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MILK AND CREAM

REPORT

OF

THE UNITED STATES TARIFF COMMISSION

TO

THE PRESIDENT OF THE UNITED STATES

DIFFERENCES IN COSTS OF PRODUCTION OF MILK AND CREAM IN THE UNITED STATES AND IN THE PRINCIPAL COMPETING COUNTRY AS ASCERTAINED PURSUANT TO THE PROVISIONS OF SECTION 315 OF TITLE III OF THE TARIFF ACT OF 1922

Printed for the use of the Committee on Finance

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JANUARY 10, 1929.

The PRESIDENT,
The White House.

MY DEAR MR. PRESIDENT: Herewith I have the honor to transmit the report of the Tariff Commission in the investigations, for the purposes of section 315 of the tariff act of 1922, of the costs of production in the United States and in the principal competing foreign country, of milk and cream.

The report consists of three parts and a statistical appendix. Part I presents general information with reference to the investigations of milk and cream (pp. 3–17). Part II presents cost-of-production data and the commission's summary with respect to milk (pp. 18–31). Part III presents cost-of-production data and the commission's summary with respect to cream (pp. 32–41).

Respectfully,

THOMAS O. MARVIN,
Chairman.

MILK AND CREAM

UNITED STATES TARIFF COMMISSION,
Washington, December 20, 1928.

To the PRESIDENT:

The United States Tariff Commission respectfully submits the following report upon an investigation of the differences in costs of production and other advantages and disadvantages in competition of milk and cream in the United States and in the principal competing country for the purposes of section 315 of Title III of the tariff act of 1922.

INTRODUCTION

Reference to files.—The documentary and statistical material upon which this report is based is in the files of the commission and available to the President. It comprises the original cost schedules and other basic data, the papers and reports on different stages of the investigation, and a transcript of the public hearing. Included in the basic material are matters of a confidential nature, the disclosure of which is forbidden by section 708 of the revenue act of 1916, the pertinent provisions of which are as follows:

SEC. 708. It shall be unlawful for any member of the United States Tariff Commission, or for any employee, agent, or clerk of said commission, or any other officer or employee of the United States, to divulge, or to make known in any manner whatever not provided for by law, to any person, the trade secrets or processes of any person, firm, copartnership, corporation, or association embraced in any examination or investigation conducted by said commission, or by order of said commission, or by order of any member thereof.

RATES OF DUTY

The rates of duty for milk and cream since the act of 1909 are as follows:

Act of 1922 (par. 707):

Milk, fresh, 2½ cents per gallon. Sour milk and buttermilk, 1 cent per gallon. Cream, 20 cents per gallon: *Provided*, That fresh or sour milk containing more than 7 per centum of butterfat shall be dutiable as cream, and cream containing more than 45 per centum of butterfat shall be dutiable as butter.

Act of 1921 (par. 23):

Milk, fresh, 2 cents per gallon. Cream, 5 cents per gallon.

Act of 1913 (par. 547):

Milk, fresh, free. Cream, free.

Act of 1909 (par. 247):

Milk, fresh, 2 cents per gallon. Cream, 5 cents per gallon.

HISTORY OF THE INVESTIGATION

Senate Resolution 146, passed February 17, 1926 (calendar day), requested the commission to investigate the cost of producing milk and cream as follows:

Resolved, That the United States Tariff Commission be, and it is hereby, requested forthwith, under the provisions of section 315 of the act approved September 21, 1922, to make an investigation into the cost of production of cream, and of milk, sweet or sour, or buttermilk, in the United States and in those countries from which our importations of these dairy products come, and to report their findings to the President of the United States.

The investigation was instituted on March 4, 1926. On March 25 and 26, 1926, a preliminary public hearing was held at which the commission presented for discussion certain problems which had arisen in connection with the planning of the investigation. This hearing was attended by representatives of the milk and cream importers and producers, who discussed in detail the problems presented.

The field study which had been started on July 6, 1926, was completed on November 19, 1926.

Public notice of the institution of the investigation was given in the usual form by posting in the Washington and New York offices of the commission, and by publication in Treasury Decisions and Commerce Reports. After public notice had been given as prescribed by law and a preliminary statement of information obtained in the investigation had been distributed, a public hearing was held at the office of the commission in Washington on February 23, 24, and 25, 1928.

All parties interested were given an opportunity to be present at the public hearing to produce evidence, and to be heard with regard to the differences in costs of production and all other facts and conditions enumerated in section 315 of the tariff act of 1922, with respect to milk and cream. A Canadian sent by the National Dairy Council of Canada, representatives of certain New England cream and milk dealers' associations, the assistant to the director of the legislative department of the American Farm Bureau Federation, and representatives of the National Cooperative Milk Producers' Federation were present at the hearings. Members of Congress also appeared in behalf of the domestic industry. Briefs by parties of record were filed March 10 and 22, 1928.

Investigation limited to sweet milk and cream.—Of the total imports

INVESTIGATION LIMITED TO SWEET MILK AND CREAM

Of the total imports of cream, sweet milk, sour milk, and buttermilk, less than one-half of 1 per cent in 1925 were sour milk and buttermilk. Costs of production were therefore obtained only for sweet milk and cream.

PART I

INFORMATION OBTAINED IN COMMISSION'S INVESTIGATION

Development of the dairy industry in the Northeastern States.—In the Northeastern States included in the investigation there has been a gradual transition from the production of milk for butter or cheese to the production of milk and cream for fluid consumption. Cream was formerly skimmed on the farm by the gravity system and later by the farm separator. Milk is now usually hauled to the creamery where it is separated. As the demand for milk and cream in the cities increased the territory furnishing the cities widened. Creameries for butter making were converted into plants for handling fluid milk and cream. To-day cream is shipped from all over the New England States, from New York, from Pennsylvania, and even from certain States in the Middle West to the large Eastern cities such as New York, Philadelphia, and Boston.

The shift from the production of butter and cheese to market milk in the areas described resulted in better sanitation and cleaner milk. It also encouraged better types of dairy cattle and more balanced systems of feeding. As the demand for fluid milk increased the large production in May and June resulted in a surplus in the late spring and early summer. As the result of the abundance of milk in summer and the relative shortage of it in winter, prices were relatively low in summer and relatively high in winter. To take advantage of the higher winter prices, farmers began and have continued to produce relatively more winter milk. Milk-producers organizations also consciously adjusted milk prices to encourage such a shift from the production of surplus summer milk to the production of winter milk. (See pp. 7 to 9.)

Types of dairy farming.—In the dairy sections of the northern part of New England and New York State, where farming is less diversified than in the States to the south, farmers depend for the most part on the income from dairy products and livestock. Fruit is more important in some sections of southern New England, and near large urban centers market garden crops furnish considerable income. Onions and tobacco are common in the Connecticut River Valley.

Although farming in New York State is more diversified than in New England, New York is an important dairy State. The western section of the State, extending from Cayuga County to the Niagara River, but not including the southern tier of counties, is a region of general farming with beans, potatoes, and wheat as chief sources of income. Fruit is important in counties bordering Lake Erie, in the counties south of Lake Ontario, and in the finger-lake region of New York State. Dairying is prominent in the southern border counties west of Broome County. Along the St. Lawrence River and in counties along the Canadian border dairying is the chief source of income. Conditions in these regions are more similar to those in northern New England. In some of these counties potatoes are an

important crop. A region, extending from St. Lawrence County south through the central part of the State to the southern border, is adapted to dairy farming. Greene and Delaware Counties are important cream-producing sections. Milk for fluid consumption is the principal dairy product in the Hudson River Valley. In the eastern, southeastern, and southern parts of the State nearly 80 per cent of the milk received from farmers is shipped for fluid use, while in the northern and southwestern sections of the State over 60 per cent is used in manufactured products.

The zone, or milk shed, furnishing the Philadelphia supply, includes sections of Pennsylvania, New Jersey, Delaware, and Maryland. (See Chart 1, p. 10.) This region is an important dairy section notwithstanding the prevalence of other highly specialized farm enterprises. The western part of this milk shed is suited primarily to dairy farming because of its rugged topography and pasture area. This region is the source of a large part of the local cream supply. The eastern part of this milk shed is more particularly a fluid-milk region. The return from dairy products, however, is not the only source of farm income in this region. In Lancaster, Lebanon, and Berks Counties the beef cattle and tobacco enterprises are important. In New Jersey, Delaware, and on the Eastern Shore of Maryland vegetables and fruit are widely cultivated.

THE DAIRY REGIONS SUPPLYING THE NEW ENGLAND AND MIDDLE ATLANTIC STATES

United States.

Northeastern States.[1]—In the eastern dairy regions of the United States a larger proportion of the milk is produced for consumption as fluid milk and cream than for use in manufactured products. About 57 per cent of the milk produced during the year 1924 in the Boston, New York, and Philadelphia milk sheds was consumed as fluid milk. In addition, somewhat over 9 per cent was used in the manufacture of ice cream. In the North Central States included in this investigation only 42 per cent of the milk was for fluid use and less than 2 per cent for ice cream. Dairymen in the eastern dairy regions are nearer the large markets for fluid milk and cream and have, therefore, an advantage in this profitable outlet. The production of milk and cream for fluid use has been steadily increasing in the Northeastern States, but this increase has not been so great as the increase in population. New territory is continually being added to the milk sheds supplying our large cities, and dealers supplying these cities have been forced to go farther and farther away from the consuming centers to satisfy the increased demand.

As the demand for fluid milk is relatively stable throughout the year the farmer, producing primarily for the fluid-milk market, must make sure of an adequate supply during the season of lowest production. The demand for cream is affected by the variation in the consumption of ice cream and of cream for berries. As the peak of the domestic demand for cream comes during the summer months, particularly during the berry season, somewhat later than when production is greatest, the deficiency in the local supply is met largely

[1] New England, New York, Pennsylvania, New Jersey, Delaware, and Maryland.

in the eastern markets by imports of Canadian cream. During the late fall and winter months a considerable amount of cream is shipped east from the North Central States.

In New York State about 29 per cent of the milk produced in 1926 was used for manufactured products.[2] For the 5-year period ending in 1924, the production of milk increased 4.3 per cent in New England and decreased 1.9 per cent in New York State.[3] During the same period the amount of butter made on farms decreased over 15 per cent in the New England States and about 11 per cent in New York State. For the 5-year period ending with the calendar year 1925 the amount of creamery butter decreased 39 per cent in the New England States and 20 per cent in New York State.[4] During this period the production of cheese decreased also about 35 per cent in New England and 11 per cent in New York State. These figures illustrate the extent of the shift in recent years from the production of milk products to the production of market milk in the Eastern States.

Table 1 gives, for the year 1924, the production and uses of milk in Canada and in the States of the United States covered by this investigation.

TABLE 1.—*Milk: Production and uses in the United States as a whole, in the States covered by the milk and cream investigation, and in Canada, 1924* [1]

Purpose for which milk is used	United States as a whole		Northeastern States [2]		North Central States [3]		Canada as a whole	
	Thousand pounds	*Per cent*	*Thousand pounds*	*Per cent*	*Thousand pounds*	*Per cent*	*Thousand pounds*	*Per cent*
Used as fluid milk and cream	52, 772, 000	46.0	10, 120, 947	57.2	19, 388, 432	41.8	3, 879, 280	27.6
Total used in manufactured products	53, 811, 418	46.9	6, 306, 801	35.7	24, 065, 223	51.9	8, 465, 397	65.4
Creamery butter	28, 577, 680	24.9	1, 166, 718	6.6	15, 711, 150	33.9	4, 186, 118	32.3
Farm butter	12, 600, 000	11.0	1, 643, 544	9.3	2, 208, 297	4.8	2, 340, 000	18.1
Cheese (all kinds)	4, 179, 400	3.6	641, 650	3.6	3, 099, 470	6.6	1, 676, 274	12.9
Condensed and evaporated milk	4, 251, 370	3.7	997, 155	5.6	2, 142, 219	4.6	164, 598	1.3
Ice cream	3, 926, 313	3.4	1, 659, 734	9.4	872, 828	1.9	85, 238	.7
Powdered milk and cream, milk chocolate, etc.	276, 652	.3	197, 990	1.2	51, 259	.1	13, 169	.1
Fed to calves	4, 042, 800	4.1	729, 330	4.1	1, 515, 820	3.3	519, 141	4.0
Wasted	3, 439, 986	3.0	530, 816	3.0	1, 391, 427	3.0	388, 584	3.0
Total milk produced	114, 666, 201	100.0	17, 693, 894	100.0	46, 380, 902	100.0	12, 952, 382	100.0

[1] Source: United States figures calculated from data of the Bureau of Agricultural Economics, Division of Dairy and Poultry Products; Canadian figures from the report of the Minister of Agriculture for the Dominion of Canada, for the year ended March 31, 1926, p. 28. Canadian figures of milk fed to calves and milk wasted were estimated by the commission.

[2] Includes Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, and Delaware.

[3] Includes Michigan, Ohio, Indiana, Iowa, Wisconsin, and Minnesota.

North Central States.—The North Central States shipping considerable quantities of cream to eastern markets are Michigan, Ohio, Indiana, Iowa, Minnesota, and Wisconsin. It is important for the eastern market to secure a large quantity of good cream at short notice. For this reason a relatively few concerns, able to render the required service, arrange for most of the shipments. Some of them purchase

[1] New York State Department of Farms and Markets, Bulletin No. 192.

[2] United States Census of Manufactures, 1919 and 1924.

[4] Crops and Markets Supplements, vol. 3, supp. 8, p. 262, and Yearbook of U. S. Department of Agriculture for 1921, pp. 481 and 482.

milk and cream directly from farmers; others buy from dealers; still others are brokers who merely arrange for the sale of products in eastern cities.

Shipments of cream from the North Central States to Boston, New York, and Philadelphia are somewhat greater in winter than in summer. During the winter season, when shipments from Canada decrease, the eastern consuming markets obtain cream from the North Central States. During 1925 the three eastern markets received at least two-thirds as much cream from the North Central States as from Canada.

Canada.

Milk and cream from Canada are produced in three rather distinct regions. The first region is that portion of the Province of Quebec extending from the Maine border to the St. Lawrence River. The second region is the tier of counties in Ontario lying along the St. Lawrence River. The third region is the dairy section of Ontario west of the city of Hamilton and north of Lake Erie. These regions include some of the most important dairy sections in Canada. The percentage of milk used for manufactured products, principally butter and cheese, is larger in Canada than in the regions in the United States in which cost studies were made. About two-thirds of all the milk produced in Canada is used for milk products and one-third for consumption as fluid milk and cream. Six per cent of the production of milk in these Provinces, Quebec and Ontario, was exported as milk or cream in 1925. About 80 per cent of the total was shipped as cream. The manufacture of farm butter and cheese is relatively more important in Canada than in the United States. The production and various uses of milk in Canada and in the United States for 1924 are compared in Table 1.

Quebec.—Agricultural conditions in the dairy regions of Quebec are similar to those in the northern part of New England. In the southern counties of Quebec from 60 to 90 per cent of the farm income comes from dairy products and the remainder generally from the sale of hogs and poultry. In the counties bordering the St. Lawrence River, northeast of Montreal, farming is more diversified.

In the eastern part of southern Quebec, particularly in Richmond, Stanstead, Shefford, and Brome Counties, the country is rough and hilly and the farms are best suited to dairying. The income from other sources in this region is relatively small. Dairying is an important source of income in the western counties of southern Quebec bordering the United States. The land is more rolling, farming is more diversified, and a larger percentage of milk is produced in the winter season in this region than in any other region of this Province. Cows are mostly Ayrshires and Holsteins of the better grade. In Huntingdon, St. Johns, and Missisquoi Counties much of the milk is delivered to the creameries and separated there.

Ontario.—In the St. Lawrence River region of Ontario the land is rolling and the agricultural conditions are quite similar to the dairy region of northern New York. In the region north of Lake Erie the soils are, like those in the United States, well suited to growing such feed crops as silage corn and alfalfa. Wheat, hogs, and poultry contribute some additional farm income. In both of these areas the type of cattle is exceptionally good and production per cow is high. In

the St. Lawrence River region the production per cow was nearly 6,000 pounds and in the southern Ontario region about 8,000 pounds.

IMPORTS

Imports of both milk and cream have shown a steady increase during the past five years. The value of cream imports far exceeds the value of the milk imports. Table 2 shows the imports of milk and cream from 1918 to 1928.

TABLE 2.—*Milk and cream: Imports for consumption, 1918–1928*

Calendar year	Milk		Cream	
	Gallons	Value	Gallons	Value
1918	1,510,966	$341,584	704,031	$736,809
1919	2,753,401	739,073	931,416	1,111,130
1920	2,520,657	622,407	1,397,160	2,079,863
1921	2,579,240	466,962	2,033,769	2,523,612
1922	2,022,652	371,289	2,123,659	2,772,056
1923	4,473,141	866,425	3,024,663	4,744,955
1924	5,159,383	818,960	4,197,528	6,141,231
1925	7,366,494	1,225,061	5,171,498	7,585,061
1926	7,386,203	1,245,392	5,374,131	8,050,912
1927	4,493,067	748,166	4,843,138	7,606,071
1928 (9 months)	4,176,323	720,470	2,920,704	4,730,458

Source: Foreign Commerce and Navigation of the United States.

The three eastern producing regions in the United States supplying Boston, New York, and Philadelphia experience competition in dairy products from practically only two Provinces of Canada—Quebec and Ontario. The total production of milk for all purposes in these Canadian Provinces is about 900,000,000 pounds, or about 7½ per cent of the total production of the three eastern regions, where about 12,000,000,000 pounds of milk are produced annually.

Further discussion of the imports of milk is given in a later section dealing with milk only (see pp. 18 and 19). Further discussion of the imports of cream is given in a later section dealing with cream only (see pp. 32 and 33).

SYSTEMS OF FIXING THE PRICE OF FLUID MILK AND MILK FOR CREAM

During and since the war the fixing of the price of milk and cream has been widespread. As the limitations on price fixing under the Federal laws do not apply to agricultural organizations and as both the farmers' and consumers' interests in milk are of such unusual consequence price fixing has been developed as in probably no other industries. In different cities the systems of determining prices vary.

Boston.—The fluid-milk price at Boston is decided at a conference of the leading Boston dealers and a committee of the New England Milk Producers' Association. This committee agrees upon what price will be paid for fluid milk as such, and what lower price will be paid for surplus milk. The members of the Association furnish about three-fourths of the Boston supply.[5]

[5] The schedule of prices adopted at Boston is not followed by the Vermont Creameries, Inc., commonly known as the "Federation."

The Boston price for surplus milk—the milk that can not be sold profitably for fluid use but which is commonly manufactured into milk products—is based on a definite formula. The formula in force in January, 1924, was as follows:

> The average "creamery extra" Chamber of Commerce butter quotation at Boston for the month plus a "churn gain" of 16⅔ per cent, less 5 cents per pound for manufacturing costs, plus 3½ cents per pound premium, plus 15 cents per hundredweight for the skim milk portion of the surplus milk.[6]

A milk administrator supervises the system of quoting prices for surplus milk. He determines the price of surplus milk by the accepted formula. The dealers report to him under oath the amount of milk sold for fluid consumption and the amount sold for manufacturing purposes. After estimating the price of surplus milk and the proportion of such surplus to be sold by each dealer, he calculates and issues in circular form the price for each dealer in each zone.

New York.—The largest group of organized milk producers in New York State is the Dairymen's League Cooperative Association (Inc.). Since 1921 the milk from its members has been pooled and sold to both distributors and manufacturers at prices and differentials established at a conference with the dealers at about the 20th of the preceding month. The classification of milk for different uses on which prices are determined at these monthly conferences is as follows:

> Class 1. Milk for fluid distribution at a determined price.
> Class 2. Milk for cream and ice cream at determined prices.
> Class 3. Milk for case condensed or evaporated at a price based on current prices plus determined differentials.
> Class 4. (*a*) Milk for butter at current butter prices. (*b*) Milk for cheese at current cheese prices.

The members at any country station receive the same price f. o. b. at that station for a given grade of milk. The association then sells this milk to dealers at different prices for the different classes of milk according to agreement at the monthly conference. Any surplus not thus disposed of is made into milk products at the plants operated by the association. The dealers remit payment to the association, which pays the farmers. The association deducts from the gross receipts the expenses of operation before remitting to the farmers.

The Nonpooling Cooperative Association was formed to promote the interests of a group of producers who do not want to sign contracts to pool their milk. They sell directly to the city distributors and make their own price agreements.

A large milk dealer, who does not buy through the Dairymen's League Cooperative Association, has an organization of its patrons and maintains its own price system. At monthly conferences a schedule of prices for the next month is decided.

Philadelphia.—In Philadelphia the retail price is kept as uniform as possible throughout the year, while the price to the producer is varied freely from month to month according to the supply.

The Interstate Milk Producers' Association has had a great influence in stabilizing the supply and regulating prices. In the fall of 1919, through the influence of this association in cooperation with the Philadelphia dealers, a price system was established which has

[6] *The New England Dairy Market.* A preliminary report of the Bureau of Agricultural Economics, United States Department of Agriculture, p. 43.

operated successfully to reduce the summer surplus of milk. The plan of operation is essentially as follows:

A record is kept by each dealer of the amount of milk furnished by each producer for the months of October, November, and December, the average of which is known as the "basic quantity" to be supplied monthly for the following nine months at fluid-milk prices. Each producer, however, is allowed to increase the basic quantity 10 per cent for the months of July and August and 15 per cent for September.

For an amount of milk above the basic quantity, which is known as "surplus milk," the producer is paid a lower price based on the price of 92-score butter, as published by the Federal Bureau of Agricultural Economics. Surplus milk prices vary as follows: (*a*) For an amount of surplus not exceeding the basic quantity at prices based on 92-score butter, plus a 20 per cent increase or premium; (*b*) for an amount of surplus milk greater than the basic quantity no premiums are paid for the additional quantity during the six months, January to June, inclusive, but the premium is paid for all surplus during the months of scarcity—July, August, and September.

Table 3 gives the percentage of milk received at Philadelphia for which the basic price was paid. It shows how successfully this plan for payment of milk has reduced the surplus for the five months, May to September, inclusive. In 1920 when this system was established, 34 per cent of the milk received at Philadelphia was surplus, whereas in 1925 for the same months only 13 per cent was surplus milk.

TABLE 3.—*Milk: Percentage received at Philadelphia at basic price, 1920–1925* [1]

Month	1920	1921	1922	1923	1924	1925
	Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
January	85	84	89	87	88	92
February	82	84	88	89	90	94
March	76	75	82	81	86	91
April	75	69	79	81	86	90
May	68	59	67	75	77	80
June	65	64	70	72	76	90
July	63	78	79	80	80	89
August	67	74	77	80	80	85
September	67	74	85	80	82	90
October	100	100	100	100	100	100
November	100	100	100	100	100	100
December	100	100	100	100	100	100

[1] From the Interstate Milk Producers' Association of Philadelphia.

COSTS OF PRODUCTION IN THE UNITED STATES AND CANADA

Scope of the investigation.

The investigation of milk and cream for the purposes of section 315 involved finding (1) the farm costs of milk to be sold and consumed as fluid milk, (2) the farm costs of milk to be used for cream, (3) the allocated plant costs of preparing and marketing fluid milk, and (4) the allocated plant costs of preparing and marketing cream.

A staff of 10 farm-cost accountants and 2 clerks obtained 894 farm records in the United States and 197 records in Canada. Four cost accountants obtained cost data from 77 creamery plants in the United States and from 22 plants in Canada. This study occupied

approximately four months, from July to October, 1926. The farm-cost data were obtained under the supervision of crew leaders by men trained for such work. The accountants obtained from the shipping stations costs of handling and shipping milk and cream.

Under similar conditions of production there is no reason to believe that the cost of producing milk to be used for fluid consumption is much different from the cost of producing milk to be used for cream. Differences in the weighted average costs of fluid milk and milk for cream shown in this report are explained by the differences in weights for the various areas, some of which produce more milk to be sold for fluid use and others more to be used as cream.

The milk-producing and cream-producing sections supplying the three important eastern cities are commonly designated as milk sheds. The domestic regions in the investigation of the cost of producing milk for fluid use are classified as follows: (1) The Boston milk shed, including all of New England except the northern part of Maine, and (2) the New York milk shed, including those counties in northeastern Pennsylvania and northern New Jersey which contribute to the supply for the New York market.

In the cream investigation the study included the Boston and New York milk sheds as described for fluid milk; the Philadelphia milk shed including 20 counties in southern and southeastern Pennsylvania, all of Delaware, the Eastern Shore of Maryland, and three counties in western Maryland; the North Central States—Michigan, Ohio, Indiana, Iowa, Minnesota, and Wisconsin—which ship cream to the eastern markets.

From information obtained from market experts, each milk shed was divided into homogeneous areas. The center or centers for study of farm costs in the United States and Canada were selected by the "random sampling" method, that is, by drawing at random from a list of all creamery plants in the area producing Grade A milk. Information from each plant manager was obtained as to the number and location of its patrons, the type of dairying—production for fluid use, for cream, or for milk products—size of herds, breeds of cattle, feeding systems, length of haul, and other information which would help to determine whether the community was representative for the purpose of this study. The farmers were not selected from the list of creamery patrons but were visited in order of their location along definite routes. Those farms producing Grade A milk, maintaining purebred herds, and making a specialty of selling livestock were omitted. The farm production, the test of milk, and prices paid were obtained at the creamery. For every plant around which farm costs were obtained, two additional creameries were drawn for plant costs. The creameries covered in the North Central States were selected on the basis of their importance as shippers of cream to eastern markets.

Chart 1 shows the location of the areas in the United States and Canada and the center or centers in each area where agricultural costs were obtained. Table 4 shows the number of farms studied in each region or milk shed and the amount of butterfat produced. It also shows the number of plants covered in each milk shed and the quantity of butterfat in milk and cream received and sold at the plants studied.

AREAS STUDIED IN THE UNITED STATES AND CANADA
in Obtaining
AGRICULTURAL COST OF PRODUCING MILK AND CREAM.

—LEGEND—

CANADA	UNITED STATES		
Quebec-	1. West Benton, Me.	13. Franklin, N.Y.	25. Shippensburg, Pa.
I Coaticook	2. Manchester, N.H.	14. Gravesville, N.Y.	26. Lincoln, Pa.
Richmond	3. Brockton, Mass.	15. Winthrop, N.Y.	27. Money Brook, Pa.
II St. Anicet	4. Holyoke, "	16. Lowville, N.Y.	28. Salem, N.J.
III Lawrenceville	Bridgeport, Conn.	17. Pulaski, N.Y.	29. Felton, Del.
Brome & Knowlton	5. Bellows Falls, Vt.	18. Bouckville, N.Y.	30. Weston, Mich.
St. Armond	6. St. Johnsbury, Vt.	19. Baldwonsville, N.Y.	31. Columbus, Ohio.
IV St. Hyacinthe	7. Newport, Vt.	20. Montrose, N.Y.	32. Lebanon, Ind.
	8. Shelburne, Vt.	Seely Creek, N.Y.	33. Readlyn, Ia.
Ontario-	9. Archdale, N.Y.	21. Cameron Mills, N.Y.	34. Watertown, Minn.
V Finch	10. Hopewell, N.Y.	Belfast, N.Y.	35. Marshfield, Wis.
VI Brownsville	11. Cochecton, N.Y.	22. Attica, N.Y.	36. Reedsburg, Wis.
	12. Ashland, N.Y.	23. Yale, N.Y.	37. Fondulac, Wis.
		24. Belleville, Pa.	

