of transferring milk from one container to another.

16. All containers, receptacles, strainers, and other utensils used in the handling or transportation of milk or cream must be rinsed in clean water immediately after being used, scrubbed with brushes and alkaline solution or agitated in an alkaline solution and then sterilized with boiling water or steam and so stored and kept as to be free from contamination until used again, and no container or other utensil used or intended to be used for the transportation or delivery of milk shall be placed in any street, park, or open space connected therewith.

17. All containers supplied by a dairy-farmer and used for the transportation and/or delivery of milk or cream to a dairyman shall be cleansed and sterilized by such dairyman in accordance with the provisions of clause 16 of these Regulations before being returned to the dairy-farmer.
18. No person shall sell any milk in any bottle which has blown into it or which has otherwise indicated thereon the name of any person, firm, or corporation other than or different from that which is indicated on the cap or seal thereon.

19. All milk sold within the metropolitan area shall come under one or other of the following standards:

(1) Special Grade Milk for Infants—Raw or Pasteurized.

(a) Milk of this grade or designation shall be milk obtained from a herd or herds certified free from tuberculosis by the Chief Veterinary Inspector. Such milk shall be efficiently cooled to a temperature below 40 degrees Fahrenheit at the place of production, and shall contain not more than 100,000 organisms per cubic centimetre by direct count (d.c.) and not more than 25,000 organisms by plate count (p.c.) at any time from production to delivery to consumer. There shall be no Bacillus Coli in one-tenth of a cubic centimetre.

(b) All milk of this grade shall be delivered to the consumer in bottles sealed with an approved seal. Such seal shall be yellow with the grade or designation “Special Grade Milk,” “Raw,” or “Pasteurized” (as the case may be) clearly shown thereon in pale-blue print together with the name and address of the supplier and the day of the week such milk is intended for delivery. No other word or device shall appear on the seal without the consent of the committee.

(2) Grade “A” Milk or Skim Milk—Raw.

(a) Milk of this grade or designation shall be milk obtained from a herd or herds certified free from tuberculosis by the Chief Veterinary Inspector. Such milk shall contain not more than 250,000 organisms per cubic centimetre by direct count at any time from production to the delivery to consumer. There shall be no Bacillus Coli in one one-hundredth of a cubic centimetre.

(b) All milk of this grade shall be delivered to the consumer in bottles sealed with an approved seal. Such seal shall be yellow with the grade or designation “Grade ‘A’ Milk or Skim Milk (as the case may be)—Raw” clearly shown thereon in red print together with the name and address of the supplier and the day of the week such milk is intended for delivery.

(3) Grade “A” Milk or Skim Milk—Pasteurized.

(a) Milk of this grade or designation shall be obtained from cows which have been pasteurized. The seal shall be yellow with the grade or designation “Grade ‘A’ Milk or Skim Milk (as the case may be)—Pasteurized” clearly shown thereon in black print together with the name and address of the supplier and the day of the week such milk is intended for delivery as well as the place where pasteurization was performed.

(b) All milk of this grade or designation shall be delivered to the consumer in bottles sealed with an approved seal. Such sealing shall be carried out at the place of pasteurization. The seal shall be clearly shown thereon in black print together with the name and address of the supplier and the day of the week such milk is intended for delivery as well as the place where pasteurization was performed.

20. No milk which is of a grade lower than Grade “B,” whether raw or pasteurized, shall be sold as milk for human consumption.

21. Notwithstanding anything contained in these Regulations any dairyman may, supply milk in quantities not less than two gallons in approved containers which are not sealed in the prescribed manner, but which are clearly and distinctly labelled with the name showing the particulars prescribed for the grade of milk contained therein, provided that milk which has been pasteurized shall not be supplied to any other dairyman except in bottles sealed as prescribed.

22. When any dairyman purchases raw milk under the provisions of clause 21 of these Regulations he shall sell such milk in bottles sealed as prescribed.