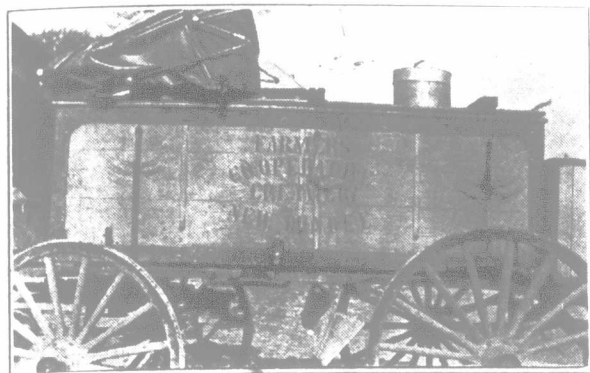


Segis Sylvia Maida, J. C. Reagan	\$235
Sir Pontiac Inka, J. E. Griffith, Weston	185
Sylvia Segis Faforit, E. E. Muirhead	290
Inka Sylvia Maida, Gordon S. Gooderham	425
Hengerveld Pontiac Korndyke, Eglinton	170
Wayne Segis Pride, R. A. Hamilton	325
Purity Mercedes Pride, Con. Slavin, Malton	255
Purity Pride Segis, E. F. Osler, Bronte	250
Segis Hengerveld Wayne, J. C. Reagan	110

Sunnybrook Butter Princess, Jas. Chesney, Norval	\$270
Prince Pontiac Sylvia, N. I. Bernoth	110
Faforit Princess Pontiac, E. W. Tobin	275
Coral Natoye Mercedes, C. Blair, Port Credit	300
Coral De Kol Mercedes, J. C. Reagan	235
Princess Betta of Harlaam, L. H. Parker, Hartley, Que	205
Pontiac Harlaam Posch, Chas. Usher, Edgeley	145
Harlaam Belle, R. M. Bell, Erin	315
Olga De Kol, E. W. Tobin	245

Olga Mercedes De Kol, Gordon Taylor, Toronto	\$187
Olga De Kol Mercedes, E. W. Tobin	430
Olga Natoye, Jno. Reagan	185
Queen Segis Lyons, Chas. Usher	215
Hengerveld Olga De Kol, E. F. Osler	300
Sunnybrook Pet Canary, T. A. Dawson	400
Elington Mercedes, Jos. Todd, Agincourt	135
Mercedes Canary Girl, Gordon S. Gooderham	540
Mercedes Sylvia Lass, W. R. Cummings, Cumming's Bridge	110

## Finding a Market for Our Milk.



An old-style Cream Gathering Wagon.

### III.—The Butter Market.

Notwithstanding the fact that cheese-making is so much a part of the Canadian dairy industry, butter-making is of even more importance to the country. In 1919 Canadian dairy production amounted to \$251,526,201, or more than a quarter of a billion dollars. Toward this huge amount 101,554,131 pounds of creamery butter contributed \$55,182,422 in addition to dairy or farm butter, the production of which is estimated at 125,000,000 pounds worth \$56,250,000. Thus, butter production contributed 45 per cent. of our annual dairy production in 1919, even if we include the very large sum of \$72,000,000 estimated as the value of milk produced and used as milk. Cheese production in 1919 was 167,734,982 pounds worth \$44,805,794, or only 80 per cent. of the value of creamery butter alone.

The significance of the cheese industry in Canadian dairying appears in connection with our exports, however, because statistics show that we have exported practically as many dollars' worth of cheese in the last three years as we have in the last thirty years of butter. In fact, our butter exports, except for the year 1919, have not averaged more than \$3,000,000 per year since 1890, while there has never been a year since 1891 when our exports of cheese have not been worth more than \$10,000,000. The year ending March, 1920, was our largest year for butter exports, when we exported 17,612,685 pounds worth \$9,844,359. This compares with 126,395,777 pounds of cheese worth \$36,336,863. The explanation of these figures lies in the difference between the per capita consumption of butter and cheese. In 1919 over 200,000,000 pounds of butter were required for home consumption, and only about 40,000,000 pounds of cheese; or, in other words, Canadians eat about 25 pounds of butter per year as compared with 5 pounds or less of cheese.