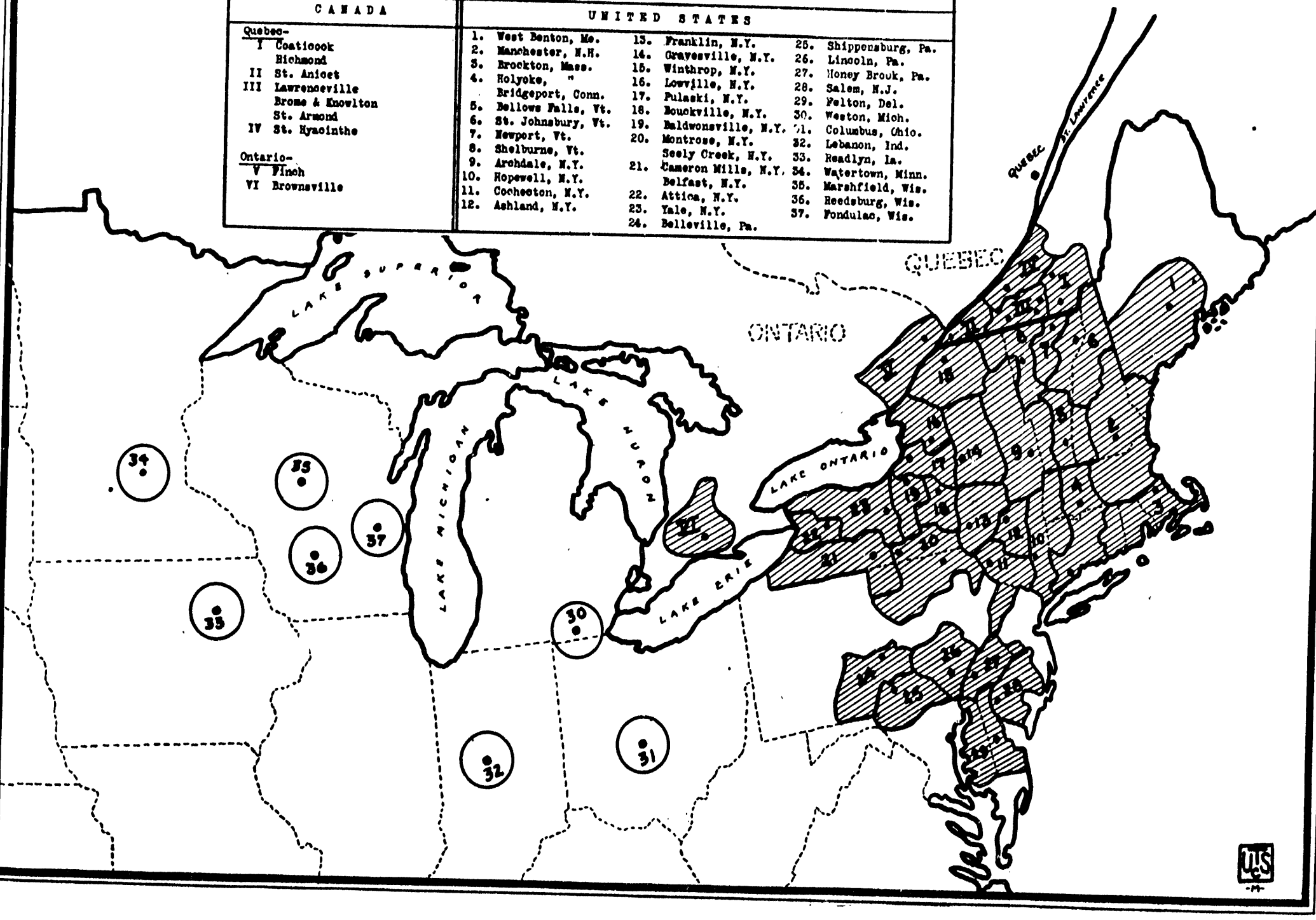

TABLE 4.—*Milk and cream: Scope of cost investigation in the United States and Canada, May 1, 1925, to April 30, 1926*

Territories supplying—	Number of areas	Number of farm records	Butterfat produced on farms studied	Creamery plants studied					
				Number of plants	Butterfat received as—		Butterfat disposed of as—		
					Milk	Cream	Milk	Cream	Other
Domestic region:									
Milk and cream—			*Pounds*		*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Boston	8	215	714, 770	23	4, 330, 130	1, 033, 070	2, 584, 483	2, 486, 798	291, 919
New York	15	421	1, 460, 757	36	11, 399, 877	541, 371	7, 940, 040	3, 528, 783	472, 425
Total, milk region	23	636	2, 175, 527	59	15, 730, 007	1, 574, 441	10, 524, 523	6, 015, 581	764, 344
Cream only—									
Philadelphia	6	158	330, 163	5	3, 860, 621	301, 737	2, 558, 076	1, 156, 404	447, 818
Mid-Western region	8	190	549, 671	13	5, 824, 403	8, 112, 367	218, 930	12, 414, 271	1, 303, 569
Total, milk and cream region	37	984	3, 055, 361	77	25, 415, 031	9, 988, 545	13, 301, 529	19, 586, 316	2, 515, 731
Foreign region, Canada	6	197	573, 075	22	2, 026, 956	3, 703, 472	27, 398	3, 976, 348	1, 726, 692

FARM COSTS OF PRODUCING FLUID MILK TO BE SOLD AS MILK OR CREAM

The same farm-cost accounting methods were used to determine the cost of milk to be sold or consumed as fluid milk, as were used to determine the cost of milk to be used for cream.

DISCUSSION OF THE ITEMS OF FARM COST

FEEDS AND PASTURE

Feeds and pasture are the most important elements in cost and represent about 60 per cent of the gross costs, both in the United States and Canada. The feed cost is divided into the costs of concentrates, roughage, and pasture. Concentrates include mill feeds and home-grown or purchased grain. Roughage is classified into three groups—succulent, hay, and other. Succulent roughage is predominantly corn silage. Hay includes all kinds of hay as distinguished from "other roughage," such as corn fodder, corn stover, and straw. Pasture includes permanent, rotation, and aftermath pasturage.

Purchased feeds, chiefly mill and mixed feeds, cottonseed meals, and purchased grains were charged at the price paid plus the cost of hauling to the farm. Feeds consumed on farms where they were produced were charged at the average of late fall, midwinter, and early spring prices at the farm. The prices arrived at in this way approximate the average price for the barn-feeding season. If grain was ground, the expense of grinding was charged at commercial rates, and where the grain was hauled to be ground the cost of hauling was added to the cost of feed. Such feeds as silage, for which there is no established price, were charged at their relative feeding values. Bedding material—such as straw, sawdust, or planer shavings—was charged at local commercial prices. Whole milk fed to

calves was both charged and credited to the herd, so that such entries merely canceled each other. Skim milk purchased from creameries was charged at actual prices paid. As explained more in detail on page 14 of this report, the farm-separated skim milk fed on the farm was based on the price of corn. Agricultural experiment stations have found that the value of skim milk varies with the amount of such skim milk fed with other feeds, but on an average 100 pounds of skim milk fed to livestock had the same feeding value as a half bushel of corn.[7]

In the production of milk for cream the domestic cost of feeds, which represents about 60 per cent of the gross cost, was much higher in the three eastern regions than in the North Central States. In Canada the cost of feeds was 59 per cent of the gross cost. (See Table 17.) Labor required for the care of the herd was cheaper in the West. The labor cost represented about 25 per cent of the gross cost in the United States and 29 per cent in Canada. The cost of feeds in Canada was about 87 per cent of the cost of feeds in the United States, and the wages of hired labor in Canada were about 85 per cent of the wages in the United States.

Purchased concentrates.—The most important difference between the United States and Canadian costs in the production of milk for cream is in the cost of purchased concentrates. (See Table 17.) Of the total difference in the gross costs per hundred pounds of 46 cents, as much as 35 cents arises from the difference in the cost of purchased concentrates. This difference in the cost of concentrates is explained by the difference in the systems of production. Canadian milk for cream is produced largely during the spring and summer season. Although in the United States, the heaviest production is also in summer, the fairly uniform demand throughout the year at the principal markets results in higher winter prices. These higher winter prices have encouraged the United States farmers to increase their winter production even though this has entailed the increased expense for purchased concentrates. Evidence of the fact that the United States farmers are producing a relatively large quantity of winter milk and that the Canadian farmers are producing summer milk almost exclusively is found in the prices received. The weighted average of the prices realized by all farmers visited in the United States was $2.50 per hundred pounds and for all farmers visited in Canada, $1.99 per hundred pounds—a difference of 51 cents per hundred pounds.

Pasture was charged at the current local rates for pasturage per cow per month, with adjustments on individual farms to allow for variations in quantity and quality of pasturage. (See Table 59 in appendix.)

LABOR

Labor is the next most important item of the farm cost of milk and represents over one-fourth of the gross costs. These costs include the wages of hired labor and the allowances for the services performed by the farmer and his family.

Determination of the hours of labor chargeable to the herd.—The number of hours per day of chore labor devoted to the herd during the

[7] Henry and Morrison, Feeds and Feeding, 16th ed., pp. 598, 599.

summer and winter months by each class of labor—milking and care of milk as well as other chores—was multiplied by the number of days in the summer and winter seasons, respectively. The two seasonal totals plus hours of special labor, such as was expended in marketing and purchasing cattle, gave an annual total number of hours of labor spent on the herd. When milk was separated on the farm the labor necessary for this operation was included.

Computation of the labor costs per hour.—The wage rate for the different classes of labor—hired, operator, women, and children—was obtained by adding to the monthly cash wages the value of the board, lodging, and laundry, furnished by the farmer, and by dividing this monthly total by the total number of hours worked on all farm enterprises each month. Twenty-six week days and four Sundays were considered a month. The charge per hour allowed for women and children was calculated as a percentage of the wage paid per hour for hired labor, and this percentage for each farm was based on the farmer's judgment.

The labor charge for the farmer or operator and the charge for other unpaid labor was taken as the amount estimated by the farmer that would have been paid in cash, board, and other perquisites, had labor of equal efficiency been hired. No further charge was made for management.

MILK OR CREAM HAULING

Whether the hauling was done by the farmer or by the creamery, the charge for hauling in the commission's calculations is included in the farm cost. Where the farmer did the hauling, either by team, automobile, or truck, the hauling costs were obtained directly from him. Where the creamery did the hauling, the costs were obtained from the books of the creamery and added to the farm costs. Hauling costs paid by the creamery were subtracted from the creamery's cost of raw material and added to the farmer's receipts because creameries deduct from the farmer's check the cost of hauling.

MISCELLANEOUS COSTS

Miscellaneous costs include charges for breeding, registration, testing, veterinary service, use of horses, as well as fuel, power, salt, ice, commissions, and dairy association dues.

REPAIRS, DEPRECIATION, AND TAXES

The charge for the use of buildings covers the depreciation and cost of repairs on the buildings. Of the whole building cost thus computed, the herd was charged with a share equal to the portion used by the dairy enterprise. Depreciation was computed by dividing the original cost by the total life, estimated by the farmer.

Taxes include those paid on real estate and personal property but not income taxes. The taxes allowed were allocated on the ratio of the investment in the dairy enterprise to the total taxable farm investment.

CREDITS OR DEDUCTIONS FROM COST

Purchases, sales, and inventories of herd.—The excess of the closing inventories plus sales over the sum of the first inventory plus purchases was credited. If the second inventory plus sales was less than the first inventory plus purchases, this difference was a charge to cost. The value of the animals butchered and insurance receipts were entered as sales.

Local farm values at the beginning and at the end of the year were used in valuing cattle remaining in the herd throughout the year. Fluctuations in the prices of cattle during the year were not allowed to affect the values of the inventories.

All sales and purchases of livestock were recorded at the prices actually received or paid. Animals slaughtered were credited at livestock sales value.

Manure.—The herd was credited with one ton of manure per thousand pounds of live weight for each month the animals were not on pasture. The manure was valued at $1.25 per ton in the Eastern States, and $1 per ton in the North Central States and in Canada. These values were based on information from farmers and State agricultural colleges.

Skim milk.—In order to determine the cost of the cream in 100 pounds of whole milk it was necessary to deduct the value of the by-product, skim milk. The records obtained by the commission indicate that skim milk was either sold for cash, fed to livestock, used in the manufacture of skim-milk products, or thrown away. For the quantity sold the actual price received has been used as its value. For the quantity fed to livestock its value was considered identical with the value of its feeding equivalent in corn—100 pounds of skim milk estimated to be worth one-half bushel of corn at the prices reported by feed dealers in the areas covered.[8]

When skim milk was used in manufacturing skim-milk products the separable manufacturing costs were deducted from the total sales value of these products in order to arrive at the value of the skim milk used. The quantity of skim milk thrown away was considered as having no value. These quantities and values of skim milk disposed of in each area were used to obtain the average unit value of skim milk. The credit to be deducted from each 100 pounds of milk used in cream production was determined by multiplying the yield of skim milk by the unit value as determined above. The skim-milk credit was deducted from the farm cost of milk used in cream production, even though some milk was separated at the creameries.

The weighted average value of 100 pounds of skim milk sold for cash, fed to livestock, used in the manufacture of skim-milk products, on the corn basis of valuation was 36.2 cents in the United States and 45.4 cents in Canada. (See Table 48 in the appendix.)

Other credits to cost.—Other credits to cost include breeding fees received, the income from feed sacks sold, and the receipts from the sale of hides.

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[8] Henry and Morrison, Feeds and Feeding, 16th ed., p. 599.

NET COST

The net cost is obtained by subtracting the credits described (such as for the net increase in the value of the herd, for manure, and for skim milk) from the gross cost. The quantity of milk sold, as shown on the books of the creamery to which the farmer shipped his product, and the quantity of milk or butter used by the family, converted into equivalent milk units, were added together and divided into the total net costs in order to arrive at the net cost per hundred pounds of milk.

CAPITAL CHARGES

Interest was charged at 6 per cent on (1) the average value of the opening and closing inventories of the herd, (2) the opening inventory of that part of the building chargeable to the herd, and (3) the opening inventory value of the dairy equipment.

INCOME FROM MILK AND CREAM

Receipts from products sold.—The receipts from milk or cream were obtained from the farmer's accounts on the books of the creamery. The average price paid him by the creamery per 100 pounds of milk was taken as the average realized sales price. The price paid to him for cream was the price of butterfat contained in the cream. Adjustment was made for hauling as explained in the section "Milk and cream hauling."

Dairy products used on the farm.—All dairy products used on the farm were credited to the herd and charged to the household. Whether milk was separated at the farm or at the creamery all milk used by the farmer was credited to the herd. However, the herd was charged only with the skim milk fed to calves. Whole milk used by the household was evaluated in the field at the price received for milk delivered to the creamery. The quantity of milk used to produce cream for family use was entered at milk prices. The butterfat used in making farm butter was valued at the average price received for butterfat in cream.

CREAMERY COSTS OF HANDLING MILK AND CREAM

As the creameries handled both fluid milk, to be sold as such, and cream the creamery costs must be added to the farm costs in order to determine the total cost of fluid milk and the total cost of cream. Sometimes cream is separated on the farm, especially in Canada, and sometimes in the creamery. The separate creamery costs for milk and for cream are presented later in the separate sections dealing with milk and with cream, but the discussion of the items of cost, which apply to both milk and cream, is presented here.

DISCUSSION OF THE ITEMS OF COST FOR THE CREAMERY PLANTS

Some of the plants visited manufactured a large number of products, such as condensed milk, evaporated milk (whole or skimmed), powdered milk, ice cream, ice-cream mix, and casein. In many of these plants records were not kept to show costs by departments or by operations. Some difficulty was experienced, therefore, in allocating the costs to the several classifications provided in the commission's schedule such as receiving, separating, pasteurizing, cooling, handling,

and shipping. Although creameries kept adequate records for the determination of the major items of cost, the basis for making the necessary allocations to the different operations was determined for each plant by the accountants in conference with superintendents and other plant officials.

The low price paid for cream by creamery plants of the Philadelphia milk shed, as given in Table 19, is in part due to the lower percentage of butterfat in the cream, and is offset by the heavy collecting, receiving, and cooling costs. The costs for handling and processing cream in the Philadelphia milk shed is from 6 to 7 cents higher than for the New York milk shed, and 9 cents higher than the average for all the regions covered. In the Philadelphia milk shed the larger number of receiving stations, where the milk was cooled, and the necessity for reicing, explain the relatively large handling costs. However, the total creamery-plant costs are small as compared with the total costs including the cost of milk and cream.

Buying and collecting expense.—To the buying account was charged all expenses connected with the actual purchase of the raw product, the inspection services, the preservation of the quality and quantity of the product, and the handling of the farmers' accounts in the office.

To the collecting account were charged all direct expenses necessary to bring the product to the creamery door. For some plants this included hired teamsters and trucks, for other plants trucks were provided by the plant. When the whole or any portion of the collecting expense was charged to the farmer a corresponding deduction was made in the plant costs.

Plant-operating expense.—To the plant-operating account were charged all direct and indirect costs connected with the operation of the plant—direct factory labor, superintendence, other indirect labor, heat, light, power, ice, repairs, depreciation, insurance, taxes, and supplies.

Direct labor.—These costs were allocated to each department after careful examination of the pay roll and other pertinent records. In conference with the manager a schedule of direct labor costs was made and from this schedule allocations were made to each operation.

Other direct costs.—The allocation of these costs to the various operations was made on the same basis as for direct labor. These items include indirect labor, superintendence, supplies, administration, and general expenses.

Buildings and equipment.—Inventory values of buildings and equipment were carried on the books in totals. The allocation of depreciation and repairs on machinery to the different departments was based on the manager's estimate of equipment used for each operation. Building charges were allocated according to floor space occupied.

Insurance, taxes, and interest.—The values of buildings and equipment in each department were made the basis for allocating the charges for insurance and taxes. Interest was computed on inventory values of real estate and equipment at 6 per cent per annum.

Service department costs.—The total costs for heat, light, power, and refrigeration were first allocated to each department. These costs were then further allocated to each of the operations on the basis of the amount of steam, electric power, water power, or refrigeration used.

Allocating costs of operations to products.—After the costs of the different operations were determined, the totals were allocated to the various products on the basis of the amount of each product handled in each department.

Shipping costs.—This expense includes the labor of loading the car and the cost of the ice as well as the icing when the car was filled and sealed at the plant. When the products were shipped in less-than-carload lots refrigeration was provided by the railroads.

PART II

MILK

The data applying especially to fluid milk are given in the following pages. Statistics of imports, of prices, and of costs are considered and analyzed.

IMPORTS

The imports for consumption of milk from 1910 to 1928 are given in the following table:

TABLE 5.—*Milk: Imports for consumption of fresh milk, 1910-1928*

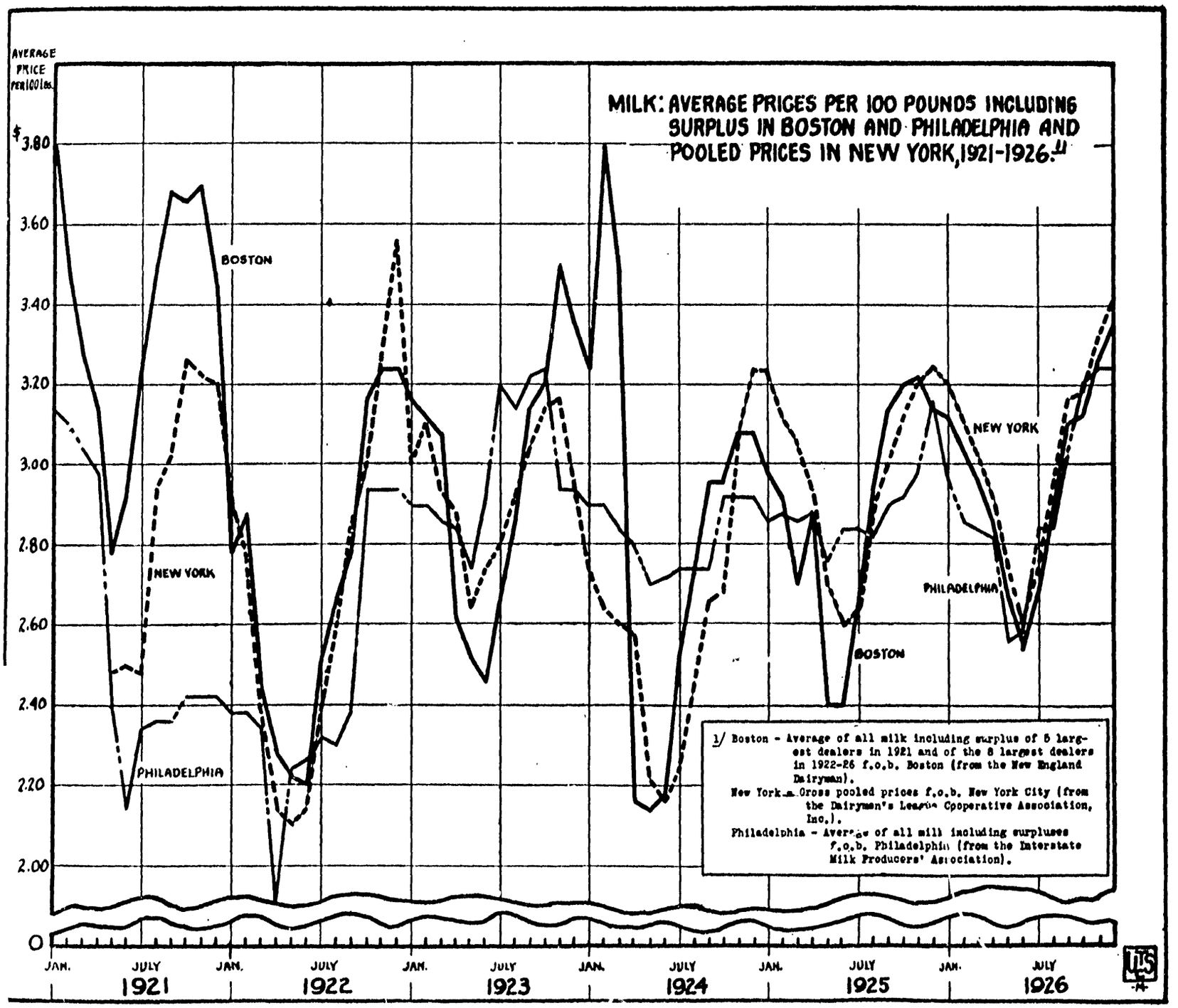
[Source: Foreign Commerce and Navigation]

Year	Rates of duty	Quantity	Value	Duty collected	Value per gallon	Computed ad valorem rate
		Gallons				*Per cent*
Fiscal:						
1910	2 cents per gallon	140,402	$18,244	$2,810	$0.129	15.40
1911	do	213,595	29,024	4,272	.136	14.72
1912	do	46,824	6,283	936	.134	14.91
1913	do	45,035	6,933	919	.151	13.25
1914	do[1]	22,150	2,714	443	.123	16.32
	Free [2]	585,698	78,225		.134	
1915	do	1,263,649	232,997		.184	
1916	do	891,931	115,614		.130	
1917	do	1,791,546	283,482		.158	
1918	do	1,933,380	397,762		.206	
Calendar:						
1918	do	1,519,966	341,584		.225	
1919	do	2,753,401	739,073		.268	
1920	do	2,520,657	622,407		.247	
1921	do[3]	778,644	159,714		.205	
	2 cents per gallon [4]	1,800,596	307,248	36,012	.171	11.72
1922	do[5]	1,417,241	258,502	28,345	.182	10.97
	2½ cents per gallon [6]	605,411	112,787	15,135	.186	13.42
1923	do	4,473,141	866,425	111,820	.194	12.91
1924	do	5,159,883	818,960	128,997	.159	15.75
1925	do	7,366,494	1,225,061	184,163	.166	15.03
1926	do	7,386,203	1,245,392	184,655	.169	14.83
1927	do	4,493,067	748,166	112,326	.166	15.01
1928 (9 months)	do	4,170,323	720,470	104,408	.171	14.49

[1] Act of 1909, July 1 to Oct. 3, 1913.
[2] Act of 1913, Oct. 4, 1913, to June 30, 1914.
[3] Act of 1913, Jan. 1 to May 27, 1921.
[4] Act of 1921, May 28, to Dec. 31, 1921.
[5] Act of 1921, Jan. 1 to Sept. 21, 1922.
[6] Act of 1922, Sept. 22 to Dec. 31, 1922.

Distribution of imports of milk.—A preliminary analysis of the data obtained from creameries importing during 1925 approximately 5,000,000 gallons seemed to indicate that only 9 per cent of the milk imported from Canada was shipped direct to New York City from the border and that 91 per cent went to border plants. To obtain additional information with respect to the milk imported from Canada, members of the staff were sent to New York, Boston, and points along the border to determine among other things the quantity and origin of milk imported from Canada, and the disposal of such milk after it was imported into the United States.

CHART II


MILK: AVERAGE PRICES PER 100 POUNDS INCLUDING SURPLUS IN BOSTON AND PHILADELPHIA AND POOLED PRICES IN NEW YORK, 1921-1926. 1/
AVERAGE PRICE per 100 lbs.
$3.80
3.60
3.40
3.20
3.00
2.80
2.60
2.40
2.20
2.00
0
BOSTON
NEW YORK
PHILADELPHIA
NEW YORK
PHILADELPHIA
BOSTON
1/ Boston - Average of all milk including surplus of 5 largest dealers in 1921 and of the 8 largest dealers in 1922-26 f.o.b. Boston (from the New England Dairyman).
New York - Gross pooled prices f.o.b. New York City (from the Dairymen's League Cooperative Association, Inc.).
Philadelphia - Average of all milk including surpluses f.o.b. Philadelphia (from the Interstate Milk Producers' Association).
JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY JAN. JULY
1921 1922 1923 1924 1925 1926
U.S.

In this study data were obtained for about 90 per cent of the total imports of milk from Canada through ports of entry in the Vermont and St. Lawrence customs districts.

Table 6 shows the total quantity of milk imported from Canada for the fiscal year May 1, 1925, to April 30, 1926, through the ports of entry in the Vermont and St. Lawrence customs districts and the quantities covered in the supplementary study.

TABLE 6.—*Milk: Imports from Canada and quantities for which data were obtained entering the United States through the Vermont and St. Lawrence customs districts, May 1, 1925, to April 30, 1926*

Customs district	Total imports through districts	Quantities for which data were obtained	
		Gallons	Percentage of total imports
	Gallons		
Vermont	1,692,303	1,413,198	83.51
St. Lawrence	5,643,796	5,153,980	91.32
Total, 2 districts	7,336,099	6,567,178	89.52

The disposal of the fluid milk covered by this inquiry is shown in Table 7, following:

TABLE 7.—*Milk: Disposal of milk imported from Canada through the Vermont and St. Lawrence customs districts, for which distribution data were obtained. May 1, 1925, to April 30, 1926*

	Vermont district		St. Lawrence district		Total 2 districts	
	Gallons	Per cent	Gallons	Per cent	Gallons	Per cent
Total quantity covered	1,413,198	100.00	5,153,980	100.00	6,567,178	100.00
Shipments for fluid consumption to—						
Boston [1]	126,416	8.95	60,324	1.17	186,740	2.84
New York City	197,410	13.97	2,223,312	43.14	2,420,722	36.86
Separated or otherwise manufactured at receiving border plants	1,089,372	77.08	2,870,344	55.69	3,959,716	60.30

[1] Including small amounts to Springfield, Mass.; Providence, R. I.; Manchester, N. H.; and Barre, Vt.

A considerable quantity of the milk imported was manufactured into condensed milk for export upon which drawback was allowed.

PRICES

It has been explained that the systems of marketing milk and the methods of determining prices in the terminal markets vary somewhat as between the different cities, but there is a general policy in having one price of milk for fluid consumption and another for surplus milk. The prices for surplus milk are based principally on the market prices for 92-score butter.

Table 8 gives the average monthly prices for milk of 3.5 per cent butterfat test delivered at the terminal markets. These prices are the

average of local prices paid farmers plus the transportation costs to the terminal markets. They do not include any receiving-station costs. They are, moreover, the weighted averages of prices of fluid milk for consumption and of surplus milk used in manufacturing milk products. For some years the prices in these three markets, although not identical, have had the same general trend. In the year 1926, the prices in these three cities did not merely have the same trend, but were practically identical. (See Chart II, p. 18.) The 5-year average (1922–1926) of prices varied but a few cents between these three markets, the Boston price being the highest and the Philadelphia price the lowest.

TABLE 8.—*Milk: Average prices of 3.5 per cent milk, including prices for surplus milk at Boston* [1] *and Philadelphia,* [2] *and the pooled prices at New York,* [3] *1921–1926*

[Prices per 100 pounds]

Month	1921			1922			1923		
	Boston	New York	Philadelphia	Boston	New York	Philadelphia	Boston	New York	Philadelphia
January	$3.80	.....	$3.14	$2.77	$2.89	$2.37	$3.16	$3.01	$2.90
February	3.48	.....	3.10	2.68	2.77	2.37	3.12	3.11	2.89
March	3.28	.....	3.04	2.44	2.38	2.34	3.08	2.93	2.86
April	3.14	.....	2.97	2.27	2.13	1.91	2.62	2.88	2.84
May	2.77	$2.47	2.37	2.22	2.09	2.25	2.52	2.63	2.74
June	2.92	2.49	2.15	2.20	2.13	2.26	2.46	2.73	2.92
July	3.24	2.47	2.84	2.51	2.41	2.32	2.66	2.81	3.10
August	3.49	2.93	2.36	2.66	2.60	2.30	3.05	2.91	3.14
September	3.68	3.02	2.36	2.78	2.83	2.38	3.16	3.03	3.22
October	3.65	3.25	2.42	3.06	3.00	2.94	3.29	3.15	3.24
November	3.69	3.21	2.42	3.24	3.26	2.94	3.49	3.16	2.94
December	3.43	3.19	2.42	3.23	3.55	2.94	3.36	2.96	2.94
Average	3.38	2.88	2.59	2.69	2.67	2.44	3.00	2.93	2.99

Month	1924			1925			1926		
	Boston	New York	Philadelphia	Boston	New York	Philadelphia	Boston	New York	Philadelphia
January	$3.23	$2.73	$2.90	$2.98	$3.23	$2.86	$3.12	$3.19	$2.95
February	3.81	2.63	2.89	2.92	3.11	2.87	3.04	3.11	2.87
March	3.48	2.61	2.84	2.70	3.06	2.83	2.95	3.02	2.83
April	3.15	2.57	2.79	2.88	2.93	2.88	2.85	2.91	2.81
May	2.14	2.22	2.69	2.40	2.69	2.76	2.67	2.73	2.56
June	2.17	2.15	2.71	2.40	2.60	2.84	2.54	2.60	2.57
July	2.52	2.23	2.75	2.67	2.64	2.84	2.68	2.74	2.83
August	2.74	2.45	2.73	2.94	2.90	2.82	2.89	2.95	2.83
September	2.96	2.66	2.75	3.17	3.01	2.89	3.09	3.15	3.02
October	2.96	2.68	2.93	3.19	3.11	2.92	3.11	3.17	3.20
November	3.08	3.08	2.93	3.21	3.21	2.98	3.25	3.31	3.24
December	3.07	3.23	2.93	3.12	3.23	3.15	3.33	3.39	3.24
Average	2.94	2.60	2.82	2.88	2.98	2.89	2.96	3.02	2.91

[1] Average prices of all milk including surpluses of 5 largest dealers in 1921, and of 8 largest dealers, 1922-1926, f. o. b. Boston. From the New England Dairyman.

[2] Average prices of all milk including surpluses, f. o. b. Philadelphia, but not including a station or receiving charge. From the Interstate Milk Producers' Association.

[3] Pooled prices of milk f. o. b. New York City. From the Dairymen's League Cooperative Association.

TABLE 9.—*Milk: Average wholesale prices paid to producers at Montreal and Toronto, Canada* [1]

[Source: Dealers' quotations]

Season	Montreal			Toronto		
	Per Imperial gallon [2]	Per United States gallon [3]	Per 100 pounds	Per 8-gallon can (Imperial gallon) [2]	Per United States gallon [3]	Per 100 pounds
	Cents	*Cents*	*Dollars*	*Dollars*	*Cents*	*Dollars*
1919, spring and summer	30.0	24.0	2.76	2.25–2.55	22.5–25.5	2.61–2.96
1919–20, fall and winter	40.0	32.0	3.71	3.10	31.0	3.60
1920, spring and summer	31.0	24.8	2.87	2.35–2.70	23.5–27.0	2.73–3.13
1920–21, fall and winter	37.0	29.6	3.43	2.90	29.0	3.36
1921, spring and summer	25.0–29.0	20.0–23.2	2.32–2.69	2.30	23.0	2.67
1921–22, fall and winter	25.0–33.0	20.0–26.4	2.32–3.06	2.20–2.50	22.0–25.0	2.35–2.90
1922, spring and summer	21.0	16.8	1.95	1.50–1.80	15.0–18.0	1.74–2.09
1922–23, fall and winter	21.0–25.0	16.8–20.0	1.95–2.32	1.95	19.5	2.26
1923, spring	21.0–25.0	16.8–20.0	1.95–2.32	1.95	19.5	2.26
1923, spring and summer	21.0	16.8	1.95	1.75–2.05	17.5–20.5	2.03–2.38
1923–24, fall and winter	25.0–29.0	20.0–23.2	2.32–2.69	2.20	22.0	2.55
1924, spring and summer	21.0	16.8	1.95	1.70–1.75	17.0–17.5	1.97–2.03
1924–25, fall and winter	21.0	16.8	1.95	1.95	19.5	2.26
1925, spring and summer	21.0	16.8	1.95	1.70	17.0	1.97
1925–26, fall and winter	25.0–29.0	20.0–23.2	2.32–2.69	2.20	22.0	2.55
1926, spring and summer	21.0	16.8	1.95	1.70–1.95	17.0–19.5	1.97–2.26
1926–27, fall and winter	25.0–29.0	20.0–23.2	2.32–2.69	2.20	22.0	2.55

[1] Canadian Monthly Bulletin of Statistics, May, 1927, p. 189.
[2] The Imperial gallon is about 5/4 of a United States gallon or 1.20032 times 8.6 pounds.
[3] Using 8.6 pounds as the weight of a United States gallon.

THE FARM COSTS OF MILK IN THE DOMESTIC REGIONS AND IN CANADA

Farm costs of producing milk to be used as fluid milk.

Table 10 shows the farm costs weighted so as to enable a comparison of the costs of milk, sold as fluid milk, in the milk sheds supplying Boston and New York with milk produced in regions of southern Quebec, southeastern and southern Ontario which export milk to the United States. In this table the costs for the different domestic regions are weighted by the quantities of fluid milk sold in those areas; for the Canadian regions the costs are weighted by the quantities of milk shipped to the United States.

TABLE 10.—*Milk for fluid use: Farm costs of producing milk in the United States and Canada (each area weighted by quantity of milk sold as fluid milk) May 1, 1925, to April 30, 1926*

	United States					Canada
	New York milk shed	Boston milk shed	Philadelphia milk shed	Weighted average including Philadelphia milk shed	Weighted average excluding Philadelphia milk shed	
Average butterfat test per cent	3.64	3.70	3.64	3.59	3.62	3.40
	Cost per 100 pounds					
Feeds:						
Concentrates—						
Farm grains	$0.11	$0.04	$0.29	$0.13	$0.09	$0.19
Purchased concentrates	.69	.85	.54	.69	.74	.17
Feed hauling and grinding	.04	.03	.08	.05	.03	.04
Total concentrates	.84	.92	.91	.87	.86	.40
Roughage—						
Hay	.59	.83	.40	.60	.65	.56
Succulent roughage	.29	.21	.14	.24	.27	.04
Straw and stover	.02	.01	.21	.06	.02	.12
Total roughage	.90	1.05	.75	.90	.94	.72
Pasture	.15	.14	.26	.17	.15	.26
Skim milk purchased	.00	.00	.00	.00	.00	.09
Total feed cost	1.89	2.11	1.92	1.94	1.95	1.47
Labor on herd:						
Operator's and hired labor	.67	.80	.63	.69	.70	.69
Unpaid family labor	.11	.07	.17	.11	.10	.14
Total herd labor	.78	.87	.80	.80	.80	.83
Other costs:						
Milk hauling	.22	.35	.26	.25	.25	.19
Repairs and depreciation—						
Buildings	.07	.06	.07	.07	.07	.06
Equipment	.03	.03	.02	.03	.03	.03
Miscellaneous expense	.18	.17	.27	.20	.18	.10
Total of other costs	.50	.61	.62	.55	.53	.38
Gross costs	3.17	3.59	3.34	3.29	3.28	2.68
Credits (deductions from cost):						
Net herd increase	.23	.12	.28	.22	.20	.25
Manure	.19	.21	.18	.19	.20	.17
Miscellaneous herd receipts	.01	.02	.01	.01	.01	.00
Total credits	.43	.35	.47	.42	.41	.42
Net cost of producing milk	2.74	3.24	2.87	2.87	2.87	2.26
Interest at 6 per cent on dairy capital	.21	.19	.22	.21	.20	.19
Net cost, including interest	2.95	3.43	3.09	3.08	3.07	2.45
	Cost per gallon					
Cost per gallon, excluding interest	$0.236	$0.279	$0.247	$0.247	$0.247	$0.194
Cost per gallon, including interest	.254	.295	.266	.265	.264	.211
Price received by farmers, per 100 pounds	2.46	2.98	2.59	2.79	2.59	1.93
Price received by farmers, per gallon	.212	.256	.223	.240	.223	.166

Although the commission obtained milk costs in the two milk sheds supplying Boston and New York, as shown in Table 10, because it was believed that the domestic supply of these markets competes with the imports of milk from Canada, the investigation has developed that the competition is more or less localized at the border. For the fiscal year beginning May 1, 1925, 60 per cent of the milk imported lost its identity as fluid milk at border plants and was utilized as cream, condensed milk, or other milk products; 37 per cent was shipped to New York City; and 3 per cent to Boston, and near-by cities. Furthermore, all imported milk is believed to be pasteurized at the border. For these reasons the costs chosen for comparison (see Table 11) are limited to those of the domestic and Canadian counties contiguous to the border. The domestic unit costs are weighted by the quantities of milk sold in the areas of northern Vermont, northern New York, and western New York along the St. Lawrence River; the Canadian unit costs are weighted by the quantities of milk imported from areas shipping milk to the United States.

The costs for the domestic and Canadian regions were obtained (with one exception) within a zone 20 miles wide on either side of the border. Practically all of the imports of milk originate within this 20-mile zone. The domestic border plants receive both Canadian and domestic milk. The costs of handling and processing milk at these border plants are practically identical; the average farm costs of hauling milk to creameries are also practically the same on either side of the border.

While the butterfat tests of the milk in the Canadian areas vary from 3.3 to 3.7 per cent, and the weighted average of 3.40 per cent is lower than the weighted average of 3.56 per cent for domestic areas, the Canadian milk meets the legal requirements for butterfat in Boston and New York.

Table 11 shows the farm costs for such domestic milk as most directly competes with imported milk at the domestic plants near the border and the farm costs of the imported Canadian milk.

TABLE 11.—*Milk for fluid use: Farm costs of producing milk for sections of the United States competing at the border plants and for Canada (United States costs weighted on total production in each area; Canadian costs weighted on imports from Canada) May 1, 1925, to April 30, 1926*

	United States				Canada [4]
	Northern Vermont [1]	Northern New York [2]	Western New York [3]	Weighted average	
Average butterfat test, per cent	3.86	3.42	3.51	3.56	3.40
	Cost per 100 pounds				
Feeds:					
Concentrates—					
Farm grains	$0.10	$0.09	$0.23	$0.14	$0.11
Purchased concentrates	.55	.66	.45	.56	.31
Feed hauling and grinding	.03	.03	.05	.04	.04
Total concentrates	.68	.78	.73	.74	.46
Roughage—					
Hay	.74	.69	.43	.62	.57
Succulent roughage	.16	.20	.35	.23	.06
Straw and stover	.02	.01	.02	.02	.12
Total roughage	.92	.90	.80	.87	.75
Pasture	.17	.17	.18	.17	.23
Total feed costs	1.77	1.85	1.71	1.78	1.44
Labor on herd:					
Operator's and hired labor	.65	.67	.68	.67	.64
Unpaid family labor	.13	.13	.11	.12	.17
Total herd labor	.78	.80	.79	.79	.81
Other costs:					
Milk hauling	.24	.24	.19	.22	.19
Repairs and depreciation—					
Buildings	.07	.09	.09	.08	.07
Equipment	.04	.04	.03	.04	.04
Miscellaneous expenses	.13	.18	.24	.19	.10
Total other costs	.48	.55	.55	.53	.40
Gross costs	3.03	3.20	3.05	3.10	2.65
Credits (deductions from cost):					
Net herd increase	.05	.19	.18	.15	.21
Manure	.20	.19	.18	.19	.16
Miscellaneous herd receipts	.01	.01			.01
Total credits	.26	.39	.36	.34	.38
Net cost of producing milk	2.77	2.81	2.69	2.76	2.27
Interest at 6 per cent on dairy capital	.18	.21	.22	.20	.19
Net cost including interest	2.95	3.02	2.91	2.96	2.46
	Cost per gallon				
Cost per gallon, excluding interest	$0.238	$0.242	$0.231	$0.237	$0.195
Cost per gallon, including interest	.253	.260	.250	.255	.212

[1] Areas 7 and 8. [2] Areas 15 and 16. [3] Areas 22 and 23. [4] Areas 2, 3, 5, and 6.

Creamery-plant costs of handling fluid milk.

After the fluid milk is hauled from the farm to the creamery it must be pasteurized and prepared for fluid consumption. The costs of the creamery plants are given in the following table:

TABLE 12.—*Milk for fluid use: Plant costs of handling and processing, and the price paid for raw milk in the United States and Canada, May 1, 1925, to April 10, 1926*

[Per gallon]

	United States					Canada
	New York milk shed	Boston milk shed	Philadelphia milk shed	Weighted average, including Philadelphia milk shed	Weighted average, excluding Philadelphia milk shed	
Average butterfat test.....per cent..	3.59	3.74	3.60	3.62	3.63	3.51
Buying and collecting costs:						
Buying expenses	$0.05	$0.04	$0.03			$0.06
Collecting expenses	.06	.31	(1)			.04
In-freight	.05	(1)	(1)			
Total buying and collecting costs	.16	.35	.03	.14	.17	.10
Processing costs:						
Receiving	.82	.79	.52	.75	.81	.71
Pasteurizing	.85	1.00	[2].89	.89	.89	2.38
Cooling	.70	.56	.55	.64	.67	1.12
Can filling	.57	.43	.28	.49	.53	.92
Total processing costs	2.94	2.78	2.24	2.77	2.90	5.13
Shipping costs:						
Icing	.09	.12	(1)		.09	.06
Loading expenses	.39	.38	.10		.39	.41
Total shipping costs	.48	.50	.10	.41	.48	.47
Total handling and processing costs	3.58	3.63	2.37	3.32	3.55	5.70
Interest on plant capital at 6 per cent..	.33	.29	.13	.28	.33	.35
Total costs, including interest..	3.91	3.92	2.50	3.60	3.88	6.05
Average price paid producers by independent plants	21.9	24.6	22.0	22.5	22.6	14.5

[1] No charge incurred for this item.
[2] Milk in the Philadelphia milk shed was not pasteurized at the plants. This figure is the average of the New York and Boston costs.

SUMMARY OF COSTS OF MILK

Table 13 gives the domestic costs of producing milk in the Boston, New York, and Philadelphia milk sheds, the weighted average of these costs for these milk sheds, including and excluding Philadelphia, and the average cost in Canada.

TABLE 13.—*Milk for fluid use: Summary of cost of production in the United States and Canada, May 1, 1925, to April 30, 1926*

[Per gallon]

	United States					Canada
	New York milk shed	Boston milk shed	Philadelphia milk shed	Weighted average, including Philadelphia milk shed	Weighted average, excluding Philadelphia milk shed	
I. Farm data: Average butterfat test ..... per cent..	3.54	3.70	3.64	3.59	3.62	3.40
Cost of producing milk—						
(*a*) Excluding interest.....	$0.236	$0.279	$0.247	$0.247	$0.247	$0.194
Including interest.....	$0.254	$0.295	$0.265	$0.265	$0.264	$0.211
(*b*) Price received by farmers from independent plants.	$0.219	$0.246	$0 220	$0.225	$0.226	$0.145
II. Plant costs: Average butterfat test..... per cent..	3.59	3.74	3.60	3.62	3.63	3.51
Cost of receiving, processing, etc...	$0.029	$0.028	$0.022	$0.028	$0.029	$0.051
Buying, collecting, and freight.....	.002	.003	.001	.001	.002	.001
Cost of loading and icing.....	.005	.005	.001	.004	.005	.005
Total plant cost.....	.036	.036	.024	.033	.036	.057
Interest on plant capital.....	.003	.003	.001	.003	.003	.003
Total plant cost including interest.....	.039	.039	.025	.036	.039	.060
Total farm and plant costs (including interest).....	.293	.334	.290	.301	.303	.271

TRANSPORTATION COSTS OF MILK

Cost of transporting Canadian and domestic milk to the principal market or markets of the United States can be computed in different ways according to what markets are interpreted as the principal cities. Table 7 shows that approximately 60 per cent of the Canadian milk imported is separated or otherwise manufactured at border plants and that another 37 per cent, after being pasteurized at these plants, is sent on to New York City. Most of the milk produced in the three eastern milk sheds (Boston, New York, and Philadelphia) is shipped to these three cities, but it appears that little Canadian milk is received at Boston and none at Philadelphia.

Three methods of treating the milk-transportation costs are discussed below.

METHOD I

Canadian milk produced near the border and domestic milk produced in northern Vermont and in northern and western New York are shipped to the border plants in a zone extending from North Troy, Vt., to Morristown, N. Y. The cost of transporting both Canadian and domestic milk received at these border plants is a hauling charge and is already included in the farm costs. Therefore, if this method is adopted no additional transportation costs need be considered.

METHOD II

Method II contemplates the equalization of costs in a common market. If some large city is to be selected as the principal market in which domestic and Canadian milk compete, there is no question

but that New York is that city. Apparently all the Canadian milk imported is received and processed at the border plants on the United States side, but about 37 per cent is later transshipped to New York City after pasteurization. Furthermore, New York consumes more domestic milk than any other city in the United States.

To the Canadian farm and plant costs of the milk produced near the border there is to be added under Method II the costs of transportation from the border to New York City. The transportation costs averaged $0.057 per gallon in 1926 and $0.0571 in 1927. These costs were computed by weighting the transportation rates from the Canadian border points, from which shipments were made, to New York, as shown in Table 7.

Inasmuch as domestic milk is not shipped to New York from all the areas covered in the commission's investigation, there are, in many instances, no published transportation rates. For this reason it is impossible to compute the transportation costs from such areas to New York which would be incurred if milk were shipped to these points in commercial quantities. Limiting the calculation of domestic transportation costs, therefore, to the shipments of milk from the points covered in the New York milk shed to New York City, the average transportation cost is $0.0434 per gallon in 1926 and $0.0435 in 1927.

Table 14 shows the summary of costs of production in the United States and in Canada, including the transportation to New York City, the principal market (Method II). Instead of using the plant costs shown in Table 12, the average cost of handling and processing milk at four plants near the border was used to represent the plant cost of 37 per cent of Canadian milk shipped to New York City.

TABLE 14.—*Milk for fluid use: Summary of costs of production in the United States and Canada, including transportation to New York City (Method II), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	New York milk shed	Canada
Average butterfat test.....per cent..	3.54	3.40
Farm cost of producing milk,[1] including interest	$0.254	$0.211
Plant-handling costs [2]	.039	.041
Total cost, not including transportation	.293	.252
Transportation to New York City (1926)	.043	.057
Total cost, including transportation	.336	.309
Amount by which United States cost exceeds Canadian cost		.027

[1] For details see Table 10, p. 22.
[2] For details see Table 12, p. 25.

COMPARISON OF DOMESTIC AND FOREIGN COSTS

Table 15 shows a summary of costs of production in the United States and Canada based upon delivery to United States border points. Under this method of treating transportation (Method I) domestic milk produced in northern Vermont and in northern and western New York and Canadian milk produced near the border are shipped to the border plants in a zone extending from North

Troy, Vt., to Morristown, N. Y. As the milk of both countries is handled in the same plants, the plant costs are identical for the United States and Canada, and are therefore omitted in the final cost comparison.

TABLE 15.—*Milk for fluid use: Summary of costs of production in the United States and Canada, based upon delivery to United States border plants,*[1] *(Method I), May 6, 1925, to April 30, 1926*

[Dollars per gallon]

	United States				Canada
	Northern Vermont	Northern New York	Western New York	Weighted average	
Average butterfat test.....per cent..	3.86	3.42	3.51	3.56	3.40
Farm cost of producing milk, including interest [2]....	$0.253	$0.260	$0.250	$0.255	$0.212
Difference in cost.....					.043

[1] (*a*) The milk of both countries being handled in the same plants, the plant costs are omitted as being identical. (*b*) Transportation consists of farmer hauling to country plants and is already included in the farm cost.

[2] For details of cost see Table 11, p. 24.

SUMMARY FOR MILK

Findings of fact to the following effect are, in the judgment of the United States Tariff Commission, warranted by the evidence collected in the commission's investigation of the costs of production of milk and summarized in the foregoing report:

1. Canada is the principal competing country.

2. The present duty on milk, fresh, of 2½ cents per gallon, prescribed in paragraph 707 of Title I of the tariff act of 1922, does not equalize the difference in costs of production of milk in the United States and in said principal competing country.

3. Canadian milk imported into the United States is received at domestic plants near the border, separated for cream, made into condensed milk or other milk products, or reshipped to New York City or Boston for fluid consumption. During the fiscal year May 1, 1925, to April 30, 1926, about 60 per cent of this milk lost its identity in the manufacture of milk products in the domestic border plants, 37 per cent was shipped to New York City, and 3 per cent to Boston. (Table 7, p. 19.) The bulk of the Canadian milk enters into competition with domestic milk at the domestic border plants. The domestic regions supplying these plants are chiefly the areas in northern Vermont, northern New York, and western New York bordering the St. Lawrence River. (Table 11, p. 24.) The bulk of Canadian milk is processed in the same plants, with the same equipment, and at the same cost as domestic milk. Most of the Canadian milk is hauled to these border plants by farmers, or by means of truck routes from a zone about 20 miles wide at practically the same expense as for domestic milk from areas in Vermont and New York. For the purpose of comparison, the costs of production for both countries have been calculated on the basis of farm costs, including the costs of hauling to the domestic border plants.

4. The weighted average farm cost of production of milk for the United States (northern Vermont, northern New York, and western

New York along the St. Lawrence River) has been determined by weighting the unit cost in each of the several domestic areas by the quantity of fresh milk delivered to the border plants located in those several domestic areas, respectively. The weighted average cost of production of Canadian milk has been determined by weighting the unit costs in the fluid-milk areas of Canada, where farm costs were obtained, by the imports into the United States from those several Canadian areas, respectively.

The weighted average farm cost of production of milk, in the United States and in Canada, including interest and hauling to the domestic border plants, for the fiscal year May 1, 1925, to April 30, 1926, as shown by Method I, Table 15, page 28, is $0.255 per gallon for the United States and $0.212 per gallon for Canada. Said cost of production for the United States exceeds said cost of production for Canada by $0.043 per gallon.

5. The rate of duty necessary to equalize said difference in said costs of production of milk, within the limits of section 315 of the tariff act of 1922, is $0.0375 per gallon.

Respectfully submitted.

THOMAS O. MARVIN,
Chairman.
ALFRED P. DENNIS,
Vice Chairman.
EDGAR B. BROSSARD,
SHERMAN J. LOWELL,
FRANK CLARK,
Commissioners.

SEPARATE STATEMENT OF COMMISSIONER DIXON

I regret to dissent from a report signed by all the members of the commission but I believe that certain facts, that seem to me important, should be presented.

1. Although the original scope of the investigation of milk included the New York milk shed, which extends as far south as Pennsylvania and north to the international boundary line, and the Boston milk shed, which includes all of New Egnland except the north part of Maine and extends as far east as Boston, the majority report of the commission has, for reasons not entirely convincing to me, disregarded all the competing domestic areas except those contiguous to a narrow strip on the Canadian border.

2. The proper interpretation of all the facts set forth in the commission's report makes it illogical to select this restricted area, in which the border plants are located, as the principal market for the purposes of section 315 of the tariff act of 1922.

3. The comparison of costs, used by the majority as the basis of increasing the duties on milk, does not give a true picture of the competitive strengths of the foreign and domestic industries.

1. Scope of the investigation.

The scope of the investigation as to milk is shown on page 19 of the commission's report:

(1) The farm costs of milk to be sold and consumed as fluid milk; * * *
(3) the allocated plant costs of preparing and marketing fluid milk. * * *

2. Principal competitive market.

New York City is the principal competing market for the purposes of section 315 of the tariff act of 1922. It is the greatest consuming market for both the domestic and imported fluid milk to be consumed as fluid milk. The majority members have selected the border plants extending from North Troy, Vt., to Morristown, N. Y., as the area in which domestic and imported milk compete and to which domestic and foreign transportation costs should be computed. No common or single market was taken but the weighted average value of the cost of producing imported milk and hauling it to these plants was used for comparison with the average cost of producing domestic milk and of shipping it to those border plants.

New York City derives its supply of fluid milk from the New York milk shed, but when the domestic supply is not adequate the shortage is supplied by milk imported from Canada. The total imports of milk from Canada into the United States are exceedingly small when compared with the quantity produced in the United States or even with that produced in the Northeastern States. The imports of milk from Canada into New York City (about 2,500,000 gallons) were insignificant—less than 1 per cent—when compared with the quantity produced in the New York milk shed and marketed in New York City (318,589,290 gallons in 1926). This small importation of seventy-six one hundredths of 1 per cent in New York City can not so seriously affect the dairy interests of New York. A small import trade in times of domestic shortage may serve a very useful purpose in helping to moderate excessive prices to the thousands of poor in such cities as New York and Boston.

3. Comparison of costs.

All the milk to be consumed as milk in New York City must come from farms that have been approved by the board of health of that city. With the exception of the patrons of the St. Armand creamery, adjacent to the Vermont border, all the Canadian farms subjected to New York inspection are located in a narrow strip, not over 20 miles at any place, along the New York boundary line from Chateauguay to Rouses Point. It is contended in the majority report that this strip on the Canadian side and a similar adjacent strip in New York State constitute the principal competing market where costs should be equalized. Yet the costs of milk produced in these border areas were not tabulated separately. They were averaged in with costs of milk produced in areas from which no milk was shipped to New York City. Some of the farms included were not inspected by the New York board of health and, therefore, could not sell that milk for consumption as fluid milk in New York City.