Before the war the British people consumed about 11 pounds of cheese as compared with 19 pounds of butter. In 1919 the United Kingdom consumed under food restrictions 396,000,000 pounds of butter as compared with a normal consumption of 469,554,800 pounds in 1914. It is estimated that the United Kingdom in 1919 imported 70 per cent. of the cheese consumed and 42 per cent. of the butter consumed, or an amount of butter 57,000,000 pounds in excess of all the creamery butter produced in Canada. These figures proclaim the size of the British market, and point to the fact that there is abundant opportunity for the expansion of our butter industry.

### OUR BUTTER PRODUCTION INCREASES.

Our butter production is climbing upward and partly at the expense of the cheese industry. The latter has decreased from 194,904,336 pounds in 1917.

to 174,878,313 pounds in 1918, and 167,734,982 pounds in 1919, while creamery butter production increased from 82,564,130 pounds in 1916 to 87,526,939 pounds in 1917, 93,298,348 pounds in 1918, and 101,554,131 pounds in 1919. The number of cheese factory patrons has remained about constant (around 65,000) since 1915, but patrons of creameries have increased from 107,905 in 1915 to 150,973 in 1918. Although there were only about 3,700 more patrons of all dairy factories in Canada in 1918 than in 1917 (252,416 as compared with 248,683) the number of creamery patrons rose from 139,032 to 150,973, a gain of 11,941. During this period combined cheese and butter factories lost 7,655 patrons, and it is evident that these were all absorbed by creameries as well as 500 cheese factory patrons and 3,700 new patrons to dairy factories. Condenseries gained 269 patrons. The number of creameries increased from 949 to 990, but combined factories decreased by 73—many of them no doubt turned to butter only. The development of the large centralizer creamery is indicated by the fact that although the number of creamery patrons increased from 1916 to 1918 by 30,106, the number of factories decreased by 3.

As far back as 1880 Canada exported over 18,000,000 pounds of butter worth \$3,058,069. Beginning in 1897 and lasting until 1907, our exports were never under 11,000,000 pounds and averaged about 23,000,000 pounds, the biggest year being 1903 when we exported 34,128,944 pounds or 33 pounds more than all the creamery butter produced in Ontario in 1919. With the increase in our population, however, our butter has been needed at home, with the result that in 1919, for example, New Zealand exported about ten times and

increased by more than 15,000,000 pounds. In 1919 Western Ontario produced 24,419,782 pounds of butter as compared with 5,032,640 pounds in Eastern Ontario. This amount of butter in Western Ontario was secured from cream supplied by 46,927 patrons.