The Canadian costs used were obtained from four areas, but in only one of these areas is milk produced under such conditions and inspected in such a way that it can be marketed in New York City. The costs of this one area have a weight of less than 1 per cent in the Canadian average costs used by the other members of the commission. In the other areas milk is produced almost wholly for cream or milk products. In the average Canadian costs used in the report the largest weights are given to these two areas in which milk is produced almost entirely for cream and milk products and can not be sold for fluid consumption in New York City. A comparison of

the costs within these Canadian areas indicates that it is cheaper to produce milk intended for cream and milk products than milk to be consumed as fluid milk. It is assumed in the majority report that the costs of production within these large areas on both sides of the boundary line are representative of the costs of production in the narrow strip 20 miles in width along the boundary line. It is, however, inconceivable that in such contiguous domestic and Canadian areas—20 miles in width—where farming conditions are practically the same, labor conditions similar, and land of the same quality, costs of producing fluid milk for the same markets at the same time of the year should differ by $0.043 per gallon.

The Canadian costs of milk, used by the majority as a basis for an increase in the duty on fresh milk, were incurred in producing milk intended for the most part for cream and milk products. The United States costs, however, were incurred in producing milk to be consumed more largely in the metropolitan markets. Such milk is the more costly to produce. In addition, Canadian summer costs, representing largely summer production, are compared by the majority with the average of summer and winter costs in the United States, although it costs more to produce milk in the winter than in the summer. The higher winter cost is due mainly to the heavy expense for purchased concentrates needed for winter feeding. Domestic farmers are compensated in some measure for the higher winter feed costs by the higher prices they receive for winter milk. The domestic farmers covered in the report received an average of about 7 cents a gallon more for their milk than was paid the Canadian farmers covered. This is explained by (1) the larger proportion of domestic winter milk; and (2) by the larger proportion of higher-price domestic milk sold for fluid consumption.

For the foregoing reasons I do not consider the cost comparison made by the majority members a fair basis upon which to base the rate of duty.

The weighted average domestic cost, it seems to me, should be computed as follows: (1) by using the average cost of production from the areas actually supplying New York City, to wit—the entire New York milk shed, rather than the costs for the northern portions of New York and Vermont only; (2) by including actual handling and pasteurizing costs for the milk sent to New York City; and (3) by computing costs of transporting the milk from production centers to New York City.

The weighted average Canadian costs of production, the actual costs of handling and pasteurization, and the weighted average transportation cost of Canadian milk to New York City should be computed in the same way.

These costs and comparisons are shown in Table 14, page 27 of the report and show that the domestic costs exceed the Canadian costs by $0.027 cents per gallon.

Since the domestic and Canadian milk is not entirely comparable and since the difference in cost of entirely comparable milk would be less than $0.027, an increase in the present duty of $0.025 cents per gallon does not seem to be warranted.

Respectfully submitted.

LINCOLN DIXON, *Commissioner.*

PART III

CREAM

The data applying especially to cream are given in the following pages. Statistics of imports, of prices, and of costs are considered and analyzed.

IMPORTS

The imports for consumption of cream, from 1910 to 1928, are given in the following table:

TABLE 16.—*Cream: Imports for consumption, 1910–1928*

[Source: Foreign Commerce and Navigation]

Year	Rate of duty	Quantity	Value	Duty collected	Value per gallon	Computed ad valorem rate
Fiscal:		*Gallons*				*Per cent*
1910	5 cents per gallon	731,375	$577,339	$36,569	$0.789	6.33
1911	do	2,335,439	1,875,506	116,772	.803	6.23
1912	do	1,120,241	923,767	56,012	.825	6.06
1913	do	1,247,351	1,068,109	62,368	.856	5.84
1914	do.[1]	672,594	585,372	33,630	.870	5.75
1914	Free [2]	1,100,519	964,332		.876	
1915	do	2,077,392	1,800,196		.867	
1916	do	1,193,911	1,042,775		.873	
1917	do	743,819	666,267		.896	
1918	do	711,502	675,012		.949	
Calendar:						
1918	do	704,031	763,809		1.046	
1919	do	931,416	1,111,130		1.193	
1920	do	1,397,160	2,079,863		1.302	
1921	do.[3]	353,855	442,518		1.250	
1921	5 cents per gallon [4]	1,679,914	2,081,094	83,996	1.239	4.04
1922	do.[5]	1,655,890	2,055,190	82,796	1.241	4.03
1922	20 cents per gallon [6]	467,769	716,866	93,554	1.533	13.05
1923	do	3,024,663	4,744,955	604,933	1.569	12.75
1924	do	4,197,528	6,141,231	839,506	1.463	13.67
1925	do	5,171,498	7,585,061	1,033,839	1.467	13.63
1926	do	5,374,131	8,050,912	1,074,826	1.498	13.35
1927	do	4,843,138	7,606,071	968,628	1.570	12.73
1928 (9 months)	do	2,929,704	4,730,458	585,941	1.615	12.38

[1] Act of 1909, July 1 to Oct. 3, 1913.
[2] Act of 1913, Oct. 4, 1913, to June 30, 1914.
[3] Act of 1913, Jan. 1 to May 27, 1921.
[4] Act of 1921, May 28 to Dec. 31, 1921.
[5] Act of 1921, Jan. 1 to Sept. 21, 1922.
[6] Act of 1922, Sept. 22 to Dec. 31, 1922.

Distribution of imports of cream.—Importers of Canadian dairy products furnished the commission information concerning approximately 60 per cent of the quantity of milk and cream imported. It appears that about 50 per cent of the imports of cream were shipped to Metropolitan Boston, Greater New York, and Philadelphia; about 50 per cent to the smaller cities and towns in New England, New

York State and Pennsylvania. About 20 per cent of the Canadian cream was consumed in Boston. About 17 per cent of the imports went to other sections of New England. New York City (including nearby cities in New Jersey) received about 18 per cent and Philadelphia about 12 per cent of the Canadian imports.

The distribution of the imports of cream, according to intended uses, was as follows: Ice cream, 59 per cent; fluid cream, 21 per cent; butter, 13 per cent; condensed and evaporated milk, 1 per cent; and unaccounted for, 6 per cent.

PRICES

The prices of domestic and Canadian cream are based on the price of 92-score butter. The prices for butterfat paid in Canada are usually determined by subtracting from the price of No. 1 pasteurized butter at Montreal about 3½ per cent for making and then by multiplying this difference by 1.166 for the churn overrun. This value plus 4 to 5 cents premium is the price paid for butterfat in sweet cream. In the United States a churn overrun of 1.20 is generally allowed. Inasmuch as prices of cream are usually computed from the values of butterfat based on the prices of butter, a comparison of the prices of butter and butterfat at New York and Montreal is given in Table 58 of the statistical appendix.

FARM COSTS OF PRODUCING MILK TO BE USED FOR CREAM

The farm costs of producing milk in the North Central States and in the three eastern milk sheds (Boston, New York, and Philadelphia) are shown as representative of the costs of milk used for the cream which competes with Canadian cream. The costs for the domestic areas are weighted by the quantities of cream shipped to the three principal eastern markets.

Table 17 shows the farm costs of producing milk in those regions where it is sold to be made into cream.

Table 18 shows costs for separating and processing this milk.

Table 19 shows the combined and summarized costs of producing and handling a gallon of cream.

The figures for the Philadelphia milk shed may be used to illustrate the method: The average butterfat test of milk is 3.64 per cent (Table 17) and that of cream is 35.85 per cent (Table 18). Dividing 3.64 by 35.85 and multiplying the result by 100 gives 10.15, which is the number of pounds of cream in 100 pounds of milk. The remainder, 89.85 pounds, is skim milk. The net cost of 100 pounds of milk, including interest, is $3.06 (Table 17), from which the value of 89.85 pounds of skim milk, $0.325 ($0.362 per 100 pounds, see Table 48 in appendix) is deducted. The remainder, $2.735 is the cost of 10.15 pounds of cream. This is readily converted to the cost per gallon at the rate of 8.3 pounds to the gallon. This cost of $2.24 is that in Table 19.

TABLE 17.—*Milk for cream: Farm cost of producing milk in the United States and Canada. (Each area weighted by the quantity of cream shipped to three eastern markets.) May 1, 1925, to April 20, 1926*

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Average butterfat test.....per cent..	3.57	3.64	3.65	3.81	3.69	3.50
	Cost per 100 pounds					
Feeds:						
Concentrates—						
Farm grains	$0.27	$0.27	$0.11	$0.06	$0.13	$0.15
Purchased concentrates	.13	.56	.66	.78	.63	.28
Feed hauling and grinding	.04	.08	.05	.03	.05	.04
Total concentrates	.44	.91	.82	.87	.81	.47
Roughage—						
Hay	.39	.40	.64	.77	.62	.63
Succulent roughage	.24	.14	.25	.18	.21	.12
Straw and stover	.07	.22	.01	.01	.05	.06
Total roughage	.70	.76	.90	.96	.88	.81
Pasture	.20	.26	.16	.15	.17	.24
Skim milk purchased	.03					.09
Total feed cost	1.37	1.93	1.88	1.98	1.86	1.61
Labor on herd:						
Operator's and hired labor	.53	.56	.64	.80	.67	.64
Unpaid family labor	.12	.19	.16	.07	.13	.14
Total herd labor	.65	.75	.80	.87	.80	.78
Other costs:						
Milk hauling	.11	.26	.21	.30	.24	.13
Repairs and depreciation—						
Buildings	.06	.07	.07	.07	.07	.06
Equipment	.02	.02	.03	.03	.03	.01
Miscellaneous expense	.15	.29	.17	.17	.18	.10
Total	.34	.64	.48	.57	.52	.33
Gross costs	2.36	3.32	3.16	3.42	3.18	2.72
Credits (deductions from cost):						
Net herd increase	.29	.29	.21	.17	.22	.20
Manure	.14	.19	.19	.21	.19	.18
Miscellaneous herd receipts		.01	.01	.02	.01	.01
Total credits	.43	.49	.41	.40	.42	.39
Net cost of producing milk	1.93	2.83	2.75	3.02	2.76	2.33
Interest at 6 per cent on dairy capital	.18	.23	.20	.20	.20	.20
Net cost of producing milk, including interest	2.11	3.06	2.95	3.22	2.96	2.53
Price received by farmers for milk	2.10	2.35	2.43	2.76	2.50	1.99
	Cost per gallon of cream					
Net cost of producing milk, including interest	$1.69	$2.24	$2.32	$2.40	$2.27	$2.00

TABLE 18.—*Cream: Plant costs per gallon of handling and processing, and prices paid for raw milk in the United States and Canada, May 1, 1925, to April 30, 1926*

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Average butterfat test, per cent	39.93	35.85	38.42	38.75	38.38	39.93
Buying and collecting costs:						
Buying expenses	$0.001	$0.005	$0.009	$0.003	$0.006	$0.006
Collecting expenses	.014	.074	.029	.018	.029	.011
In freight			.021	.006	.009	.001
Total buying and collecting costs	.015	.079	.059	.027	.044	.018
Processing costs:						
Receiving	.033	.093	.053	.046	.053	.048
Separating	.018	.034	.039	.030	.032	.025
Pasteurizing	.025	.006	.020	.019	.019	.028
Cooling	.016	.030	013	006	013	.019
Can filling	.014	.004	.010	.005	.008	.014
Total processing costs	.106	.167	.135	.106	.125	.134
Shipping costs:						
Icing	.005		.001	.001	.001	.002
Loading expenses	.018	.004	.006	.006	.007	.010
Total shipping costs	.023	.004	.007	.007	.008	.012
Total handling and processing costs	.144	.250	201	.140	.177	.164
Interest on plant capital at 6 per cent	.015	.030	.013	.011	.015	.014
Total costs, including interest	.159	.280	.214	.151	.192	178
Average price paid by independent plants	1.715	1.886	2.206	2.214	2.107	1.515

TABLE 19.—*Cream: Summary of cost of production per gallon in the United States and Canada, May 1, 1925, to April 30, 1926*

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Average butterfat test, per cent [1]	39.93	35.85	38.42	38.75	38.38	39.93
I. Farm data:						
Cost of milk per gallon of cream—						
(a) Excluding interest	$1.520	$2.050	$2.150	$2.230	$2.100	$1.810
Including interest	1.690	2.240	2.320	2.400	2.270	2.000
(b) Price received by farmers from independent plants	1.715	1.886	2.206	2.214	2.107	1.517
II. Plant costs:						
Cost of receiving, processing, etc	.106	.167	.135	.106	.125	.134
Buying, collecting, and freight	.015	.079	.059	.027	.044	.018
Cost of loading and icing	.023	.004	.007	.007	.008	.012
Total plant cost	.144	.250	.201	.140	.177	.164
Interest on plant capital	.015	.030	.013	.011	.015	.014
Total plant cost, including interest	.159	.280	.214	.151	.192	.178
Farm and plant cost (including interest)	1.849	2.520	2.534	2.551	2.462	2.178

[1] Butterfat test as determined from plants studied.

STANDARDIZATION OF CREAM COSTS

Costs have been shown for milk and cream with the actual average butterfat test as determined for each region. For a comparison of the grades having the same butterfat tests, the costs of cream are shown on a 40 per cent butterfat basis.

SUMMARY OF COSTS OF CREAM

Table 20 shows the domestic costs of producing cream in the United States and Canada.

TABLE 20.—*Cream: Summary of cost of production per gallon in the United States and Canada, standardized to 40 per cent cream, May 1, 1925, to April, 30, 1926*

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk-shed	Weighted average	
Average butterfat test, per cent	40	40	40	40	40	40
I. Farm data:						
Cost of milk per gallon of cream—						
(a) Excluding interest	$1.530	$2.280	$2.240	$2.310	$2.190	$1.820
Including interest	[1] 1.690	2.490	2.420	2.480	2.370	2.010
(b) Price received by farmer from independent plants	[1] 1.715	2.096	2.301	2.288	2.200	1.525
II. Plant costs:						
Cost of receiving, processing, etc	[1] .106	.181	.139	.109	.128	[1] .134
Buying, collecting, and freight	[1] .015	[1] .079	[1] .059	[1] .027	[1] .044	[1] .018
Cost of loading and icing	[1] .023	[1] .004	[1] .007	[1] .007	[1] .008	[1] .012
Total plant costs	[1] .144	.264	.205	.143	.180	[1] .164
Interest on plant capital	[1] .015	[1] .030	[1] .013	[1] .011	[1] .015	[1] .014
Total plant cost including interest	.159	.294	.218	.154	.195	.178
Farm and plant cost (including interest)	1.849	2.784	2.638	2.634	2.565	2.188

[1] Indicates that the particular figure is identical with that appearing in Table 19.

TRANSPORTATION COSTS OF CREAM

Canadian cream penetrates farther into the eastern part of the United States than does Canadian milk. It has been stated that the city of Boston consumes 20 per cent, New York City 18 per cent, and Philadelphia 12 per cent of the Canadian imports; the other 50 per cent of the imports is consumed for the most part in the other urban centers of the East (see p. 33).

Either Boston or New York City might be considered the principal market in the United States, or these two, together with Philadelphia, might possibly be taken as the principal markets for the purpose of this investigation.

Three methods of treating transportation costs are discussed below.

METHOD I

In Method I Boston is considered the principal competing market in the United States, and Canadian transportation costs thereto are added to the Canadian farm and plant costs. The costs actually expended in moving cream from the areas in the Boston milk shed to the city of Boston would constitute the domestic transportation costs.

According to this method the Canadian transportation costs would be $0.0911 per gallon for 1926 and $0.0852 per gallon for 1927. The domestic transportation costs would be $0.0463 per gallon for 1926 and $0.0518 for 1927.

METHOD II

In Method II New York is considered the principal competing market in the United States, and Canadian transportation costs thereto are added to the Canadian farm and plant costs. The costs actually expended in moving cream from the areas in the New York milk shed and from the North Central States to New York City would constitute the domestic transportation costs. New York City receives practically no cream from the Boston or Philadelphia milk sheds; its supply is furnished by the New York milk shed, by the cream-shipping areas in the North Central States, and by Canadian imports.

According to this method the Canadian transportation costs would be $0.0952 per gallon for 1926 and $0.0873 per gallon for 1927. The domestic transportation costs would be $0.0571 per gallon for 1926 and $0.0571 per gallon for 1927.

METHOD III

In Method III an average of the actually expended transportation costs incurred in moving all the cream from the three eastern milk sheds and from the North Central States to the three eastern metropolitan markets is compared with the average of the costs of transporting Canadian cream to these three metropolitan markets.

The average cost of shipping Canadian cream to Boston, New York, and Philadelphia in 1926 was $0.0956 per gallon, and in 1927 was $0.0889 per gallon.

The average cost of shipping domestic cream from the three eastern milk sheds and from the North Central States to Boston, New York, and Philadelphia in 1926 was $0.0651 per gallon, and in 1927, was $0.0672 per gallon.

SUMMARY OF COSTS INCLUDING TRANSPORTATION

Tables 21, 22, and 23 show summaries of costs of production in the United States and Canada for cream with the average butterfat test as determined from the books of the plants studied. Table 21 with transportation to Boston; Table 22 with transportation to New York; Table 23 with transportation to the markets in each milk shed to which cream was actually shipped.

Tables 24, 25, and 26 similarly show summaries of costs of production for cream with the butterfat test standardized at 40 per cent.

TABLE 21.—*Cream: Summary of cost of production in the United States and Canada, for cream with the average butterfat test as determined from the books of the plants studied, including transportation to Boston, Mass. (Method I), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	Boston milk shed	Canada
Average butterfat test (per cent)	38.75	39.93
Farm cost of producing milk for cream, including interest [1]	$2.400	$2.000
Plant-handling costs [2]	.151	.178
Total cost, not including transportation	2.551	2.178
Transportation to Boston, Mass.	.046	.091
Total cost, including transportation	2.597	2.269
Amount by which United States cost exceeds Canadian cost		.328

[1] For details see Table 17, p. 34. [2] For details see Table 18, p. 35.

TABLE 22.—*Cream: Summary of cost of production in the United States and Canada, for cream with the average butterfat test as determined from the books of the plants studied, including transportation to New York, N. Y. (Method II), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	New York milk shed	Canada
Average butterfat test (per cent)	38.42	39.93
Farm cost of producing milk for cream, including interest [1]	$2.320	$2.000
Plant-handling costs [2]	.214	.178
Total cost, not including transportation	2.534	2.178
Transportation to New York, N. Y.	.057	.095
Total cost, including transportation	2.591	2.273
Amount by which United States cost exceeds Canadian cost		.318

[1] For details see Table 17, p. 34. [2] For details see Table 18, p. 35.

TABLE 23.—*Cream: Summary of the cost of production in the United States and Canada, for cream with the average butterfat test as determined from the plants studied, including transportation to the normal principal market for each of the respective milk sheds (Method III), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Average butterfat test (per cent)	39.93	35.85	38.42	36.75	38.38	39.93
Farm cost of producing milk for cream, including interest [1]	$1.690	$2.240	$2.320	$2.400	$2.270	$2.000
Plant-handling costs [2]	.159	.280	.214	.151	.192	.178
Total cost not including transportation	1.849	2.520	2.534	2.551	2.462	2.178
Transportation to the normal principal market for each of the respective milk sheds	.176	.038	.057	.046	.065	.096
Total cost including transportation	2.025	2.558	2.591	2.597	2.527	2.274
Amount by which United States cost exceeds Canadian cost						.253

[1] For details see Table 17, p. 34. [2] For details see Table 18, p. 35.

TABLE 24.—*Cream: Summary of cost of production in the United States and Canada, for cream with an average butterfat test of 40 per cent, including transportation to Boston, Mass. (Method I), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	Boston milk shed	Canada
Average butterfat test (per cent)	40.00	40.00
Farm cost of producing milk for cream, including interest	$2.480	$2.010
Plant-handling costs	.154	.178
Total cost not including transportation	2.634	2.188
Transportation to Boston, Mass	.046	.091
Total cost including transportation	2.680	2.279
Amount by which United States cost exceeds Canadian cost	----------	.401

TABLE 25.—*Cream: Summary of cost of production in the United States and Canada, for cream with an average butterfat test of 40 per cent, including transportation to New York, N. Y. (Method II), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	New York milk shed	Canada
Average butterfat test (per cent)	40.00	40.00
Farm cost of producing milk for cream, including interest	$2.420	$2.010
Plant-handling costs	.218	.178
Total cost not including transportation	2.638	2.188
Transportation to New York, N. Y	.057	.095
Total cost including transportation	2.695	2.283
Amount by which United States cost exceeds Canadian cost	----------	.412

TABLE 26.—*Cream: Summary of cost of production in the United States and Canada, for cream with an average butterfat test of 40 per cent, including transportation to the normal principal market for each of the respective milk sheds (Method III), May 1, 1925, to April 30, 1926*

[Dollars per gallon]

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Average butterfat test (per cent)	40.00	40.00	40.00	40.00	40.00	40.00
Farm cost of producing milk for cream, including interest	$1.690	$2.490	$2.420	$2.480	$2.370	$2.010
Plant-handling costs	.159	.294	.218	.154	.195	.178
Total cost, not including transportation	1.849	2.784	2.638	2.634	2.565	2.188
Transportation to the normal principal market for each of the respective milk sheds	.176	.038	.057	.046	.065	.096
Total cost, including transportation	2.025	2.822	2.695	2.680	2.630	2.284
Amount by which United States cost exceeds Canadian cost	----------	----------	----------	----------	----------	.346

SUMMARY FOR CREAM

Findings of fact to the following effect are, in the judgment of the United States Tariff Commission, warranted by the evidence collected in the commission's investigation of the costs of production of cream and summarized in the foregoing report:

1. Canada is the principal competing country.

2. The present duty on cream of 20 cents per gallon, prescribed in paragraph 707 of Title I of the tariff act of 1922, does not equalize the difference in costs of production of cream in the United States and in said principal competing country.

3. Canadian cream enters into competition with domestic cream at the three principal markets—Boston, New York, and Philadelphia. Of the Canadian cream, 20 per cent goes to Boston, 18 per cent to metropolitan New York, 12 per cent to Philadelphia, and the remainder, 50 per cent, to cities in the milk sheds supplying cream to these markets. Of the domestic cream consumed in Boston, New York, and Philadelphia, 37 per cent is supplied by areas in the Boston milk shed, 38 per cent by the New York milk shed, 13 per cent by the Phildelphia milk shed, and 12 per cent by creameries in six North Central States.

4. The weighted average cost of production in each of the milk sheds supplying Boston, New York, and Philadelphia has been determined by weighting the unit cost of production for each of the various areas of each milk shed by the quantity of cream sold in each area, respectively, of that milk shed. The weighted average cost of production of cream delivered to the three markets—Boston, New York, and Philadelphia—from the three eastern milk sheds has been determined by weighting the average unit cost of the cream for each milk shed by the quantity of cream sold in each of these three markets, respectively. The weighted average cost for the North Central States has been determined by weighting the unit cost of production in the various States by the quantity of cream sold to the three eastern markets from each State, respectively. The weighted average cost of production for the United States has been determined by weighting the average unit cost for the three eastern milk sheds by the cream sold there and combining that with the average unit cost of the North Central States weighted by the cream from the North Central States supplied to these three eastern markets. The weighted average cost of production for Canada has been determined by weighting the average unit cost for each area in Canada by the quantity of cream imported into the United States from that area. The weighted average cost of transportation of domestic cream to the three eastern markets—Boston, New York, and Philadelphia—from producing areas in the respective milk sheds and in the six North Central States has been determined by weighting the average freight rate from each area in the eastern milk sheds and in the North Central States to the principal markets by the quantity of cream shipped to these eastern markets from each area, respectively. This is the same method of weighting as used in determining the weighted average cost of production.

The weighted average cost of production of cream, including interest and transportation, for the fiscal year May 1, 1925, to May 1, 1926, as shown by Method I in Table 24, page 39, is for the United

States, $2.680 per gallon, and for Canada, $2.279 per gallon. Said cost of production in the United States exceeds said cost of production in Canada by $0.401 per gallon. By Method II, shown in Table 25, page 39, the domestic costs exceed the foreign costs by $0.412 per gallon. By Method III, shown in Table 26, the domestic costs exceed the foreign costs by $0.346.

5. The rate of duty necessary to equalize the differences in costs of production of cream in the United States and in said principal competing country, within the limits of section 315 of the tariff act of 1922, is $0.30 per gallon.

Respectfully submitted.

THOMAS O. MARVIN,
Chairman.
ALFRED P. DENNIS,
Vice Chairman.
EDGAR B. BROSSARD,
SHERMAN J. LOWELL,
FRANK CLARK,
Commissioners.

SEPARATE STATEMENT OF COMMISSIONER DIXON ON CREAM

The objections urged to the comparison of milk costs, accepted by the other members of the commission, are not so pertinent to the comparison of cream costs used by them. However, there are two matters which should be considered with respect to the duty on cream.

First, the milk costs used by the other members of the commission in computing the domestic costs of cream are to a large extent representative of costs in areas which are given over to the production of higher cost milk to be consumed as fluid milk, whereas the milk costs used in computing Canadian cream costs are representative of costs in areas which are more largely given over to the production of lower cost milk to be used for cream and milk products.

Second, imported Canadian cream is the product of summer dairying, wherein the herd is largely pasture fed. The domestic cream industry of the North Central States is organized in much the same way in this respect as that in the Canadian areas covered. But the eastern milk production, which is given a far larger weight in the average domestic cost used in the report, is stimulated in winter only at the considerable expense of feeding purchased concentrates. Had the Canadian costs, which are largely summer costs, been compared with the summer costs of the Northeastern States or with the all-year-round costs of the similarly organized industry of the North Central States, no increase in duty, as indicated in the report, would be necessary.

It should be realized that nearly three times as much Canadian cream comes into the United States during the spring and summer months as during the fall and winter months, and that summer dairying costs are lower than winter dairying costs.

Respectfully submitted.

LINCOLN DIXON, *Commissioner.*

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SECTION II

STATISTICAL APPENDIX

TABLE 27.—*Scope of farm-cost study in the United States May 1, 1925, to April 30, 1926*

Area	Farm sales, 1924 (census)			Production on farms studied		Number of farms studied	Number of cows on farms studied
	Whole milk	Butterfat [1]		Milk	Butterfat in milk		
		In fluid milk sold	In fluid cream sold				
	Thousands of pounds, i. e., 000 omitted			*1,000 pounds*	*Pounds*		
Boston milk shed:							
1	471,031	4,164	7,451	999	41,185	23	204
2	591,799	11,015	4,454	1,346	50,385	26	276
3	346,247	6,771	1,661	3,056	105,387	26	462
4	492,748	5,945	5,894	4,926	170,035	51	751
5	160,053	2,248	629	1,845	67,627	22	377
6	303,753	2,337	6,284	2,065	82,813	23	384
7	278,300	3,650	4,307	2,307	93,371	20	480
8	501,107	8,177	8,545	2,805	103,967	24	545
New York milk shed:							
9	571,474	11,119	2,941	2,110	77,079	25	389
10	434,999	11,464	1,197	2,642	93,464	23	508
11	464,996	14,131	690	1,905	67,734	26	320
12	133,756	1,439	2,004	1,891	84,077	24	439
13	677,892	10,881	11,555	3,351	129,056	30	627
14	321,146	6,751	744	2,742	94,276	24	510
15	610,673	5,063	2,879	2,323	81,223	26	458
16	471,539	4,785	1,168	4,109	138,951	27	638
17	406,127	5,620	1,578	3,044	104,723	28	494
18	474,686	11,998	2,446	3,059	106,650	25	458
19	299,752	6,015	1,157	1,694	59,344	24	264
20	851,546	22,585	335	4,218	158,212	46	690
21	845,473	5,195	4,792	3,247	114,699	49	636
22	308,950	2,883	3,076	2,165	75,773	23	378
23	584,150	7,112	2,864	2,137	75,496	23	296
Philadelphia milk shed:							
24	219,617	3,587	1,771	2,219	83,313	26	325
25	518,418	8,905	4,509	1,031	38,006	25	216
26	421,525	6,757	4,825	1,178	42,008	27	186
27	478,634	15,164	----------	1,690	58,006	26	286
28	182,580	4,601	843	2,312	75,606	29	359
29	216,547	4,422	2,123	870	33,223	25	197
North Central States:							
30	----------	----------	[2] 672	1,493	49,989	24	241
31	----------	----------	52	1,102	49,366	20	204
32	----------	----------	490	1,026	46,454	28	213
33	----------	----------	1,311	2,269	81,954	25	433
34	----------	----------	4,631	2,497	85,921	27	370
35	----------	----------	2,743	1,868	69,001	22	276
36	----------	----------	1,186	1,553	67,649	19	284
37	----------	----------	1,774	2,861	99,338	25	445

[1] The butterfat in fluid milk and cream sold was determined by applying the percentage of each handled by creamery plants to census figures. These amounts formed the basis of weighting costs.
[2] Cream for fluid consumption and ice cream shipped to eastern markets.

TABLE 28.—*Scope of farm-cost study in Canada May 1, 1925, to April 30, 1926*

Area	Shipments to the United States, 1925 [1]		Production on farms studied		Number of farms studied	Number of cows on farms studied
	Pounds of milk	Pounds of butterfat in cream	Milk	Butterfat in milk		
	Pounds	*Pounds*	*1,000 pounds*	*Pounds*		
1		3,544,000	2,758	103,180	40	678
2	42,939,000	3,310,000	1,550	52,931	26	319
3	268,000	5,007,000	4,371	160,197	62	1,056
4		336,000	1,375	51,048	22	295
5	28,068,000	1,559,000	2,344	79,469	25	405
6	62,000	2,896,000	3,830	126,250	22	470

[1] Based on data obtained from importers, the Provincial Department of Agriculture of Quebec, and reports from United States consular districts.

TABLE 29.—*Milk: Production costs per cow by areas for regions in the United States supplying milk and cream to Boston, New York, and Philadelphia,[1] May 1, 1925, to April 30, 1926*

Area	Production per cow			Direct cost						
	Milk	Butter-fat	Butter-fat	Roughage and concentrates	Pasture	Total feed cost	Labor cost	Milk hauling	Miscellaneous	Total direct cost
Boston milk shed:[2]	*Pounds*	*Per cent*	*Pounds*							
1	4,886	4.1	201.5	$81.92	$7.52	$89.44	$51.08	$11.50	$13.00	$165.02
2	4,872	3.7	182.4	110.53	7.13	117.66	49.01	25.34	9.89	201.90
3	6,621	3.4	228.4	153.95	5.90	159.85	47.75	18.26	10.47	236.33
4	6,556	3.4	226.3	135.86	9.34	145.20	49.41	27.05	11.54	233.20
5	4,893	3.7	179.3	94.91	5.96	100.87	45.12	17.77	8.29	172.05
6	5,378	4.0	215.6	98.35	6.09	104.44	45.01	11.60	7.17	168.22
7	4,803	4.0	194.4	80.47	5.62	86.09	34.12	9.84	6.24	136.29
8	5,149	3.7	190.9	79.51	10.68	90.19	43.27	13.47	7.15	154.08
New York milk shed:										
9	5,419	3.6	197.9	102.84	11.49	114.33	43.16	13.03	9.15	179.67
10	5,206	3.5	184.2	112.55	8.16	120.71	44.97	11.66	9.09	186.43
11	5,944	3.6	211.3	104.42	6.92	111.34	50.78	16.75	12.05	190.92
12	4,307	4.4	191.5	101.07	7.46	108.53	43.71	10.17	5.74	168.15
13	5,355	3.8	206.3	97.94	6.65	104.59	43.55	9.57	6.97	164.68
14	5,378	3.4	184.9	94.31	8.48	102.79	38.26	10.78	6.67	158.50
15	5,068	3.5	177.2	84.69	9.71	94.40	42.76	11.96	10.32	159.44
16	6,436	3.4	217.6	108.40	9.83	118.23	49.81	15.82	11.29	195.15
17	6,163	3.4	212.0	107.60	9.01	116.61	38.40	10.64	9.33	174.98
18	6,672	3.5	232.6	96.21	7.58	103.79	43.38	12.14	9.50	168.81
19	6,406	3.5	224.5	103.17	12.50	115.67	54.39	13.59	13.59	197.24
20	6,110	3.8	229.1	105.98	8.58	114.56	46.39	11.40	14.86	187.21
21	5,101	3.5	180.2	69.40	10.63	80.03	40.98	14.75	9.03	144.79
22	5,722	3.5	200.2	89.97	10.37	100.34	48.72	9.94	13.81	172.81
23	7,218	3.5	255.0	106.91	13.91	120.82	52.58	14.35	17.66	205.41
Philadelphia milk shed:										
24	6,834	3.8	256.6	111.96	11.99	123.95	41.48	13.18	14.69	193.30
25	4,786	3.7	176.4	79.52	14.73	94.25	35.61	14.41	14.08	158.35
26	6,334	3.6	225.7	95.29	13.86	109.15	47.93	11.59	21.46	190.13
27	5,909	3.4	202.7	94.34	14.52	108.86	52.30	14.77	15.64	191.57
28	6,441	3.3	210.7	111.54	14.72	126.26	43.12	15.32	15.64	200.34
29	4,415	3.8	168.4	90.97	14.02	104.99	40.07	18.45	11.2	174.75

North Central States:										
30	6,201	3.4	207.7	82.01	14.57	96.58	39.73	8.48	9.56	154.35
31	5,397	4.5	241.9	85.20	15.39	100.59	42.68	17.18	11.48	171.93
32	4,806	4.5	217.7	68.39	15.94	84.33	41.07	11.38	8.87	145.65
33	5,240	3.6	189.3	79.16	9.30	88.46	35.88	6.25	10.15	140.72
34	6,768	3.4	232.8	66.41	12.06	78.47	38.24	6.85	8.95	132.51
35	6,782	3.7	250.5	68.96	11.17	80.13	46.93	10.79	7.38	145.23
36	5,458	4.4	237.8	99.15	13.14	112.29	47.16	5.85	10.29	175.59
37	6,423	3.5	223.0	82.71	14.14	96.85	41.36	6.58	10.71	155.50

See footnotes on p. 47.

TABLE 29.—*Milk: Production costs per cow by areas for regions in the United States supplying milk and cream to Boston, New York, and Philadelphia,*[1] *May 1, 1925, to April 30, 1926*—Continued

Area	Indirect cost			Total gross cost	Credits (deductions from cost)					Interest on investment (@ 6 per cent	Net cost including interest	Returns per cow
	Depreciation and repairs		Total		Net herd sales and increased inventory	Manure	Other credits	Total credits	Net cost excluding interest			
	Buildings	Equipment										
Boston milk shed:[2]												
1	$3.40	$1.83	$5.23	$170.25	$17.04	$11.08	$1.10	$29.22	$141.03	$11.79	$152.82	$123.96
2	3.01	1.62	4.63	206.53	9.36	11.37	1.74	22.47	184.06	9.48	193.54	151.38
3	3.38	1.22	4.60	240.93	[3] −8.88	12.53	1.66	5.31	235.62	10.38	246.00	254.79
4	4.39	1.46	5.85	239.05	6.85	11.58	1.49	19.92	219.13	13.69	232.82	224.49
5	3.08	1.66	4.74	176.79	14.16	11.85	.84	26.85	149.94	9.94	159.88	130.44
6	2.65	.93	3.58	171.80	15.14	10.74	.55	26.43	145.37	9.88	155.25	134.34
7	3.70	1.75	5.45	141.74	1.10	9.92	.61	11.63	130.11	9.41	139.52	122.87
8	3.47	1.98	5.45	159.53	4.27	9.96	.28	14.51	145.02	8.82	153.84	122.95
New York milk shed:												
9	3.85	1.51	5.36	185.03	20.06	10.99	.56	31.61	153.42	12.30	165.72	129.99
10	3.80	1.08	4.88	191.31	9.02	10.87	.46	20.35	170.96	10.40	181.36	142.50
11	2.66	1.22	3.88	194.80	8.80	12.05	.83	21.68	173.12	9.84	182.96	147.70
12	2.73	.82	3.55	171.70	11.10	9.82	1.34	22.26	149.44	8.51	157.95	115.12
13	3.13	1.17	4.30	168.98	9.81	10.33	.37	20.51	148.47	9.77	158.24	135.73
14	3.55	.95	4.50	163.00	5.86	10.30	.52	16.68	146.32	11.55	157.87	126.70
15	4.23	1.69	5.92	165.36	12.84	10.64	.36	23.84	141.52	10.50	152.02	112.51
16	5.54	3.29	8.83	203.98	10.13	11.76	.52	22.41	181.57	13.42	194.99	155.73
17	5.57	3.10	8.67	183.65	10.91	12.25	.44	23.60	160.05	12.50	172.55	142.33
18	4.27	1.65	5.92	174.73	1.33	11.30	.18	12.81	161.92	11.91	173.83	168.84
19	7.07	1.64	8.71	205.95	21.01	11.28	.26	32.55	173.40	16.79	190.19	146.34
20	3.30	1.92	5.22	192.43	22.73	13.12	.85	36.70	155.73	14.76	170.49	152.59
21	2.48	1.73	4.21	149.00	12.25	10.53	.41	23.19	125.81	9.88	135.69	115.07
22	5.82	2.02	7.84	180.65	12.92	11.93	.15	25.00	155.65	14.90	170.55	135.61
23	5.63	1.98	7.61	213.02	9.83	11.31	.09	21.23	191.79	13.18	204.97	174.19
Philadelphia milk shed:												
24	3.46	1.24	4.70	198.09	18.67	11.77	.57	31.01	166.99	13.18	180.17	172.05
25	3.82	1.10	4.92	163.27	16.03	9.64	.30	25.97	137.30	10.42	147.72	108.49
26	5.37	1.36	6.73	196.86	17.93	11.83	.51	30.27	166.59	14.42	181.01	141.65
27	3.45	1.13	4.58	196.15	16.75	11.16	.46	28.37	167.78	12.32	180.10	152.86
28	3.66	1.11	4.77	205.11	[3] −3.19	8.88	.44	6.13	198.98	11.74	210.72	165.03
29	3.10	1.19	4.29	179.04	17.18	8.75	.66	26.59	152.45	10.75	163.20	112.92

North Central States:												
30	3.57	1.67	5.24	159.59	14.69	8.29	.26	23.24	136.35	10.43	146.78	123.84
31	3.76	1.20	4.96	176.89	15.57	7.91	.23	23.71	153.18	10.80	163.98	159.90
32	3.22	1.07	4.29	149.94	26.54	8.11	.04	34.69	115.25	8.87	124.12	113.07
33	2.82	1.70	4.52	145.24	16.05	9.48	.05	25.58	119.66	9.58	129.24	109.45
34	3.57	1.67	5.24	137.75	18.01	8.80	.06	26.87	110.88	10.65	121.53	142.05
35	4.61	1.07	5.68	150.91	15.76	9.34	.22	25.32	125.59	12.97	138.56	139.70
36	5.60	1.73	5.33	180.92	28.05	11.35	.54	39.94	140.98	14.03	155.01	142.72
37	3.88	2.09	5.97	161.47	15.70	9.84	.11	25.65	135.82	14.08	149.90	129.34

[1] The cost per cow includes the proportional cost of raising young cattle to maintain the herd.
[2] The milk shed is the territory which furnishes the supply to the terminal market.
[3] Net herd decrease.

TABLE 30.—*Milk: Production cost per cow by areas for regions in Canada supplying milk and cream to the United States, May 1, 1925, to April 30, 1926*

Area	Production per cow			Direct costs						
	Milk	Butter-fat	Butter-fat	Rough-age and concen-trates	Pasture	Total feed cost	Labor cost	Milk hauling	Miscel-laneous	Total direct cost
	Pounds	*Per cent*	*Pounds*							
1	4,005	3.7	152.1	$65.86	$9.31	$75.17	$37.89	$4.77	$4.77	$122.60
2	4,862	3.4	166.9	59.21	14.71	73.92	41.80	10.00	4.43	130.15
3	4,139	3.7	151.7	59.87	10.01	69.88	34.44	3.33	4.24	111.89
4	4,667	3.7	173.2	62.51	15.76	78.27	38.21	6.50	4.71	127.69
5	5,786	3.4	196.1	69.42	11.21	80.63	44.91	10.20	6.15	141.89
6	8,142	3.3	268.4	95.81	18.66	114.47	35.44	8.27	7.10	165.28

Area	Indirect cost			Total gross cost	Credits (deductions from cost)				Net cost excluding interest	Interest on invest-ment at 6 per cent	Net cost including interest	Re-turns per cow
	Depreciation and repairs		Total		Net herd sales and increased inventory	Manure	Other credits	Total credits				
	Build-ings	Equip-ment										
1	$3.25	$1.66	$4.91	$127.51	$10.65	$9.35	$0.64	$20.64	$106.87	$9.05	$115.92	$85.71
2	2.67	.91	3.58	133.73	16.83	9.13	.26	26.22	107.51	10.54	118.05	97.06
3	2.68	1.52	4.20	116.09	4.99	8.35	.91	14.25	101.84	8.66	110.50	84.21
4	4.81	2.16	6.97	134.66	4.63	8.72	.36	13.71	120.95	11.17	132.12	93.17
5	4.42	3.02	7.44	149.33	7.13	7.82	.37	15.32	134.01	9.59	143.60	105.15
6	3.31	.16	5.47	170.75	8.74	8.75	.29	17.78	152.97	11.67	164.64	148.84

TABLE 31.—*Milk: Quantities and cost of feed, pasture, and labor per animal unit for regions in United States supplying milk and cream to Boston, New York, and Philadelphia,*[1] *May 1, 1925, to April 30, 1926*

Area	Number of animal units	Quantity of feeds						
		Roughage			Skim milk fed to calves	Concentrates		
		Hays	Succulent	Straw, corn fodder, and stover		Farm grains	Mill feeds and oil meal	Total concentrates
Boston milk shed:		*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1	280	4,284	2,382	82	17	116	1,218	1,334
2	356	4,232	2,043	70	11	20	1,729	1,749
3	511	4,447	6,037	16	.....	12	2,662	2,674
4	926	4,226	5,369	159	20	64	2,052	2,116
5	489	4,252	4,248	63	20	29	1,172	1,201
6	508	5,320	1,133	133	19	38	1,652	1,690
7	590	4,729	1,091	192	37	144	1,212	1,356
8	659	4,877	4,662	312	33	276	758	1,034
New York milk shed:								
9	487	4,088	4,527	834	.....	833	900	1,733
10	592	3,275	6,448	306	.....	143	1,510	1,662
11	399	4,333	4,598	180	.....	1	1,632	1,633
12	552	3,507	2,048	255	17	9	1,519	1,528
13	805	4,050	2,961	20	6	12	1,638	1,650
14	609	4,686	4,456	60	.....	56	1,320	1,376
15	574	4,607	4,183	75	.....	87	1,214	1,301
16	793	5,271	3,621	106	.....	405	1,587	1,992
17	627	4,536	4,424	86	.....	197	1,975	2,172
18	563	4,365	7,568	76	.....	136	1,603	1,739
19	339	3,614	8,314	206	.....	430	1,038	1,468
20	908	3,912	6,735	103	.....	258	1,627	1,885
21	777	3,689	5,355	244	.....	493	585	1,078
22	453	3,151	7,447	132	.....	512	1,242	1,754
23	363	3,742	5,996	639	.....	1,220	839	2,059
Philadelphia milk shed:								
24	416	2,741	4,817	1,504	.....	1,583	953	2,536
25	259	1,752	1,175	3,410	.....	1,064	795	1,859
26	228	2,240	2,145	1,700	.....	1,074	1,520	2,594
27	346	2,454	2,765	1,905	.....	1,242	1,146	2,388
28	422	2,142	2,640	3,062	.....	862	1,523	2,385
29	234	2,057	2,749	3,504	.....	913	1,005	1,918
North Central States:								
30	296	3,013	3,227	3,055	.....	1,587	102	1,689
31	270	2,099	2,515	2,682	.....	1,959	583	2,542
32	299	1,673	2,447	3,022	.....	1,968	368	2,336
33	581	1,852	4,736	2,444	510	1,798	362	2,160
34	461	3,708	2,562	1,576	680	942	219	1,161
35	344	3,158	6,963	213	94	608	685	1,293
36	390	1,924	7,577	1,570	1,180	1,301	660	1,961
37	592	2,696	9,709	968	201	1,312	262	1,574

[1] An animal unit is the equivalent of one mature cow kept for 12 months.

TABLE 31.—*Milk: Quantities and cost of feed, pasture, and labor per animal unit for regions in United States supplying milk and cream to Boston, New York, and Philadelphia, May 1, 1925, to April 30, 1926*—Continued

Area	Number of animal units	Value of feeds							
		Roughage			Skim milk fed to calves	Concentrates			
		Hays	Succulent	Straw, corn fodder, and stover		Farm grains	Mill feeds and oil meal	Feed grinding and hauling	Total feeds
Boston milk shed:									
1	280	$22.67	$4.49	$0.25	$0.08	$2.37	$28.85	$1.05	$59.76
2	356	37.75	5.88	.24	.06	.37	40.41	1.00	85.70
3	511	52.44	20.56	.09	.....	.24	64.64	1.01	138.98
4	926	41.87	17.22	.62	.13	1.18	47.97	1.25	110.24
5	489	32.54	10.49	.22	.10	.54	28.03	1.32	73.24
6	508	32.53	2.70	.38	.08	.68	36.11	1.89	74.37
7	590	31.37	2.59	.49	.10	2.62	26.90	1.30	65.46
8	659	29.81	9.99	.96	.08	5.20	18.35	1.33	65.72
New York milk shed:									
9	487	27.78	10.42	2.86	.....	16.45	21.71	2.96	82.18
10	592	29.66	24.74	1.32	.....	2.35	37.49	.88	96.44
11	399	33.36	11.50	.70	.....	.02	36.12	1.90	83.90
12	552	34.16	6.96	.85	.03	.18	35.63	1.16	78.97
13	805	30.60	7.29	.07	.02	.26	35.94	1.93	76.11
14	609	32.56	11.15	.26	.....	1.03	32.80	1.15	78.95
15	574	28.40	9.81	.19	.....	1.29	27.08	.91	67.68
16	793	35.67	9.19	.41	.....	6.00	34.09	1.95	87.31
17	627	26.30	10.74	.33	.....	3.56	42.44	1.43	84.80
18	563	24.56	17.26	.21	.....	2.99	33.60	1.10	79.72
19	339	24.44	20.55	.57	.....	8.13	24.88	1.82	80.39
20	908	21.03	14.37	.35	.....	4.54	38.61	1.66	80.56
21	777	22.08	10.72	.78	.....	8.31	13.19	1.78	56.86
22	453	21.57	18.57	.34	.....	7.15	25.27	2.22	75.12
23	363	27.10	15.27	1.93	.....	18.61	21.13	3.19	87.23
Philadelphia milk shed:									
24	416	21.03	12.04	7.07	.....	19.85	22.44	4.92	87.35
25	259	15.16	3.53	13.30	.....	12.26	19.26	2.77	66.28
26	228	16.99	5.66	6.17	.....	11.78	32.62	4.66	77.88
27	346	19.52	6.92	7.19	.....	15.54	25.36	3.39	77.92
28	422	24.55	7.92	12.84	.....	8.94	36.69	3.92	94.86
29	234	20.36	8.25	11.57	.....	9.26	23.62	3.50	76.56
North Central States:									
30	296	22.57	7.69	12.10	.....	17.88	2.91	3.49	66.64
31	270	14.06	6.03	5.82	.....	20.18	12.79	5.62	64.50
32	299	9.45	5.74	5.55	.....	17.10	6.65	4.29	48.78
33	581	12.47	12.07	6.58	1.53	17.96	6.12	2.26	58.99
34	461	26.03	6.01	2.68	2.53	10.88	3.15	2.04	53.32
35	344	17.23	14.54	.48	.19	8.62	12.23	2.01	55.30
36	390	15.99	17.12	3.80	4.42	16.56	11.34	2.91	77.35
37	592	17.45	20.47	2.54	.43	14.64	4.28	2.38	62.19

TABLE 31.—*Milk: Quantities and cost of feed, pasture, and labor per animal unit for regions in United States supplying milk and cream to Boston, New York, and Philadelphia, May 1, 1925, to April 30, 1926*—Continued

Area	Number of animal units	Duration of pasture season	Total equivalent hours in man labor	Rate per hour for man labor	Value of labor			
					Hired	Operator	Women and children	Total
		Months		*Cents*				
Boston milk shed:								
1	280	4.8	140.2	25.0	$7.52	$28.00	$1.05	$37.26
2	356	4.6	152.0	25.0	10.72	26.17	2.11	38.00
3	511	3.3	144.1	29.9	16.00	23.08	2.24	43.11
4	926	4.4	137.7	29.1	14.53	24.06	1.50	40.09
5	489	4.4	125.9	27.7	12.78	18.47	3.67	34.92
6	508	4.9	145.4	23.4	13.74	16.64	3.65	34.03
7	580	4.8	114.6	24.2	8.00	13.46	6.20	27.76
8	650	4.6	120.7	27.6	13.82	17.51	4.43	35.76
New York milk shed:								
9	487	5.1	126.2	27.5	11.01	20.30	3.18	34.49
10	592	4.5	134.8	28.6	16.86	19.07	1.70	38.63
11	369	4.5	151.7	26.9	7.14	26.30	7.36	40.80
12	652	4.7	127.3	26.8	7.00	18.12	8.04	33.16
13	805	5.0	127.7	26.5	4.00	18.97	10.87	33.84
14	600	4.6	118.5	27.0	5.78	19.41	6.84	32.03
15	574	4.8	142.4	24.0	8.06	21.43	4.60	34.18
16	703	4.5	139.7	28.7	12.86	20.10	7.16	40.12
17	627	4.4	118.9	25.5	6.70	19.75	3.82	30.27
18	563	4.6	142.4	25.2	10.80	21.03	3.42	35.04
19	339	4.8	155.6	27.2	10.50	28.24	3.58	42.32
20	908	4.4	138.2	25.5	8.86	22.27	4.13	35.26
21	777	4.9	139.3	24.1	5.79	22.10	5.09	33.68
22	453	4.7	143.4	28.4	11.10	22.76	6.71	40.08
23	363	5.0	163.2	26.3	11.80	26.03	4.47	42.30
Philadelphia milk shed:								
24	416	4.9	140.5	23.0	1.16	18.92	12.28	32.36
25	250	5.4	145.1	20.4	4.65	17.47	7.55	29.67
26	228	4.3	158.9	24.7	.63	25.08	12.86	39.17
27	346	4.5	160.4	26.9	11.23	25.31	6.67	43.19
28	422	5.6	128.3	26.6	10.99	21.35	4.32	36.67
29	234	5.1	138.5	24.3	6.33	23.91	3.50	33.74
North Central States:								
30	296	5.8	135.2	23.9	6.66	20.86	4.74	32.26
31	270	5.2	136.4	23.7	10.57	18.37	3.37	32.31
32	299	5.5	121.3	24.2	1.52	24.90	2.98	29.39
33	781	5.0	104.4	25.6	6.33	14.13	6.28	26.74
34	461	5.3	131.2	23.4	7.28	17.52	6.92	30.72
35	344	4.6	150.5	25.6	8.70	26.96	7.97	37.63
36	320	4.9	140.0	24.6	7.71	21.09	5.61	34.41
37	702	5.0	124.6	25.0	9.95	16.90	4.25	31.10

TABLE 32.—*Milk; Quantities and cost of feed, pasture, and labor per animal unit by areas for regions in Canada supplying milk and cream to the United States, May 1, 1925, to April 30, 1926*

Area	Number of animal units	Quantity of feeds						
		Roughage			Skim milk fed to calves	Concentrates		
		Hay	Succulent	Straw, corn fodder, and stover		Farm grains	Mill feed and oil meal	Total concentrates
		Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1	949	4,867	1,137	189	878	133	756	889
2	475	3,740	316	1,170	860	350	127	477
3	1,392	4,331	1,532	488	356	120	664	784
4	379	4,021	3,338	640	405	581	456	1,037
5	479	4,003	1,822	1,228	111	603	902	1,505
6	588	2,827	8,871	878	.....	1,381	305	1,686

Area	Number of animal units	Value of feeds							
		Roughage			Skim milk fed to calves	Concentrates			Total feeds
		Hay	Succulent	Straw, corn fodder, and stover		Farm grains	Mill feeds and oil meal	Feeds grinding and hauling	
1	949	$22.67	$2.10	$0.51	$4.62	$2.22	$14.06	$0.87	$47.05
2	475	20.54	.65	4.01	4.82	5.92	2.51	1.28	39.73
3	1,392	23.95	3.09	1.42	2.10	1.94	12.11	.80	45.41
4	379	19.00	8.78	1.73	1.99	8.35	6.96	1.75	48.58
5	479	22.06	3.69	5.21	.22	10.10	15.55	1.93	58.76
6	588	23.45	21.83	2.86	.....	20.45	5.74	2.29	76.62

Area	Number of animal units	Duration of pasture season	Total equivalent hours in man labor	Rate per hour of man labor	Value of labor			
					Hired	Operator	Women and children	Total
		Months		*Cents*				
1	949	4.6	136.3	19.9	$8.46	$12.48	$6.13	$27.07
2	475	5.3	131.7	21.3	5.26	20.30	2.49	28.05
3	1,392	4.6	130.3	20.0	7.38	14.19	4.54	26.11
4	379	4.4	147.7	20.1	6.79	17.87	5.03	29.69
5	479	5.0	163.4	23.3	6.82	20.10	11.09	38.01
6	588	5.2	132.7	21.4	11.37	12.95	4.02	28.34

TABLE 33.—*Milk and cream: Analysis of receipts from the dairy enterprise by areas in the United States, returns per farm, May 1, 1925, to April 30, 1926* [1]

Area	From milk				Other returns				Total returns cash and noncash
	Sold	Used by household	Total	Per 100 pounds	Net herd increase	Credit for manure	Miscellaneous	Total	
Boston milk shed:									
1	$1,025.37	$76.22	$1,101.59	$2.54	$151.48	$98.43	$9.83	$259.74	$1,361.33
2	1,490.28	118.53	1,608.81	3.11	99.50	120.80	18.50	238.80	1,847.61
3	4,415.21	107.38	4,522.59	3.85	[2] 239.24	222.39	29.46	12.61	4,535.20
4	3,204.86	102.60	3,307.46	3.42	100.96	170.69	21.88	293.53	3,600.99
5	2,142.79	93.19	2,235.98	2.67	242.73	203.04	14.45	460.22	2,696.20
6	2,154.30	88.69	2,242.99	2.50	252.75	179.39	9.22	441.36	2,684.35
7	2,848.33	102.43	2,950.76	2.56	26.35	238.30	14.60	279.25	3,230.01
8	2,712.50	77.89	2,790.39	2.39	97.01	225.91	6.33	329.25	3,119.64
New York milk shed:									
9	1,947.53	77.19	2,024.72	2.40	212.44	171.24	8.64	492.32	2,517.04
10	3,020.47	123.78	3,144.25	2.74	198.92	239.91	10.17	449.00	3,593.25
11	1,724.24	96.53	1,820.77	2.49	108.38	148.58	10.23	267.19	2,087.96
12	1,982.10	123.68	2,105.78	2.67	203.04	179.54	24.54	407.12	2,512.90
13	2,738.90	92.03	2,830.93	2.53	204.80	215.47	7.63	427.90	3,258.83
14	2,617.25	74.61	2,691.86	2.36	124.37	218.92	11.00	354.29	3,046.15
15	1,923.18	60.88	1,984.06	2.22	226.43	187.69	6.31	420.43	2,404.49
16	3,606.31	76.36	3,682.67	2.42	239.52	278.07	12.41	530.00	4,212.67
17	2,633.78	69.96	2,703.74	2.31	207.23	232.65	8.43	448.31	3,152.05
18	3,008.80	87.88	3,096.68	2.53	24.24	207.36	3.36	234.96	3,331.64
19	1,529.16	83.09	1,612.25	2.28	231.50	124.25	2.91	358.66	1,970.91
20	2,177.29	113.28	2,290.57	2.50	341.22	196.97	12.67	550.86	2,841.43
21	1,400.93	93.82	1,494.75	2.26	159.12	136.84	5.27	301.23	1,795.98
22	2,151.84	79.37	2,231.21	2.37	212.57	196.21	2.48	411.26	2,642.47
23	2,165.78	76.68	2,242.46	2.41	126.61	145.60	1.09	273.30	2,515.76
Philadelphia milk shed:									
24	2,031.36	117.42	2,148.78	2.52	233.15	146.96	7.12	387.23	2,536.31
25	852.16	82.98	935.14	2.27	138.20	83.12	2.60	223.92	1,159.06
26	937.31	39.07	976.38	2.24	123.56	81.51	3.52	208.59	1,184.97
27	1,610.08	72.01	1,682.09	2.59	184.35	122.76	5.12	312.23	1,994.32
28	1,967.03	75.42	2,042.45	2.56	[2] 39.45	109.93	5.41	75.89	2,118.34
29	854.38	36.36	890.74	2.56	135.48	69.00	5.24	209.72	1,100.46
North Central States:									
30	1,188.74	53.26	1,242.00	2.00	147.37	83.08	2.63	233.08	1,475.08
31	1,545.29	86.47	1,631.76	2.96	158.90	80.75	2.35	242.00	1,873.76
32	787.36	74.40	861.76	2.35	202.25	61.82	.25	264.32	1,126.08
33	[3] 1,834.04	61.57	1,895.61	2.09	278.00	164.20	.88	443.08	2,338.69
34	[3] 1,843.21	103.43	1,946.64	2.10	246.82	120.59	.81	368.22	2,314.83
35	[3] 1,680.73	68.72	1,749.45	2.06	197.45	116.91	2.68	317.04	2,066.49
36	2,060.53	76.52	2,137.05	2.20	420.00	170.00	8.05	598.05	2,735.10
37	2,253.91	50.48	2,304.39	2.01	279.72	175.36	1.96	457.04	2,761.43

[1] Includes milk for fluid use and milk for cream.
[2] Net herd decrease.
[3] Includes the skim milk used on farm based on feeding value.