### BUTTER, LIVE STOCK AND SOIL FERTILITY.

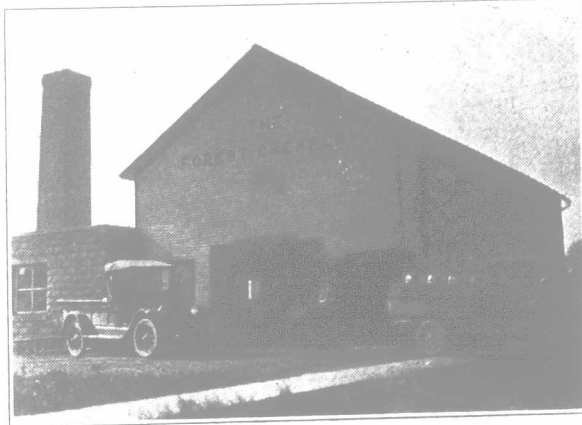
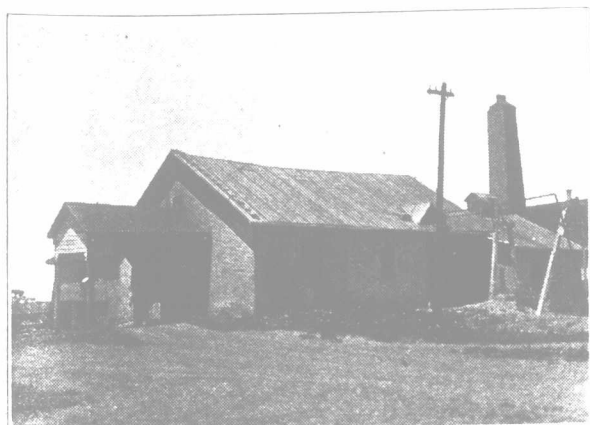
It will be readily seen from the above figures that butter production is steadily increasing, especially in Ontario and the Prairie Provinces. How to account for this increase, partly at the expense of other branches of the industry, is rather difficult unless one does so on the basis of the very keen demand for butter, and partly on account of the more valuable by-products left on the farm. It is a fact that milk sold from the farm in the form of butter removes less than one per cent. of the fertility value of the whole milk itself, all of which is lost if the whole milk is sold and no by-products secured for feeding. The value of skim-milk for calf feeding is a factor which is of considerable importance in many sections in influencing farmers toward the butter industry. This is especially noticeable for instance in the beef-producing areas of Western Ontario where the creamery is the natural and most popular outlet for the surplus milk produced. In these districts the skim-milk is required largely for calf feeding, and it is here that the creamery has reached its greatest development in Ontario. Whey is not suitable for calf feeding, and where the skim-milk is retained on the farm the fertility of the soil is also maintained with but little loss. Both skim-milk and buttermilk contain practically all of the protein of the milk, while whey is low in this particular. For hog feeding skim-milk is commonly rated as worth twice as much as unskimmed whey, which is about 25 per cent. more valuable than separated or skimmed whey. In addition to the protein, all the valuable fertilizing ingredients of whole milk and practically all the protein, ash, and carbohydrates required for feeding are left in the skim-milk. Farm live stock returns, as manure, an average of about 80 per cent. of the fertilizing constituents of the feed consumed, the dairy cow about 75 per cent. of the nitrogen and 89 per cent. of the ash, while the growing calf returns only about 30 per cent. of the nitrogen and 45 per cent. of the ash. If a farm produces 100,000 pounds of milk yearly from twenty 5,000-pound cows, this milk will include 580 pounds of nitrogen, 190 pounds of phosphoric acid and 170 pounds potash. Where the skim-milk is fed to calves and pigs, 30 per cent. or more of this is returned to the farm as manure and nearly all the rest is retained by the live stock. Comparative figures have been given to show that the loss of fertility per cow per year (not based on present prices) where butter is sold is .59 cents; where cream is sold \$1.11; where cheese is sold \$4.34, and where whole milk is sold \$6.68. Similarly it has been stated that a herd of 18 cows in 30 years would restore \$10,000 worth of fertility to 100 acres of land, and that this herd would not only support the crops grown to feed themselves, but additional fields of 20 acres of corn and 14 acres of wheat where whole milk is sold; 24 acres of corn and 18 acres of wheat where cheese is sold; 33 acres of corn and 23 acres of wheat where cream is sold; and 35 acres of corn and 24 acres of wheat where butter is sold. There is no doubt that where farmers' manure is relied upon chiefly to maintain soil fertility, the butter market has its advantages as a means of disposing of milk. We venture to say further that as improvement in the quality of our live stock takes place skim-milk will be appreciated to a much greater extent as necessary for the proper growth of dairy and beef calves, baby beef and young pigs. It should be noted here, however, that with large herds the amount of skim-milk left in the farm where cream is sold is often so large that it is not used to the best advantage. Observation also shows that the bulk of creamery patrons are those with



Modern Jacketed Milk or Cream Cans.

Australia fifteen times the amount of butter to the United Kingdom than Canada did. For years practically all the surplus butter of Eastern Canada went to the Western Provinces. Now, however, the three prairie provinces are developing the creamery industry very rapidly, having had in 1918 over 67,000 dairy patrons of whom all but perhaps 5,000 could be counted as creamery patrons. Production for the three prairie provinces in 1918 was 24,080,137 pounds.

As in the case of cheese, Ontario and Quebec lead in butter production by a wide margin, and are responsible for about 70 per cent. of our total production. Quebec in 1918 produced 36,761,057 pounds, while Ontario produced 29,452,422 pounds with an increase to 34,128,911 pounds in 1919. Western Ontario from 1908 to 1918 increased her butter production by more than 17,000,000 pounds, while cheese production de-



Three of the Many Creameries in Western Ontario, they are located at Kerwood, Forest and Warwick.