TABLE 34.—*Milk and cream: Analysis of receipts from the dairy enterprise by areas in Canada, returns per farm, May 1, 1925, to April 30, 1926* [1]

Area	From milk				Other returns				Total returns cash and noncash
	Sold [2]	Used by household	Total	Per 100 pounds	Net herd increase	Credit for manure	Miscellaneous	Total	
No. 1	$1,303.99	$149.61	$1,453.60	$2.11	$180.52	$158.60	$10.95	$350.07	$1,803.67
No. 2	1,114.57	75.50	1,190.07	2.00	206.27	112.00	3.19	321.46	1,511.53
No. 3	1,302.80	131.29	1,434.09	2.03	116.52	142.16	15.50	274.18	1,708.27
No. 4	1,120.60	127.41	1,248.01	2.00	61.95	116.73	4.86	183.54	1,431.55
No. 5	1,654.85	49.46	1,704.31	1.82	115.44	126.84	6.04	248.32	1,952.63
No. 6	3,134.19	48.19	3,182.38	1.83	186.91	187.18	6.18	380.27	3,562.65

[1] Includes milk for fluid use and milk for cream.
[2] Includes skim milk used on farm at feeding value.

TABLE 35.—*Milk and cream: Acreage and number of dairy cattle per farm and dairy investment per cow in United States, May 1, 1925, to April 30, 1926*

Area	Distribution of acreage				Dairy cattle kept				Dairy investment per cow			
	Crop land	Pasture land	All others	Total	Cows	Heifers [1]	Bulls	Calves [2]	Dairy herd	Herd buildings	Herd equipment	Total
	Acres	*Acres*	*Acres*	*Acres*								
Boston milk shed:												
1	52	39	42	133	8.9	2.6	0.7	1.9	$103.08	$80.15	$13.29	$196.52
2	35	55	77	167	10.6	2.5	.5	1.6	93.01	55.86	9.18	158.05
3	31	33	37	101	17.8	1.2	.6	1.1	113.12	51.92	8.04	173.08
4	49	44	32	125	14.7	2.9	.7	2.1	118.30	102.90	7.10	228.30
5	63	108	73	244	17.1	4.1	.7	3.4	100.61	54.61	10.47	165.69
6	57	119	45	221	16.7	4.6	.9	4.0	100.63	53.74	10.40	164.77
7	72	85	29	186	24.0	3.5	1.1	4.1	78.49	70.39	7.90	156.78
8	96	94	15	205	22.7	3.7	.7	4.1	76.20	61.26	9.44	146.90
New York milk shed:												
9	88	72	19	179	15.6	3.1	1.0	2.7	129.09	66.52	9.46	205.07
10	70	84	46	200	22.1	3.3	.9	2.1	101.94	67.47	4.00	173.41
11	44	45	44	133	12.3	2.1	.8	2.0	105.75	54.52	3.70	163.97
12	54	110	50	214	18.3	3.6	1.1	4.6	98.89	38.03	4.95	141.87
13	52	84	34	170	20.9	4.5	.9	4.5	100.63	55.77	6.34	162.74
14	52	81	31	164	21.2	2.8	.9	2.9	119.01	68.39	5.09	192.49
15	53	81	26	160	17.6	3.1	.9	3.6	112.53	53.04	9.47	175.04
16	80	82	19	181	23.6	3.9	1.1	3.8	123.74	86.43	13.57	223.74
17	54	65	13	132	19.0	3.9	.8	2.8	119.74	70.00	18.60	208.34
18	54	57	10	121	18.3	2.9	.5	2.0	119.63	66.89	11.94	198.46
19	60	50	11	121	11.0	2.3	.6	2.5	154.67	119.02	6.17	279.86
20	64	64	28	156	15.0	3.7	1.0	3.8	165.22	70.41	10.28	245.91
21	69	59	35	163	13.0	2.1	.7	2.1	102.88	52.17	9.50	164.55
22	73	55	22	150	16.5	2.5	.8	2.4	133.56	104.93	9.88	248.37
23	81	41	13	135	12.9	2.1	.7	1.9	132.26	75.83	11.67	219.76
Philadelphia milk shed:												
24	84	32	15	131	12.5	2.6	.8	2.6	121.39	92.52	5.78	219.60
25	90	21	13	124	8.6	1.0	.7	.7	89.89	78.52	5.11	173.52
26	62	7	5	74	6.9	.7	.6	.5	104.31	131.67	4.39	240.37
27	66	23	17	106	11.0	1.5	.9	.9	102.25	99.08	3.99	205.32
28	63	26	27	116	12.4	1.1	.8	1.3	119.20	68.93	7.50	195.63
29	63	18	39	120	7.9	1.1	.4	.7	107.16	66.94	5.11	179.21
North Central States:												
30	61	39	17	117	10.0	1.6	.5	1.8	98.49	66.08	9.24	173.81
31	63	50	7	120	10.2	2.6	.7	2.0	107.59	66.81	5.63	180.03
32	75	32	8	115	7.6	2.3	.7	1.8	98.20	45.31	4.34	147.85
33	96	40	7	143	17.3	5.1	.9	4.2	96.01	52.82	10.91	159.74
34	61	40	11	112	13.7	2.8	.7	2.1	94.34	73.62	9.58	177.54
35	38	30	10	78	12.5	2.3	.6	2.5	114.60	96.78	4.76	216.14
36	73	51	16	140	15.0	4.2	1.0	4.9	142.34	81.79	9.69	233.82
37	83	46	10	139	17.8	4.8	.9	4.1	130.76	91.80	12.16	234.72

[1] Includes heifers from 1 year old to calving.
[2] Includes bull calves under 1 year of age.

TABLE 36.—*Milk and cream; Acreage and number of dairy cattle per farm and dairy investment per cow, in Canada, May 1, 1925, to April 30, 1926*

Area	Distribution of acreage				Dairy cattle kept				Dairy investment per cow			
	Crop land	Pasture land	All others	Total	Cows	Heifers	Bulls	Calves	Dairy herd	Herd buildings	Herd equipment	Total
	Acres	*Acres*	*Acres*	*Acres*								
1	55	79	26	160	17.0	5.6	0.9	4.8	$82.25	$59.11	$9.48	$150.84
2	65	63	38	166	12.3	4.6	1.0	4.5	124.03	46.00	5.67	175.70
3	60	70	39	169	17.0	3.6	1.0	3.7	79.06	55.34	9.85	144.25
4	111	39	16	166	13.4	2.3	.9	3.7	84.59	88.21	13.34	186.14
5	56	38	9	103	16.2	2.1	.8	2.1	90.11	54.87	14.81	159.79
6	82	50	13	145	21.4	3.9	1.0	3.9	113.23	69.84	11.46	194.53

TABLE 37.—*Milk for cream: Cumulative number of farms, number of cows, number of pounds of milk, and number of pounds of butterfat produced at varying costs per gallon of milk. Summary 37 areas in United States (interest included), May 1, 1925, to April 30, 1926* [1]

Net cost per gallon	Farms			Cows			Milk			Butterfat		
	Number	Cumulative number	Cumulative per cent of total	Number	Cumulative number	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total,
$0.08 and less than $0.09	3	3	0.30	47.4	47.4	0.32	405,953	405,953	0.48	13,384.2	13,384.2	0.44
$0.09 and less than $0.10	1	4	.41	13.5	60.9	.42	102,093	508,046	.60	3,504.3	16,888.5	.55
$0.10 and less than $0.11	2	6	.61	16.0	76.9	.52	106,672	614,718	.73	4,146.4	21,034.9	.69
$0.11 and less than $0.12	4	10	1.02	49.8	126.7	.87	460,753	1,075,471	1.28	15,417.8	36,452.7	1.19
$0.12 and less than $0.13	4	14	1.42	60.6	187.3	1.28	484,438	1,559,909	1.86	16,422.1	52,874.8	1.73
$0.13 and less than $0.14	8	22	2.24	103.3	290.6	1.99	812,083	2,371,992	2.82	28,079.8	80,954.6	2.65
$0.14 and less than $0.15	21	43	4.37	352.2	642.8	4.40	2,557,665	4,929,657	5.87	88,726.5	169,681.1	5.55
$0.15 and less than $0.16	16	59	6.00	221.4	864.2	5.91	1,508,215	6,437,872	7.67	54,094.2	223,775.3	7.32
$0.16 and less than $0.17	19	78	7.95	246.9	1,111.1	7.60	1,827,339	8,265,211	9.84	66,796.8	290,572.1	9.51
$0.17 and less than $0.18	38	116	11.79	591.3	1,702.4	11.64	4,265,124	12,530,335	14.92	148,504.0	439,076.1	14.37
$0.18 and less than $0.19	43	159	16.16	675.5	2,377.9	16.26	4,203,905	16,734,240	19.93	152,356.1	591,432.2	19.36
$0.19 and less than $0.20	43	202	20.53	636.4	3,014.3	20.61	3,889,971	20,624,211	24.56	139,819.5	731,251.7	23.93
$0.20 and less than $0.21	44	246	25.00	672.4	3,686.7	25.21	4,219,303	24,843,514	29.59	149,917.3	881,169.0	28.84
$0.21 and less than $0.22	51	297	30.18	744.4	4,431.1	30.30	4,826,210	29,669,724	35.34	173,518.6	1,054,687.6	34.52
$0.22 and less than $0.23	46	343	34.86	830.5	5,261.6	35.98	4,931,809	34,601,533	41.21	169,459.1	1,224,146.7	40.06
$0.23 and less than $0.24	68	411	41.77	982.9	6,244.5	42.70	5,729,851	40,331,384	48.04	207,968.4	1,432,115.1	46.87
$0.24 and less than $0.25	54	465	47.26	904.4	7,148.9	48.89	5,146,400	45,477,784	54.17	193,259.3	1,625,374.4	53.20
$0.25 and less than $0.26	50	515	52.34	708.3	7,857.2	53.74	4,125,923	49,603,707	59.08	149,603.7	1,774,978.1	58.09
$0.26 and less than $0.27	43	558	59.76	671.7	8,528.9	58.33	3,917,662	53,521,369	63.75	145,887.4	1,920,865.5	62.87
$0.27 and less than $0.28	35	593	60.26	512.1	9,041.0	61.83	2,858,024	56,379,393	67.15	101,331.5	2,022,197.0	66.18
$0.28 and less than $0.29	50	643	65.34	800.6	9,841.6	67.31	4,550,113	60,929,506	72.57	164,605.3	2,186,802.3	71.57
$0.29 and less than $0.30	48	691	70.22	747.3	10,588.9	72.42	4,096,622	65,026,128	77.45	149,226.3	2,336,028.6	76.46
$0.30 and less than $0.31	42	733	74.49	687.6	11,276.5	77.12	3,591,461	68,617,589	81.73	136,593.7	2,472,622.3	80.93
$0.31 and less than $0.32	28	761	77.34	294.1	11,570.6	79.13	1,538,736	70,156,325	83.56	61,631.2	2,534,253.5	82.94
$0.32 and less than $0.33	30	791	80.39	405.0	11,975.6	81.90	1,952,566	72,108,891	85.89	75,596.9	2,609,850.4	85.42
$0.33 and less than $0.34	26	817	83.03	429.4	12,405.0	84.84	2,112,885	74,221,776	88.40	76,594.2	2,686,446.6	87.92
$0.34 and less than $0.35	19	836	84.96	264.8	12,669.8	86.65	1,214,590	75,436,366	89.85	46,360.2	2,732,804.8	89.44
$0.35 and less than $0.36	17	853	86.69	272.8	12,942.6	88.51	1,358,638	76,795,004	91.47	49,368.8	2,782,173.6	91.06
$0.36 and less than $0.37	16	869	88.31	214.5	13,157.1	89.98	1,045,772	77,840,776	92.71	38,183.9	2,820,357.5	92.31
$0.37 and less than $0.38	13	882	89.63	259.4	13,416.5	91.75	1,196,511	79,037,287	94.14	46,125.2	2,866,482.7	93.82
$0.38 and less than $0.39	12	894	90.85	165.2	13,581.7	92.88	770,205	79,807,492	95.06	28,973.4	2,895,456.1	94.77
$0.39 and less than $0.40	13	907	92.17	170.0	13,751.7	94.05	831,725	80,639,217	96.05	29,229.1	2,924,685.2	95.72
$0.40 and less than $0.41	13	920	93.50	169.2	13,920.9	95.20	672,296	81,311,513	96.84	23,592.3	2,948,277.5	96.50
$0.41 and less than $0.42	8	928	94.31	96.0	14,016.9	95.86	420,961	81,732,474	97.35	18,332.9	2,966,610.4	97.10
$0.42 and less than $0.43	6	934	94.92	87.0	14,103.9	96.46	358,328	82,090,802	97.78	14,523.8	2,981,134.2	97.57
$0.43 and less than $0.44	6	940	95.53	78.9	14,182.8	97.00	424,925	82,515,727	98.28	18,500.7	2,999,634.9	98.18

[1] Milk costs have not been weighted for this array.

TABLE 37.—*Milk for cream: Cumulative number of farms, number of cows, number of pounds of milk, and number of pounds of butterfat produced at varying costs per gallon of milk. Summary 37 areas in United States (interest included), May 1, 1925, to April 30, 1926*—Con.

Net cost per gallon	Farms			Cows			Milk			Butterfat		
	Number	Cumulative number	Cumulative per cent of total	Number	Cumulative number	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total
$0.44 and less than $0.45	2	942	95.73	17.8	14,200.6	97.12	87,392	82,603,119	98.39	3,348.9	3,002,983.8	98.25
$0.46 and less than $0.47	3	945	96.04	31.4	14,232.0	97.33	118,249	82,721,368	98.53	4,382.2	3,007,366.0	98.43
$0.47 and less than $0.48	7	952	96.75	67.5	14,299.5	97.79	230,257	82,951,625	98.80	9,486.6	3,016,852.6	98.74
$0.48 and less than $0.49	8	960	97.56	77.7	14,377.2	98.32	280,944	83,232,569	99.14	10,716.4	3,027,569.0	99.09
$0.49 and less than $0.50	5	965	98.07	41.5	14,418.7	98.61	146,334	83,378,903	99.31	5,727.3	3,033,296.3	99.28
$0.50 and less than $0.51	1	966	98.17	5.4	14,424.1	98.64	14,561	83,393,464	99.33	563.6	3,033,859.9	99.30
$0.52 and less than $0.53	2	968	98.37	16.2	14,440.3	98.76	61,931	83,455,395	99.40	2,141.3	3,036,001.2	99.37
$0.53 and less than $0.54	2	970	98.58	9.2	14,449.5	98.82	34,173	83,489,568	99.44	1,427.1	3,037,428.3	99.41
$0.54 and less than $0.55	1	971	98.68	6.4	14,455.9	98.86	18,484	83,508,052	99.46	856.2	3,038,284.5	99.44
$0.55 and less than $0.56	2	973	98.88	23.9	14,479.8	99.03	89,338	83,597,390	99.57	3,182.5	3,041,467.0	99.54
$0.56 and less than $0.57	1	974	98.98	7.1	14,486.9	99.08	20,617	83,618,007	99.60	864.3	3,042,331.3	99.57
$0.58 and less than $0.59	1	975	99.08	6.1	14,493.0	99.12	14,741	83,632,748	99.61	627.6	3,042,958.9	99.59
$0.59 and less than $0.60	1	976	99.19	7.4	14,500.4	99.17	21,840	83,654,588	99.64	894.7	3,043,853.6	99.62
$0.60 and less than $0.61	1	977	99.29	26.5	14,526.9	99.35	60,936	83,715,524	99.71	2,181.0	3,046,034.6	99.69
$0.62 and less than $0.63	2	979	99.49	35.7	14,562.6	99.59	102,463	83,817,987	99.83	3,869.5	3,049,904.1	99.82
$0.63 and less than $0.64	1	980	99.59	5.0	14,567.6	99.63	13,867	83,831,854	99.85	571.8	3,050,475.9	99.84
$0.64 and less than $0.65	1	981	99.70	20.0	14,587.6	99.76	44,926	83,876,780	99.90	1,884.1	3,052,360.0	99.90
$0.66 and less than $0.67	2	983	99.90	27.5	14,615.1	99.95	63,933	83,940,713	99.98	2,251.5	3,054,611.5	99.96
$0.67 and less than $0.68	1	984	100.00	7.0	14,622.1	100.00	16,960	83,957,673	100.00	749.7	3,055,361.2	100.00

TABLE 38.—*Milk for cream: Cumulative number of farms, number of cows, number of pounds of milk, number of pounds of butterfat produced at varying costs per gallon of milk. Summary for 6 areas in Canada (interest included, May 1, 1935, to April 30, 1936)*

Net cost per gallon	Farms			Cows			Milk			Butterfat		
	Number	Cumulative number	Cumulative per cent of total	Number	Cumulative number	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total
$0.10 and less than $0.11												
$0.11 and less than $0.12												
$0.12 and less than $0.13												
$0.13 and less than $0.14												
$0.14 and less than $0.15												
$0.15 and less than $0.16												
$0.16 and less than $0.17												
$0.17 and less than $0.18												
$0.18 and less than $0.19												
$0.19 and less than $0.20												
$0.20 and less than $0.21												
$0.21 and less than $0.22												
$0.22 and less than $0.23												
$0.23 and less than $0.24												
$0.24 and less than $0.25												
$0.25 and less than $0.26												
$0.26 and less than $0.27												
$0.27 and less than $0.28												
$0.28 and less than $0.29												
$0.29 and less than $0.30												
$0.30 and less than $0.31												
$0.31 and less than $0.32												
$0.32 and less than $0.33												
$0.33 and less than $0.34												
$0.34 and less than $0.35												
$0.35 and less than $0.36												
$0.36 and less than $0.37												
$0.37 and less than $0.38												
$0.38 and less than $0.39												
$0.39 and less than $0.40												
$0.40 and less than $0.41												
$0.41 and less than $0.42												
$0.42 and less than $0.43												
$0.43 and less than $0.44												
$0.44 and less than $0.45												
$0.45 and less than $0.46												
$0.46 and less than $0.47												
$0.47 and less than $0.48												
$0.48 and less than $0.49												
$0.49 and less than $0.50												

[1] Milk costs have not been weighted for this array.

TABLE 39.—*Milk for fluid consumption: Cumulative number of farms, number of cows, number of pounds of milk, and number of pounds of butterfat produced at varying costs per gallon of milk. Summary 23 areas in the United States (including interest) May 1, 1925 to April 30, 1926* [1]

Net cost per gallon	Farms			Cows			Milk			Butterfat		
	Number	Cumulative number	Cumulative per cent of total	Number	Cumulative number	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total
$0.08 and less than $0.09	1	1	0.16	12.0	12.0	0.11	108,875	108,875	0.18	4,093.4	4,093.4	0.18
$0.12 and less than $0.13	2	3	.47	26.6	38.6	.36	262,532	371,407	.62	8,852.9	12,946.3	.59
$0.14 and less than $0.15	5	8	1.26	106.3	144.9	1.36	853,695	1,225,102	2.04	29,075.2	42,021.5	1.93
$0.15 and less than $0.16	4	12	1.89	51.1	196.0	1.85	369,813	1,594,915	2.65	13,033.7	55,055.2	2.53
$0.16 and less than $0.17	10	22	3.46	134.6	330.6	3.12	967,021	2,561,936	4.27	35,838.4	90,893.6	4.17
$0.17 and less than $0.18	24	46	7.23	449.6	780.2	7.36	3,232,432	5,794,368	9.65	112,732.8	203,626.4	9.35
$0.18 and less than $0.19	21	67	10.53	383.3	1,163.5	10.98	2,404,228	8,198,596	13.66	85,674.1	289,300.5	13.29
$0.19 and less than $0.20	23	90	14.15	416.4	1,579.9	14.92	2,563,317	10,761,913	17.94	90,682.5	379,983.0	17.46
$0.20 and less than $0.21	24	114	17.92	427.2	2,007.1	18.95	2,709,543	13,471,456	22.45	95,081.7	475,064.7	21.83
$0.21 and less than $0.22	25	139	21.86	463.7	2,470.8	23.33	2,944,368	16,415,824	27.36	104,727.8	579,792.5	26.65
$0.22 and less than $0.23	30	169	26.57	619.0	3,089.8	29.18	3,722,009	20,137,833	33.57	125,484.5	705,277.0	32.41
$0.23 and less than $0.24	45	214	33.65	680.0	3,769.8	35.62	4,045,298	24,183,131	40.31	144,407.9	849,684.9	39.05
$0.24 and less than $0.25	41	255	40.09	740.2	4,510.0	42.59	4,213,839	28,396,970	47.33	156,956.8	1,006,641.7	46.27
$0.25 and less than $0.26	32	287	45.13	535.8	5,045.8	47.66	3,129,598	31,526,568	52.55	112,734.5	1,119,376.2	51.45
$0.26 and less than $0.27	35	322	50.63	554.7	5,600.5	52.89	3,232,652	34,759,220	57.94	117,969.1	1,237,345.3	56.87
$0.27 and less than $0.28	28	350	55.03	445.9	6,046.4	57.11	2,454,241	37,213,461	62.03	87,417.3	1,324,762.6	60.89
$0.28 and less than $0.29	35	385	60.53	653.5	6,699.9	63.28	3,757,150	40,970,611	68.29	133,783.9	1,458,546.5	67.04
$0.29 and less than $0.30	39	424	66.67	658.2	7,358.1	69.50	3,566,463	44,537,074	74.24	130,411.7	1,588,958.2	73.03
$0.30 and less than $0.31	32	456	71.70	598.0	7,956.1	75.14	3,141,230	47,678,304	79.48	119,315.6	1,708,273.8	78.52
$0.31 and less than $0.32	19	475	74.68	205.2	8,161.3	77.08	1,165,950	48,844,254	81.42	46,177.6	1,754,451.4	80.64
$0.32 and less than $0.33	20	495	77.83	301.7	8,463.0	79.93	1,410,351	50,254,605	83.77	55,434.0	1,809,885.4	83.19
$0.33 and less than $0.34	22	517	81.29	389.2	8,852.2	83.62	1,931,433	52,186,038	86.99	69,441.5	1,879,326.9	86.38
$0.34 and less than $0.35	13	530	83.33	200.7	9,052.9	85.50	927,148	53,113,186	88.54	36,856.9	1,915,183.8	88.03
$0.35 and less than $0.36	15	545	85.69	247.0	9,299.9	87.84	1,258,128	54,371,314	90.63	45,652.1	1,960,835.9	90.13
$0.36 and less than $0.37	12	557	87.58	176.2	9,476.1	89.50	816,364	55,187,678	91.99	29,915.7	1,990,751.6	91.50
$0.37 and less than $0.38	9	566	88.99	195.2	9,671.3	91.35	928,025	56,115,703	93.54	36,184.7	2,026,936.3	93.16
$0.38 and less than $0.39	11	577	90.72	155.2	9,827.5	92.82	743,271	56,858,974	94.78	28,038.9	2,054,975.2	94.45
$0.39 and less than $0.40	9	586	92.14	134.8	9,962.3	94.09	682,474	57,541,448	95.92	23,508.3	2,078,483.5	95.53
$0.40 and less than $0.41	9	595	93.55	125.1	10,087.4	95.28	505,698	58,047,146	96.76	17,645.1	2,096,128.6	96.35
$0.41 and less than $0.42	6	601	94.50	80.4	10,167.8	96.04	364,779	58,411,925	97.37	15,898.2	2,112,026.8	97.08
$0.42 and less than $0.43	6	607	95.44	87.0	10,254.8	96.86	358,328	58,770,253	97.97	14,523.8	2,126,550.6	97.74
$0.43 and less than $0.44	3	610	95.91	39.9	10,294.7	97.23	240,692	59,010,945	98.37	11,069.4	2,137,620.0	98.25
$0.44 and less than $0.45	2	612	96.23	17.8	10,312.5	97.40	87,392	59,098,337	98.51	3,348.9	2,140,968.9	98.41
$0.46 and less than $0.47	1	613	96.38	15.0	10,327.5	97.54	72,324	59,170,661	98.63	2,650.3	2,143,619.2	98.53
$0.47 and less than $0.48	7	620	97.48	67.5	10,395.0	98.18	280,257	59,400,918	99.02	9,486.6	2,153,105.8	98.96
$0.48 and less than $0.49	3	623	97.96	41.7	10,436.7	98.58	132,776	59,533,694	99.24	5,237.5	2,158,343.3	99.21
$0.49 and less than $0.50	4	627	98.59	30.6	10,467.3	98.86	121,846	59,655,540	99.44	4,550.1	2,162,893.4	99.41

$0.53 and less than $0.54	1	628	98.74	3.2	10,470.5	98.89	12,986	59,668,526	99.46	639.6	2,163,533.0	99.44
$0.55 and less than $0.56	1	629	98.90	18.8	10,489.3	99.07	65,256	59,733,782	99.57	2,229.3	2,165,762.3	99.55
$0.56 and less than $0.57	1	630	99.05	7.1	10,496.4	99.14	20,617	59,754,399	99.61	864.3	2,166,626.6	99.59
$0.59 and less than $0.60	1	631	99.21	7.4	10,503.8	99.21	21,840	59,776,239	99.64	894.7	2,167,521.3	99.63
$0.62 and less than $0.63	2	633	99.53	35.7	10,539.5	99.55	102,463	59,878,702	99.82	3,869.5	2,171,390.8	99.82
$0.64 and less than $0.65	1	634	99.69	20.0	10,559.5	99.74	44,926	59,923,628	99.89	1,884.1	2,173,274.9	99.89
$0.66 and less than $0.67	2	636	100.00	27.5	10,587.0	100.00	63,933	59,987,561	100.00	2,251.5	2,175,526.4	100.00
Total	636			10,587.0			59,987,561			2,175,526.4		

[1] Milk costs have not been weighted for this array.

TABLE 40.—*Milk for fluid consumption: Cumulative number of farms, number of cows, number of pounds of milk, and number of pounds of butterfat produced at varying costs per gallon of milk. Summary of 4 areas in Canada (interest included)*[1] *May 1, 1925, to April 30, 1926*

Net cents per gallon	Farms			Cows			Milk			Butterfat		
	Number	Cumulative number	Cumulative per cent of total	Number	Cumulative number	Cumulative per cent of total	Pounds	Cumulative pounds	Cumulative per cent of total	Pounds	Cumulative pounds	Cumulative per cent of total
11 and less than 12	3	3	2.2	44.4	44.4	1.9	283,280	283,280	2.3	8,612.3	8,612.3	2.0
12 and less than 13	5	8	5.9	65.8	110.2	4.9	423,879	707,159	5.8	14,264.2	22,876.5	5.5
13 and less than 14	3	11	8.1	73.1	183.3	8.1	551,884	1,259,043	10.4	17,623.4	40,499.9	9.7
14 and less than 15	5	16	11.8	94.4	277.7	12.3	756,700	2,015,743	16.7	25,324.2	65,824.1	15.7
15 and less than 16	7	23	17.0	98.8	376.5	16.7	650,537	2,666,280	22.0	22,412.2	88,236.3	21.1
16 and less than 17	10	33	24.4	224.6	601.1	26.7	1,507,317	4,173,597	34.5	48,955.9	137,192.2	32.8
17 and less than 18	10	43	31.9	159.0	760.1	33.8	975,607	5,149,204	42.6	33,932.1	171,124.3	40.8
18 and less than 19	8	51	37.8	122.8	882.9	39.2	676,795	5,825,999	48.2	22,321.0	193,445.3	46.2
19 and less than 20	12	63	46.6	192.0	1,074.9	47.8	1,119,033	6,945,032	57.4	40,045.0	233,490.3	55.7
20 and less than 21	8	71	52.6	112.9	1,187.8	52.8	572,799	7,517,831	62.2	19,778.0	253,268.3	60.5
21 and less than 22	9	80	59.3	183.6	1,371.4	60.9	976,229	8,494,060	70.2	34,544.6	287,812.9	68.7
22 and less than 23	6	86	63.7	91.3	1,462.7	65.0	434,271	8,928,331	73.8	15,505.7	303,318.6	72.4
23 and less than 24	8	94	69.6	141.9	1,604.6	71.3	651,439	9,579,770	79.2	23,007.7	326,326.3	77.9
24 and less than 25	4	98	72.6	55.4	1,660.0	73.8	302,331	9,882,101	81.7	10,361.4	336,687.7	80.4
25 and less than 26	3	101	74.8	88.7	1,748.7	77.7	353,148	10,235,249	84.6	12,930.8	349,618.5	83.5
26 and less than 27	3	104	77.0	49.9	1,798.6	79.9	187,588	10,422,837	86.2	6,676.9	356,295.4	85.1
27 and less than 28	3	107	79.2	38.7	1,837.3	81.6	193,735	10,616,572	87.8	6,585.3	362,880.7	86.6
28 and less than 29	5	112	83.0	58.1	1,895.4	84.2	231,336	10,847,908	89.7	8,429.8	371,310.5	88.6
29 and less than 30	2	114	84.4	31.3	1,926.7	85.6	161,064	11,008,972	91.0	5,910.9	377,221.4	90.1
30 and less than 31	4	118	87.4	37.2	1,963.9	87.3	160,379	11,169,351	92.3	5,633.9	382,855.3	91.4
31 and less than 32	5	123	91.1	63.8	2,027.7	90.1	228,447	11,397,798	94.2	9,332.7	392,188.0	93.6
32 and less than 33	3	126	93.3	40.2	2,067.9	91.9	134,987	11,532,785	95.4	5,476.6	397,664.6	94.9
33 and less than 34	2	128	94.8	34.1	2,102.0	93.4	117,083	11,649,868	96.3	4,156.8	401,821.4	95.9
36 and less than 37	1	129	95.6	18.5	2,120.5	94.2	41,331	11,691,199	96.7	1,707.5	403,528.9	96.3
37 and less than 38	1	130	96.3	9.0	2,129.5	94.6	28,105	11,719,304	96.9	1,083.6	404,612.5	96.6
39 and less than 40	1	131	97.0	17.2	2,146.7	95.4	44,560	11,763,864	97.3	1,866.6	406,479.1	97.0
43 and less than 44	2	133	98.5	40.7	2,187.4	97.2	142,660	11,906,524	98.4	5,146.0	411,625.1	98.3
47 and less than 48	2	135	100.0	62.9	2,250.3	100.0	188,621	12,095,145	100.0	7,222.2	118,847.3	100.0

[1] Milk costs have not been weighted for this array.

CHART III

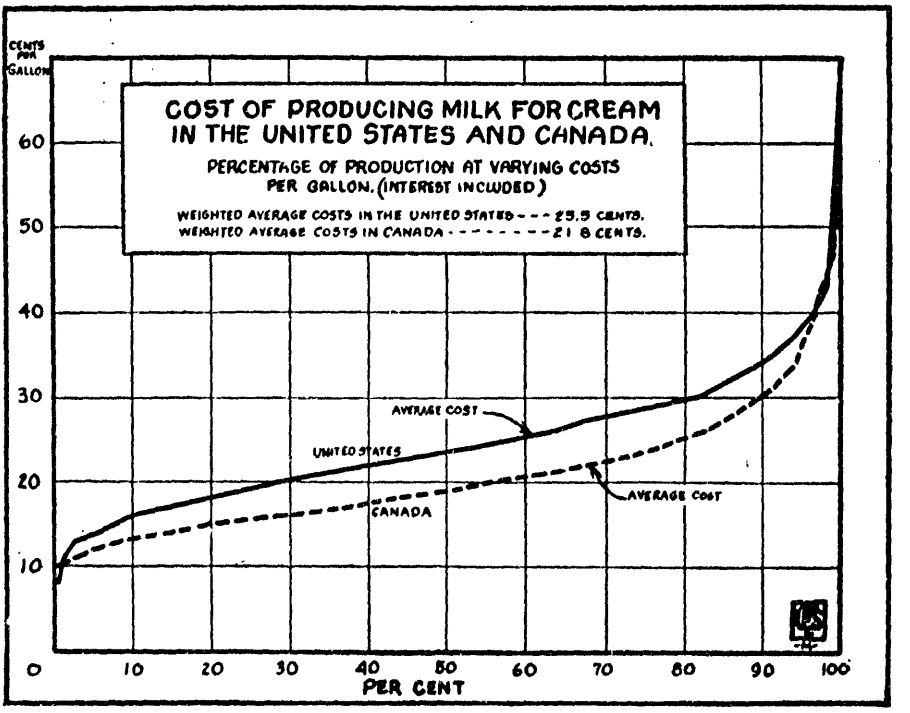
CENTS PER GALLON
COST OF PRODUCING MILK FOR CREAM IN THE UNITED STATES AND CANADA.
PERCENTAGE OF PRODUCTION AT VARYING COSTS PER GALLON. (INTEREST INCLUDED)
WEIGHTED AVERAGE COSTS IN THE UNITED STATES - - - 25.5 CENTS.
WEIGHTED AVERAGE COSTS IN CANADA - - - - - - - 21.8 CENTS.
60
50
40
30
20
10
0
AVERAGE COST
UNITED STATES
CANADA
AVERAGE COST
10
20
30
40
50
60
70
80
90
100
PER CENT

TABLE 41.—*Cream; Plant costs per hundred pounds of handling and processing, and prices paid for raw material in the United States and Canada, accounting year, May 1, 1925, to April 30, 1926*

	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	Canada
Average butterfat test (per cent)	39.93	35.85	38.42	38.75	38.38	39.93
Buying and collecting costs:						
Buying expense	$0.011	$0.064	$0.108	$0.037	$0.063	$0.083
Collecting expense	.167	.880	.361	.219	.359	.132
In-freight			.236	.068	.110	.003
Total	.178	.944	.705	.324	.532	.218
Processing costs:						
Receiving	.394	1.118	.643	.549	.642	.574
Separating	.213	.414	.474	.358	.390	.298
Pasteurizing	.306	.073	.235	.233	.222	.340
Cooling	.199	.357	.156	.075	.157	.226
Can filling	.172	.052	.117	.063	096	.170
Total	1.284	2.014	1.625	1.278	1.497	1.608
Shipping costs:						
Icing	.059	.002	.012	.017	.018	.025
Loading expense	.219	.053	.073	.065	.085	.123
Total shipping costs	.278	.055	.085	.082	.103	.148
Total handling and processing costs	1.740	3.013	2.415	1.684	2.142	1.974
Interest on plant capital at 6 per cent	.176	.359	.157	.130	.176	.171
Total costs, including interest	1.916	3.373	2.572	1.814	2.318	2.145
Average price paid by all plants	20.829	22.726	25.627	25.292	24.531	18.250

TABLE 42.—*Milk: Plant costs per hundred pounds of handling and processing, and prices paid for raw material in the United States and Canada, accounting year, May 1, 1925, to April 30, 1926*

	United States			Canada
	New York milk shed	Boston milk shed	Weighted average	
Average butterfat test	3.59	3.74	3.63	3.51
Buying and collecting costs:				
Buying expenses	$0.006	$0.005	$0.006	$0.007
Collecting expenses	.007	.036	.014	.005
In-freight	.005			
Total	.018	.041	.020	.012
Processing costs:				
Receiving	.095	.092	.094	.082
Pasteurizing	.099	.116	.103	.277
Cooling	.082	.065	.078	.130
Can filling	.066	.050	.062	.107
Total	.342	.323	.337	.596
Shipping costs:				
Icing	.010	.014	.011	.007
Loading expense	.046	.044	.045	.048
Total	.056	.058	.056	.055
Total handling and processing costs	.416	.422	.413	.663
Interest on plant capital at 6 per cent	.039	.024	.038	.040
Total costs, including interest	.455	.456	.451	.703
Average price paid producers by all plants	2.537	2.887	2.628	1.691

TABLE 43.—*Cream: Receiving costs per hundred pounds for plants in the United States and Canada, May 1, 1925, to April 30, 1926*

	United States					Canada
	Western areas	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Direct labor: Factory expense	$0.149	$0.378	$0.223	$0.194	$0.224	$0.208
Indirect labor:						
Superintendent	.012	.035	.021	.025	.025	.026
General	.000	.054	.019	.001	.014	.006
Heat, light, and power	.063	.115	.151	.138	.131	.117
Repairs and maintenance:						
Buildings	.002	.017	.017	.004	.010	.008
Equipment	.003	.006	.016	.008	.010	.010
Depreciation:						
Buildings	.008	.035	.017	.010	.015	.012
Equipment	.039	.047	.024	.016	.026	.019
Insurance	.003	.010	.012	.007	.008	.007
Taxes	.008	.010	.009	.008	.009	.004
Rent	.003	.006	.002	.002	.003	.000
Cleaning supplies	.006	.013	.004	.002	.007	.002
Other supplies	.015	.100	.030	.047	.042	.024
Miscellaneous	.007	.000	.005	.003	.004	.002
Administrative and general expense	.076	.272	.093	.084	.111	.129
Total	.394	1.118	.643	.549	.639	.574

TABLE 44.—*Cream: Separating costs per hundred pounds for plants in the United States and Canada, May 1, 1925, to April 30, 1926*

	United States					Canada
	Western areas	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Direct labor: Factory expense	$0.071	$0.091	$0.124	$0.095	$0.103	$0.031
Indirect labor:						
Superintendent	.003	.012	.016	.017	.014	.010
General	.003	.020	.011	.001	.008	.005
Heat, light, and power	.047	.140	.131	.095	.109	.092
Repairs and maintenance:						
Buildings	.001	.001	.012	.004	.006	.005
Equipment	.006	.011	.023	.015	.017	.015
Depreciation:						
Buildings	.003	.022	.012	.010	.010	.005
Equipment	.026	.038	.042	.046	.042	.024
Insurance	.001	.009	.018	.009	.010	.005
Taxes	.005	.005	.010	.013	.011	.000
Rent	.001	.000	.002	.001	.002	.000
Cleaning supplies	.003	.005	.002	.001	.002	.000
Other supplies	.008	.014	.018	.009	.012	.008
Miscellaneous	.001	.000	.003	.001	.000	.001
Administrative and general expense	.034	.046	.050	.041	.044	.047
Total	.213	.414	.474	.358	.390	.298

TABLE 45.—*Cream: Pasteurizing costs per hundred pounds for plants in the United States and Canada, May 1, 1925, to April 30, 1926*

	United States					Canada
	Western areas	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Direct labor, factory expense	$0.050	$0.010	$0.038	$0.055	$0.042	$0.087
Indirect labor:						
Superintendent	.001	.003	.001	.013	.005	.006
General	.000	.001	.005	.000	.002	.001
Heat, light, and power	.143	.033	.108	.092	.096	.135
Repairs and maintenance:						
Buildings	.034	.002	.009	.002	.009	.004
Equipment	.008	.001	.008	.006	.005	.013
Depreciation:						
Buildings	.012	.005	.009	.006	.008	.005
Equipment	.017	.005	.017	.019	.016	.026
Insurance	.002	.002	.007	.005	.005	.006
Taxes	.008	.002	.005	.006	.005	.005
Rent	.002	.000	.000	.003	.001	.000
Cleaning supplies	.001	.000	.000	.000	.000	.000
Other supplies	.006	.000	.008	.002	.005	.008
Miscellaneous	.001	.000	.002	.002	.002	.002
Administrative and general expense	.021	.009	.018	.022	.018	.042
Total	.306	.073	.235	.233	.219	.340

TABLE 46.—*Cream: Cooling costs for plants in the United States and Canada, May 1, 1925, to April 30, 1926*

[Cost per 100 pounds]

	United States					Canada
	Western areas	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Direct labor, factory expense	$0.027	$0.116	$0.017	$0.010	$0.029	$0.054
Indirect labor:						
Superintendent	.002	.004	.003	.001	.002	.003
General	.000	.010	.001	.000	.002	.004
Heat, light, and power	.074	.033	.052	.010	.037	.043
Ice and refrigeration	.036	.017	.029	.028	.028	.050
Repairs and maintenance:						
Buildings	.002	.002	.002	.000	.001	.003
Equipment	.003	.006	.006	.001	.004	.008
Depreciation:						
Buildings	.007	.020	.005	.002	.006	.009
Equipment	.025	.045	.018	.006	.018	.021
Insurance	.001	.005	.038	.001	.004	.005
Taxes	.006	.001	.003	.001	.002	.004
Rent	.000	.000	.000	.000	.000	.000
Cleaning supplies	.000	.001	.000	.000	.000	.000
Other supplies	.004	.011	.006	.002	.004	.003
Miscellaneous	.000	.000	.000	.000	.000	.000
Administrative and general expense	.012	.086	.006	.013	.020	.019
Total cost	.199	.357	.156	.075	.157	.226

TABLE 47.—*Cream: Can-filling costs for plants in the United States and Canada, May 1, 1925, to April 30, 1926*

[Cost per 100 pounds]

	United States					Canada
	Western areas	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
Direct labor, factory expense	$0.067	$0.015	$0.030	$0.027	$0.031	$0.064
Indirect labor:						
Superintendent	.006	.002	.006	.003	.004	.003
General	.000	.002	.003	.000	.002	.003
Heat, light and power	.024	.021	.036	.011	.023	.048
Repairs and maintenance:						
Buildings	.000	.....	.011	.000	.005	.003
Equipment	.000	.....	.002	.000	.001	.003
Depreciation:						
Buildings	.004	.003	.007	.001	.004	.007
Equipment	.011	.002	.002	.002	.003	.004
Insurance	.001	.....	.003	.001	.002	.004
Taxes	.002	.....	.002	.001	.001	.001
Rent	.002	.....	.000	.000	.....	.000
Cleaning supplies	.001	.....	.000	.000	.....	.000
Other supplies	.007	.005	.004	.004	.004	.005
Miscellaneous	.003	.000	.000	.001	.....	.001
Administrative and general expense	044	.002	.011	.012	.014	.024
Total cost	.172	.052	.117	.063	.094	.170

TABLE 48.—*Cream: Disposal and value of skim milk in the United States and Canada, May 1, 1925, to April 30, 1926*

Area [1]	Total quantities of skim milk on which data were obtained	Percentage disposal and value per hundredweight											
		At plants where values were given		At plants where no values were given		Wasted		At farm feeding value [2]		Total having known value		Total with known value plus wasted	
		Per cent	Value	Per cent	Value	Per cent	Value	Per cent	Value	Per cent	Value	Per cent	Value
	Pounds		*Cents*		*Cents*		*Cents*		*Cents*		*Cents*		*Cents*
United States	.....	.....	[4] 32.3	.....	0	.....	0	.....	[4] 51.7	.....	[4] 38.4	.....	[4] 36.2
Canada	.....	.....	13.0	.....	0	.....	0	.....	53.4	.....	51.7	.....	45.4
Boston milk shed	.....	.....	44.3	.....	0	.....	0	.....	54.8	.....	45.8	.....	41.5
Area 1	17,769,851	5.02	20.5	7.54	.....	2.44	.....	45.00	52.0	90.02	36.3	92.46	35.3
Area 2	5,128,710	9.18	56.6	62.55	.....	10.37	.....	17.90	58.8	27.08	48.2	37.45	36.6
Area 3	5,012,373	50.92	13.7	.....	.....	[3] .04	.....	49.12	53.0	100.04	33.0	100.00	33.0
Area 4	41,096,347	68.38	59.6	9.12	.....	2.43	.....	20.07	51.2	88.45	54.4	98.88	53.1
New York milk shed	.....	.....	25.7	.....	.....	.....	.....	.....	57.4	.....	33.8	.....	32.4
Area 5	32,408,901	47.02	7.9	50.07	.....	2.91	.....	.....	.....	47.02	7.9	49.93	7.4
Area 6	22,901,958	.60	10.7	59.00	.....	4.54	.....	35.86	55.9	36.46	55.2	41.00	49.0
Area 7	39,747,352	92.26	64.9	7.58	.....	.16	.....	.....	.....	92.26	64.9	92.42	64.8
Philadelphia milk shed	.....	.....	19.1	.....	.....	.....	.....	.....	40.3	.....	36.7	.....	36.2
Area 1	14,731,120	.....	.....	100.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Area 2	20,788,559	45.10	19.1	43.81	.....	1.01	.....	9.45	44.0	54.55	36.9	56.16	36.1
Area 3	2,740,067	.....	.....	.....	.....	.....	.....	100.00	36.4	100.00	36.4	100.00	36.4
North Central States	.....	.....	30.1	.....	.....	.....	.....	.....	36.9	.....	31.8	.....	31.7
Area 30	31,960,774	42.64	27.5	56.33	.....	1.03	.....	.....	33.9	42.64	27.5	43.67	26.8
Area 31	4,832,935	90.29	32.1	.....	.....	9.71	.....	.....	34.0	90.29	32.1	100.00	28.9
Area 32	26,825,624	84.06	23.7	.....	.....	10.35	.....	5.59	27.0	89.65	25.4	100.00	22.5
Area 33	3,879,162	2.40	17.6	.....	.....	[3] .08	.....	97.68	30.0	100.08	29.7	100.00	29.7
Area 34	31,005,319	11.18	32.3	.....	.....	[3] .97	.....	89.78	37.5	100.97	36.9	100.00	37.3
Area 35	64,817,370	1.55	25.4	98.95	.....	.....	.....	.....	.....	1.55	25.4	1.55	25.4
Area 36	97,918,466	25.62	65.8	54.85	.....	.87	.....	18.66	37.5	44.28	54.0	45.15	53.0
Area 37	73,058,778	29.62	19.6	12.97	.....	2.25	.....	55.14	37.5	84.78	18.4	87.03	13.1
Canada	.....	.....	13.0	.....	0	.....	0	.....	53.4	.....	51.7	.....	45.4
Area 1	19,413,006	.36	25.0	2.44	.....	.....	.....	97.20	52.0	97.56	51.9	97.56	51.9
Area 2	12,495,215	.....	.....	57.18	.....	.....	.....	42.82	55.4	42.82	53.8	42.82	53.8
Area 3	47,320,926	7.84	4.5	8.56	.....	.....	.....	83.60	58.3	91.44	53.9	91.44	53.9
Area 4	64,591,814	.....	.....	93.38	.....	3.30	.....	3.32	47.3	3.32	47.3	6.62	23.7

[1] These areas were covered by the accountants in obtaining plant costs and the numbers do not correspond to the arrangement in Fig. 2.

[2] Feeding values are based on agricultural experiment station work—the value of one-half bushel of corn.

[3] Indicates more skim milk disposals than purchases

[4] Weighted on the skim milk production for the various areas.

TABLE 49.—*Cream: Distribution of shipments originating in Boston and New York milk sheds, May 1, 1925, to April 30, 1926*

Shipped to—	Pounds fluid cream	Per cent of total	Shipped from areas—						
			1	2	3	4	5	6	7
			Per cent	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Charleston, Mass.	1,250,319	8.13	64.06	.....	.....	.....	.....	.....	.....
Boston, Mass.	4,298,910	27.94	19.81	.....	84.92	83.34	.....	.....	.....
Total	.....	36.07	83.87	.....	84.92	83.34	.....	.....	.....
New York, N. Y.	5,805,069	37.74	.....	.....	.....	.....	23.25	100.00	100.00
Hoboken, N. J.	1,335,478	8.68	.....	.....	.....	.....	36.98	.....	.....
Total	.....	46.42	.....	.....	.....	.....	60.23	100.00	100.00
Worcester, Mass.	236,898	1.54	12.14	.....	.....	.....	.....	.....	.....
Providence, R. I.	591,885	3.85	2.82	56.92	.....	10.58	.....	.....	.....
Lowell, Mass.	18,450	.12	.....	10.77	.....	.....	.....	.....	.....
Lawrence, Mass.	18,450	.12	.....	10.77	.....	.....	.....	.....	.....
Haverhill, Mass.	18,450	.12	.....	10.77	.....	.....	.....	.....	.....
Salem, Mass.	18,450	.12	.....	10.77	.....	.....	.....	.....	.....
Springfield, Mass.	65,860	.43	.....	.....	12.42	.....	.....	.....	.....
Northfield, Vt.	2,217	.01	.....	.....	.42	.....	.....	.....	.....
Lynn, Mass.	94,129	.61	.....	.....	.....	2.27	.....	.....	.....
Waltham, Mass.	119,466	.78	.....	.....	.....	2.88	.....	.....	.....
Philadelphia, Pa.	1,387,276	9.02	.....	.....	.....	.....	38.42	.....	.....
Total	.....	99.21	14.96	100.00	12.84	15.73	38.42	.....	.....
Local and unknown	122,269	.79	1.17	.....	2.24	.93	1.35	.....	.....
Total	15,383,576	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: From the records of plants studied.

TABLE 50.—*Milk and cream: Average transportation rates for milk and cream for each of the areas studied in the eastern dairy regions of the United States,[1] May 1, 1925, to April 30, 1926*

[Per 40-quart can]

From central point in each area to—	Shipments of milk		Shipments of cream		From central point in each area to—	Shipments of milk		Shipments of cream	
	Carload	Less than carload	Carload	Less than carload		Carload	Less than carload	Carload	Less than carload
Boston:	*Cents*	*Cents*	*Cents*	*Cents*	New York—Con.	*Cents*	*Cents*	*Cents*	*Cents*
Area 1	35	40	44	50	Area 16	47	53½	58	66½
Area 2	23½	27	29½	35½	Area 17	44	50½	55	63
Area 3 [2]	.....	104	.....	157	Area 18	42½	48½	53½	61
Area 4 [2]	.....	36	.....	51	Area 19	48½	56½	62	70
Area 5	30	34	37	42½	Area 20	44	50½	55	63
Area 6	35	40	44	50	Area 21	51½	59	64	74
Area 7	38	44	47½	54½	Area 22	53	60	66	75
Area 8	38	44	47½	54½	Area 23	51½	59½	65	74½
New York:					Philadelphia:				
Area 9	41½	47½	51½	59½	Area 24	40	45½	50	57
Area 10	30½	35½	38½	44	Area 25	36	41½	45	51½
Area 11	27½	32	35	39½	Area 26	30½	35½	38½	44
Area 12	33½	38½	42	47	Area 27	22	25½	28	32
Area 13	44½	50½	55	63	Area 28	26	29½	32	36½
Area 14	41½	47½	51½	59½	Area 29	30½	35½	38½	44
Area 15	50	57	62½	71½					

[1] Carload and less than carload shipments in refrigerated cars, iced in summer and heated in winter.
[2] Only baggage car rates published.

Source: Interstate Commerce Commission—Rates in force for the accounting year May 1, 1925, to Apr. 30, 1926.

TABLE 51.—*Cream: Average transportation rates from the North Central States and from Canada to eastern markets, May 1, 1925, to April 30, 1926*

[Source: Interstate Commerce Commission, rates in force for the accounting year, May 1, 1925, to April 30, 1926]

North Central States					Canada						
From central point in each area to—	Car-lot rates for shipments of cream per 40-quart can to—				From central point in each area to—	Rates for shipments of cream per 40-quart can to—					
						Boston, Mass.		New York, N. Y.		Philadelphia Pa.	
	Boston, Mass.	New York, N. Y.	Philadelphia, Pa.	Harrisburg, Pa.		Carload	Less than carload	Carload	Less than carload	Carload	Less than carload
	Cents	*Cents*	*Cents*	*Cents*		*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Area 30	164	140½	134½	125½	1	76	82	------	------	------	------
Area 31	------	97	89½	79½	2	82	90	88	99	108	117
Area 32	182	107	105	96	3	98	106	103	113	140	148
Area 33	206½	182	175	167	4	94	102	128	137	140	149
Area 34	228½	204	197	189	5	------	------	86½	100	134	148
Area 35	198½	174	167	159	6	------	------	112	119	112	119
Area 36	212	190	180½	172½	------	------	------	------	------	------	------
Area 37	181	157	150	142	------	------	------	------	------	------	------

TABLE 52.—*Milk and cream: Old schedule of transportation rates for the New England territory* [1]

[Source: Interstate Commerce Commission Tariff Schedule No. 41681, published in Circular 16, United States Department of Agriculture]

Zone	Distance	Less-than-carload shipments				Carload shipments				Tank car per quart [6]	
		Per 40-quart can [2]		Per 12-quart case [3]		Per 40-quart can [4]		Per 12-quart case [5]			
		Milk	Cream	Milk	Cream	Milk	Cream	Milk	Cream	Milk	Cream
	Miles	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
1	1-20	17.5	21.5	10.0	12.5	15.0	18.5	7.0	9.0	0.36	0.40
2	21- 40	21.0	26.0	12.5	15.5	18.0	23.0	9.5	12.0	.44	.55
3	41- 60	24.0	30.0	14.5	18.0	21.0	26.5	11.5	14.0	.52	.64
4	61- 80	27.0	33.5	16.0	20.0	23.5	29.5	12.5	15.5	.58	.72
5	81-100	29.5	37.0	18.0	22.0	26.0	32.5	14.5	17.5	.64	.79
6	101-120	32.0	40.0	19.0	23.5	28.0	35.0	15.0	19.0	.68	.85
7	121-140	34.0	42.5	20.5	26.0	30.0	37.0	17.0	20.5	.73	.91
8	141-160	36.5	45.5	21.5	27.0	32.0	39.5	17.5	22.0	.77	.96
9	161-180	38.5	48.0	23.0	29.0	33.5	42.0	18.5	23.5	.82	1.01
10	181-200	40.0	50.0	24.0	30.0	35.0	44.0	20.0	24.5	.85	1.06
11	201-220	42.0	52.0	25.0	31.0	36.5	45.5	20.5	26.0	.89	1.12
12	221-240	44.0	54.5	26.0	32.5	38.0	47.5	21.5	27.0	.92	1.15
13	241-260	45.0	56.5	27.0	33.5	39.5	49.0	22.0	27.5	.96	1.20
14	261-280	47.0	59.0	27.5	35.0	41.0	51.0	23.0	29.0	1.00	1.24
15	281-300	48.5	60.5	29.0	36.0	42.5	53.0	24.0	29.5	1.03	1.28
16	301-320	50.0	62.5	29.5	37.0	44.0	54.5	24.5	30.5	1.06	1.32
17	321-340	51.0	64.0	30.5	38.0	45.0	56.0	25.0	32.0	1.09	1.36
18	341-360	53.0	66.0	31.0	39.0	46.0	57.5	26.5	32.5	1.12	1.39
19	361-380	54.0	68.0	32.5	40.0	47.5	59.0	27.0	33.5	1.15	1.43
20	381-400	55.0	69.0	33.0	41.0	48.5	60.5	27.5	34.0	1.18	1.48
21	401-420	57.0	71.0	33.5	42.0	50.0	62.0	28.0	35.5	1.20	1.50
22	421-440	58.0	72.5	35.0	43.0	50.5	63.0	29.0	36.0	1.24	1.54
23	441-460	59.5	74.0	35.5	44.0	51.5	65.0	29.5	36.5	1.26	1.57
24	461-480	60.5	75.5	36.0	45.0	53.0	66.0	30.5	38.0	1.28	1.60
25	481-500	62.0	77.0	36.5	46.0	54.0	67.0	30.5	38.5	1.31	1.63

[1] Effective Aug. 26, 1920. Rates quoted are not applicable to shipments when service is performed wholly within the State of Massachusetts.

[2] Rates for less-than-carload shipments in milk or refrigerator cars (iced in summer and heated in winter) on milk, passenger, or mixed passenger and freight trains; also applicable to shipments in baggage cars (no icing) on passenger trains between points where milk or refrigerator cars (iced or heated) are provided.

[3] Rates for less-than-carload shipments, in bottles or in milk or refrigerator cars (iced in summer and heated in winter), on milk, passenger, or mixed passenger and freight trains; also applicable to shipments in baggage cars (no icing) on passenger trains between points where milk or refrigerator cars (iced or heated) are provided.

[4] Rates for carload shipments in milk or refrigerator cars, on milk, passenger or mixed passenger and freight trains; ice furnished by shipper.

[5] Rates for carload shipments in bottles, in milk or refrigerator cars, on milk, passenger, or mixed passenger and freight trains; ice furnished by shipper.

[6] Rates per quart for carload shipments in tank cars, in milk or refrigerator cars, on milk, passenger or mixed passenger and freight trains; minimum 9,440 quarts; ice furnished by shipper.

TABLE 53.—*Milk and cream: New schedule of transportation rates [1] for the New England milk shed*

Zone	Distance (miles)	Less-than-carload shipments				Carload shipments				Tank car per quart [6]	
		Per 40-quart can [2]		Per 12-quart case [3]		Per 40-quart can [4]		Per 12-quart case [5]			
		Milk	Cream	Milk	Cream	Milk	Cream	Milk	Cream	Milk	Cream
		Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
1	1-20	21.0	26.5	12.0	15.0	18.5	23.0	9.0	11.5	0.43	0.54
2	21-40	25.0	31.5	15.0	19.0	22.0	27.5	11.5	14.5	.53	.66
3	41-60	29.0	36.5	17.5	22.0	25.5	32.0	13.5	17.0	.62	.78
4	61-80	32.5	40.5	19.0	23.5	28.5	35.5	15.0	19.0	.70	.88
5	81-100	35.5	44.5	19.0	22.5	31.0	39.0	15.0	19.0	.77	.96
6	101-120	37.0	47.0	19.0	23.5	32.5	41.0	15.0	19.0	.79	.99
7	121-140	39.5	49.0	20.5	26.0	34.0	43.0	17.0	20.5	.84	1.05
8	141-160	41.5	51.5	21.5	27.0	36.0	45.0	17.5	22.0	.88	1.10
9	161-180	43.0	54.0	23.0	29.0	38.0	47.0	18.5	23.5	.92	1.15
10	181-200	45.0	56.0	24.0	30.0	39.0	49.0	20.0	24.5	.96	1.20
11	201-220	47.0	58.0	25.0	31.0	41.0	51.0	20.5	26.0	1.01	1.26
12	221-240	48.0	60.0	26.0	32.5	42.0	53.0	21.5	27.0	1.02	1.28
13	241-260	50.0	62.0	27.0	33.5	43.0	54.0	22.0	27.5	1.07	1.34
14	261-280	51.0	63.5	27.5	35.0	45.0	56.0	23.0	29.0	1.09	1.36
15	281-300	53.0	66.0	29.0	36.0	46.0	57.5	24.0	29.5	1.13	1.41
16	301-320	54.0	68.0	29.5	37.0	47.5	59.5	24.5	30.5	1.16	1.45
17	321-340	56.0	69.5	30.5	38.0	48.5	60.5	25.0	32.0	1.20	1.50
18	341-360	57.0	71.0	31.0	39.0	50.0	62.5	26.5	32.5	1.22	1.53
19	361-380	58.0	72.5	32.5	40.0	51.0	63.5	27.0	33.5	1.24	1.55
20	381-400	59.5	74.5	33.0	41.0	52.0	65.0	27.5	34.0	1.27	1.59

[1] Effective June 10, 1927. Rates quoted are not applicable to shipments when service is performed wholly within the State of Massachusetts.

[2] Rates per can for less than carload shipments in milk or refrigerator cars (iced in summer and heated in winter, on milk, passenger, or mixed passenger and freight trains; also applicable to shipment in baggage cars (no icing) on passenger trains between points where milk or refrigerator cars (iced or heated) are provided.

[3] Rates for less than carload shipments, in bottles, or in milk or refrigerator cars (iced in summer and heated in winter) on milk, passenger, and freight cars; also applicable to shipments in baggage cars (no icing) on passenger trains between points where milk or refrigerator cars (iced or heated), are provided.

[4] Rate per can for carload shipments in milk or refrigerator cars, on milk, passenger, or mixed passenger and freight trains; ice furnished by shipper.

[5] Rates for carload shipments in bottles, in milk or refrigerator cars on milk, passenger, or mixed passenger and freight trains, ice furnished by shipper.

[6] Rates per quart for carload shipments in tank cars, on milk, passenger, or mixed passenger, or mixed passenger and freight trains, ice furnished by shipper.

Source: Interstate Commerce Commission, Tariff Schedule No. 4834, published in Circular 16. U. S. Dept. of Agriculture.

TABLE 54.—*Milk and cream: Transportation rates per 40-quart can for the New York State milk shed* [1]

Source: Rates for zones 1 to 12 are from schedules of rates prescribed by the New York Public Service Commission. Rates for zones 13 to 40 are from Interstate Commerce Commission Tariff Schedule No. 882. From Circular 16, Department of Agriculture.

Zone	Distance (miles)	Less-than-carload shipments		Carload shipments		Zone	Distance (miles)	Less-than-carload shipments		Carload shipments	
		Milk	Cream	Milk	Cream			Milk	Cream	Milk	Cream
		Cents	*Cents*	*Cents*	*Cents*			*Cents*	*Cents*	*Cents*	*Cents*
1	1-10	23.5	29.5	20.5	26.0	21	201-210	45.5	57.0	40.0	50.0
2	11-20	24.5	31.0	21.5	27.0	22	211-220	47.0	58.0	41.0	51.0
3	21-30	26.5	33.0	23.0	29.0	23	221-230	47.5	59.0	41.5	51.5
4	31-40	27.5	35.0	24.5	30.5	24	231-240	48.0	60.0	42.0	53.0
5	41-50	29.5	36.5	26.0	31.0	25	241-250	48.5	61.0	42.5	53.5
6	51-60	30.5	38.5	27.0	33.5	26	251-260	50.0	62.0	43.0	54.0
7	61-70	32.0	39.5	27.5	35.0	27	261-270	50.5	63.0	44.0	55.0
8	71-80	33.0	41.5	29.0	36.0	28	271-280	51.0	63.5	44.5	56.0
9	81-90	34.0	42.5	30.0	37.0	29	281-290	51.5	65.0	45.0	56.5
10	91-100	35.5	44.0	30.5	38.5	30	291-300	53.0	65.5	46.0	57.5
11	101-110	36.0	45.0	32.0	39.5	31	301-310	52.5	66.5	47.0	58.0
12	111-120	37.0	47.0	32.5	41.0	32	311-320	54.0	68.0	47.5	59.0
13	121-130	38.5	48.0	33.5	42.0	33	321-330	54.5	68.5	48.0	60.0
14	131-140	39.5	49.0	34.0	43.0	34	331-340	56.0	69.5	48.5	60.5
15	141-150	40.0	50.5	35.5	44.0	35	341-350	56.5	70.0	49.0	62.0
16	151-160	41.5	51.5	36.0	45.0	36	351-360	57.0	71.0	50.0	62.5
17	161-170	42.0	53.0	36.5	46.0	37	361-370	57.5	72.0	50.5	63.0
18	171-180	43.0	53.5	38.0	47.0	38	371-380	58.0	72.5	51.0	63.5
19	181-190	44.0	54.5	38.5	48.0	39	381-390	59.0	74.0	51.5	64.0
20	191-200	45.0	56.0	39.0	49.5	40	391-400	59.5	74.5	52.0	65.0

[1] Shipped in milk or refrigerator cars on milk, passenger, and freight trains, iced when necessary, to Melrose Junction, or One hundred and thirtieth Street, New York City.

TABLE 55.—*Milk: Average transportation rates from regions supplying Boston and New York City* [1]

	Mileage weighted on quantities shipped	Per 40-quart can					
		At published rates, 1926			At published rates, 1927		
		Carload lots	Less than carloads	Average of carloads and less than carloads [2]	Carload lots	Less than carloads	Average of carloads and less than carloads [2]
	Miles	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
From areas in the Boston milk shed to Boston	134	31.0	33.7	31.8	35.6	37.0	36.0
From areas in the New York milk shed to New York	234	41.9	48.1	43.4	41.9	48.1	43.4
Average of Boston and New York milk sheds	208	39.1	44.4	40.4	40.3	45.2	41.5
Average of areas in Canada to Boston and New York	384	49.7	57.0	[3] 57.0	49.9	57.2	[3] 57.2

[1] Weighted average carload in milk or refrigerated cars, on milk, passenger, or mixed passenger and freight trains. Less than carload in milk or refrigerated cars, iced in summer and heated in winter when necessary; passenger or milk trains; also baggage cars (no icing). Providence and Springfield issue no rates on refrigerated cars, and baggage-car rates were used in weighting less than carload.
[2] Includes icing of cars that take less-than-carload rates.
[3] Less than carload in Canada and the United States.

TABLE 56.—*Cream: Average transportation rates from regions supplying Boston, New York, and Philadelphia* [1]

	Mileage weighted on quantities shipped	Per 40-quart can					
		At published rates in 1926			At published rates in 1927		
		Carload lots	Less than carloads	Average of carloads and less than carloads [2]	Carload lots	Less than carloads	Average of carloads and less than carloads [2]
	Miles	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
From areas in the Boston milk shed to Boston	169	43.2	50.2	46.3	48.8	55.3	51.8
From areas in the New York milk shed to New York	271	56.6	64.8	57.1	56.6	64.8	57.1
From areas in the Philadelphia milk shed to Philadelphia	126	41.6	47.6	[3] 38.3	41.6	47.6	[3] 38.3
From areas in the North Central States to Boston, New York, and Philadelphia	1,050	177.9	156.4	[4] 176.4	177.9	156.4	[4] 176.4
Average of all domestic regions	309	64.4	68.2	65.1	66.5	70.2	67.2
Average of areas in Canada to Boston, New York, and Philadelphia	360	89.9	95.6	[5] 95.6	82.4	88.9	[5] 88.9
Average per gallon for domestic region				6.51			6.72
Average per gallon for Canadian region				9.56			8.89

[1] Weighted average carload (c. l.) in milk or refrigerated cars, on milk, passenger, or mixed passenger and freight trains. Less than carload (l. c. l.) in milk or refrigerated cars, iced in summer and heated in winter when necessary; passenger or milk trains; also baggage cars (no icing). Providence and Springfield issued no rates on refrigerated cars and baggage car rates were used in weighting less than carload.
[2] Includes icing of cars that take less than carload rates.
[3] The lower rate is due to the transportation of a large amount of cream by truck.
[4] Applies only to 8 per cent of the cream shipped from Columbus, Ohio, and Lebanon, Ind.
[5] Less than carload in Canada and the United States.

TABLE 57.—*Milk and cream: Average rates per hour for farm labor in the United States and Canada, May 1, 1925, to April 30, 1926* [1]

Area	Rates for hired help			Rates for operator			Rates for family			Equivalent man rate
	Summer	Winter	Average for year	Summer	Winter	Average for year	Summer	Winter	Average for year	
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
United States	23.4	25.2	24.7	25.3	26.6	26.3	20.1	21.1	20.8	25.8
Canada	19.7	22.4	21.2	19.1	20.8	20.3	15.3	16.0	15.8	20.5
Boston milk shed	23.5	25.2	24.7	25.5	27.0	26.6	17.8	18.1	17.9	26.2
Area 1	22.7	23.5	23.5	24.3	26.0	25.4	14.3	14.3	14.3	25.2
Area 2	19.0	21.6	20.8	26.1	26.2	26.2	19.3	15.8	17.1	25.0
Area 3	29.0	28.6	28.7	29.4	32.0	31.1	16.0	17.1	16.6	29.9
Area 4	27.9	28.5	28.3	28.5	29.7	29.3	18.7	16.7	17.6	29.0
Area 5	27.0	27.3	27.2	25.8	28.7	27.9	20.2	22.3	21.5	27.5
Area 6	22.0	24.6	23.8	23.5	22.5	22.8	21.1	22.0	21.6	23.5
Area 7	22.6	24.2	23.8	23.0	24.6	24.1	16.8	20.7	19.1	24.1
Area 8	24.9	28.6	27.6	24.7	28.7	27.4	17.6	23.0	20.5	27.4
New York milk shed	24.6	25.3	25.2	25.8	27.0	26.7	21.8	23.1	22.5	26.2
Area 9	26.8	28.4	27.9	26.1	28.1	27.5	22.9	22.4	26.6	27.7
Area 10	28.1	29.2	28.9	28.1	29.2	29.0	22.5	25.6	24.0	28.8
Area 11	23.8	25.2	24.8	26.8	28.0	27.7	17.6	20.2	19.3	26.9
Area 12	25.9	27.8	27.2	26.8	26.8	26.6	21.6	22.1	21.9	26.8
Area 13	23.2	23.8	23.6	25.4	27.2	26.6	24.3	25.8	25.1	26.5
Area 14	27.2	27.9	27.7	27.3	27.9	27.7	24.8	24.7	24.8	27.5
Area 15	21.9	22.3	22.2	24.5	25.2	25.0	19.8	20.3	20.0	24.0
Area 16	26.8	26.7	26.7	29.3	30.1	29.9	24.6	27.7	26.3	28.7
Area 17	23.6	23.6	23.6	26.3	26.3	26.3	22.4	23.5	23.0	25.5
Area 18	23.6	23.9	23.8	24.9	26.4	25.9	22.1	21.9	22.0	25.2
Area 19	28.5	29.9	29.5	25.1	27.3	26.6	26.0	25.8	25.9	27.2
Area 20	22.3	23.8	23.4	24.9	27.0	26.4	20.9	22.7	22.0	25.3
Area 21	22.7	23.4	23.2	23.3	25.0	24.4	17.9	20.0	18.8	24.1
Area 22	29.3	29.7	29.6	28.5	27.9	28.1	23.9	25.5	24.8	28.4
Area 23	26.1	25.4	25.6	26.3	26.8	26.6	23.8	24.5	24.2	26.3
Philadelphia milk shed	20.1	24.8	22.6	23.3	25.4	24.7	18.1	20.8	19.6	24.0
Area 24	19.0	17.0	17.7	21.6	24.5	23.7	16.4	18.0	17.3	23.0
Area 25	16.3	18.0	17.4	20.8	22.6	21.9	15.5	16.9	16.3	20.5
Area 26	15.5	37.8	25.8	23.4	25.8	25.0	18.6	21.6	20.4	24.7
Area 27	26.3	28.7	27.9	26.0	27.5	27.0	21.7	23.0	22.5	27.4
Area 28	28.2	27.7	27.9	28.9	30.7	30.0	16.2	15.3	15.7	27.7
Area 29	18.6	23.0	21.2	21.9	24.9	23.8	18.6	30.0	24.5	23.6
North Central States	24.0	24.0	24.0	24.3	23.8	23.9	19.4	20.8	20.2	24.1
Area 30	19.3	24.9	22.1	22.3	25.5	24.3	20.3	21.6	20.9	23.9
Area 31	22.8	24.8	24.1	22.5	24.1	23.6	16.0	17.7	16.9	23.7
Area 32	19.4	14.9	16.8	22.9	25.5	24.5	13.9	22.2	18.2	24.8
Area 33	27.2	29.8	29.0	24.3	24.7	24.5	21.9	24.6	23.6	26.3
Area 34	24.6	24.5	24.6	24.0	22.8	23.2	19.7	19.5	19.6	23.3
Area 35	22.0	21.6	21.8	24.8	23.7	24.0	19.6	21.8	21.0	23.6
Area 36	23.7	25.0	24.5	23.7	25.5	24.9	19.6	19.5	19.5	24.6
Area 37	26.9	24.4	25.2	25.7	23.0	23.8	17.7	20.2	19.1	24.9
Canada	19.7	22.4	21.2	19.1	20.8	20.3	15.3	16.0	15.8	20.5
Area 1	19.2	21.1	20.5	18.9	20.2	19.7	13.5	15.0	14.4	19.8
Area 2	19.6	25.2	22.4	19.9	22.0	21.3	13.7	11.2	13.2	21.3
Area 3	20.3	21.1	20.8	18.1	19.2	18.8	16.1	17.3	16.8	19.6
Area 4	17.8	25.5	22.5	17.4	20.7	19.7	15.5	15.6	15.6	19.9
Area 5	19.8	22.7	21.8	22.7	24.6	23.9	20.9	21.4	21.2	23.2
Area 6	20.0	21.3	20.9	20.5	22.0	21.6	15.9	20.8	18.1	21.4

[1] The average rate per hour weighted by the total hours of labor required to produce the quantity of milk for cream shipped from each area to terminal markets.

TABLE 58.—*Wholesale prices of butter and equivalent values of butterfat at New York City and Montreal, 1921–1926*

[Cents per pound]

	1921		1922		1923		1924		1925		1926	
	Butter	Butterfat	Butter	Butterfat	Butter	Butterfat	Butter	Butterfat	Butter	Butterfat	Butter	Butterfat
New York City:[1]												
January	52	62.4	37	44.4	52	62.4	53	63.6	40	48.0	46	53.2
February	47	56.4	37	44.4	50	60.0	50	60.0	41	49.2	45	54.0
March	48	57.6	38	45.6	49	58.8	47	56.4	48	57.6	44	52.8
April	46	55.2	38	45.6	46	55.2	38	43.6	45	54.0	40	48.0
May	32	38.4	38	45.6	42	50.4	39	46.8	43	51.6	40	48.0
June	33	39.6	37	44.4	39	46.8	41	49.2	42	50.4	41	49.2
July	40	48.0	36	43.2	39	46.8	40	48.0	43	51.6	41	49.2
August	43	51.6	35	42.0	44	52.8	38	45.6	43	51.6	41	49.2
September	43	51.6	41	49.2	46	55.2	38	48.6	48	57.6	44	52.8
October	47	56.4	46	55.2	48	57.6	39	46.8	51	61.2	46	55.2
November	45	54.0	51	61.2	53	63.8	43	51.6	51	61.2	49	58.8
December	44	52.8	56	64.8	55	66.0	45	54.0	49	58.8	54	64.8
Average	43.3	52.0	40.7	48.8	46.9	56.3	42.6	51.1	45.3	54.4	44.2	53.1
Montreal:[2]												
January	55	64.2	37	43.2	40	46.7	44	51.3	.....	.....	44	51.3
February	56	65.3	36	42.0	46	53.7	.....	.....	34	39.7	46	53.7
March	59	68.8	38	44.3	53	61.8	42	49.0	35	40.8	47	54.8
April	53	61.8	42	49.0	49	57.2	37	42.1	34	39.7	42	49.0
May	37	42.2	35	40.8	33	38.5	32	37.3	34	39.7	35	40.8
June	32	37.3	35	40.8	33	38.5	33	38.5	34	39.7	37	43.2
July	38	44.3	38	44.3	33	38.5	34	39.7	38	44.3	34	39.7
August	38	44.3	36	42.0	34	39.7	37	43.2	39	45.5	34	39.7
September	38	44.3	37	43.2	36	42.0	37	43.2	41	47.8	34	39.7
October	37	43.2	36	42.0	39	45.5	37	43.2	46	52.5	35	40.8
November	40	46.7	38	44.3	39	45.5	37	43.2	44	51.3	36	42.0
December	40	46.7	39	45.5	42	49.0	.....	.....	45	52.5	40	46.7
Average	43.8	51.0	37.2	43.5	39.9	46.6	37.0	43.2	38.5	44.9	38.7	44.5

[1] Yearbook of Department of Agriculture, 1925, page 1094; Crops and Markets, 1926 (for 92-score butter). The value of butterfat was obtained by multiplying the butter prices by 1.20.

[2] Canadian Monthly Bulletins of Statistics for Montreal prices. The value of butterfat was obtained by multiplying the prices of butter by 1.1667.

TABLE 59.—*Milk and cream: Pasture rates per month per animal unit in the United States and Canada, May 1, 1925, to April 30, 1926*

UNITED STATES

Area	Rate per month	Area	Rate per month
Boston milk shed:		New York milk shed—Continued.	
Area 1	$1.14	Area 20	$1.40
Area 2	1.20	Area 21	1.78
Area 3	1.62	Area 22	1.84
Area 4	1.72	Area 23	2.27
Area 5	1.05	Philadelphia milk shed:	
Area 6	.94	Area 24	1.91
Area 7	.95	Area 25	2.27
Area 8	1.92	Area 26	2.63
New York milk shed:		Area 27	2.66
Area 9	1.80	Area 28	2.24
Area 10	1.55	Area 29	2.31
Area 11	1.24	North Central States:	
Area 12	1.24	Area 30	2.04
Area 13	1.03	Area 31	2.24
Area 14	1.54	Area 32	2.07
Area 15	1.62	Area 33	1.39
Area 16	1.76	Area 34	1.83
Area 17	1.61	Area 35	1.95
Area 18	1.37	Area 36	1.96
Area 19	2.03	Area 37	2.13

Weighted average for cream areas	$1.62
Weighted average for milk areas	1.52

TABLE 59.—*Milk and cream: Pasture rates per month per animal unit in the United States and Canada, May, 1925, to April 30, 1926*—Continued

CANADA

Area	Rate per month	Area	Rate per month
1	$1.45	4	$2.78
2	1.86	5	1.91
3	1.65	6	2.87

Weighted average for cream areas	$1.91
Weighted average for milk areas	1.88

APPENDIX

A PROCLAMATION

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

INCREASING RATES OF DUTY ON MILK, FRESH, AND CREAM

Whereas in and by section 315 (a) of Title III of the act of Congress approved September 21, 1922, entitled "An act to provide revenue, to regulate commerce with foreign countries, to encourage the industries of the United States, and for other purposes," it is, among other things, provided that whenever the President, upon investigation of the differences in costs of production of articles wholly or in part the growth or product of the United States and of like or similar articles wholly or in part the growth or product of competing foreign countries, shall find it thereby shown that the duties fixed in this act do not equalize the said differences in costs of production in the United States and the principal competing country he shall, by such investigation, ascertain said differences and determine and proclaim the changes in classifications or increases or decreases in rates of duty provided in said act shown by said ascertained differences in such costs of production necessary to equalize the same;

Whereas in and by section 315 (c) of said act it is further provided that in ascertaining the differences in costs of production, under the provisions of subdivisions (a) and (b) of said section, the President, in so far as he finds it practicable, shall take into consideration (1) the differences in conditions in production, including wages, costs of material, and other items in costs of production of such or similar articles in the United States and in competing foreign countries; (2) the differences in the wholesale selling prices of domestic and foreign articles in the principal markets of the United States; (3) advantages granted to a foreign producer by a foreign government, or by a person, partnership, corporation, or association in a foreign country; and (4) any other advantages or disadvantages in competition;

Whereas, under and by virtue of said section of said act, the United States Tariff Commission has made an investigation to assist the President in ascertaining the differences in costs of production of and of all other facts and conditions enumerated in said section with respect to the articles described in paragraph 707 of Title I of said tariff act of 1922, namely, milk, fresh, and cream, being wholly or in part the growth or product of the United States, and of and with respect to like or similar articles wholly or in part the growth or product of competing foreign countries;

Whereas in the course of said investigation a hearing was held, of which reasonable public notice was given and at which parties interested were given reasonable opportunity to be present, to produce evidence, and to be heard;

And whereas the President upon said investigation of said differences in costs of production of said articles wholly or in part the growth or product of the United States and of like or similar articles wholly or in part the growth or product of competing foreign countries, has thereby found—

That the principal competing country is Canada;

And that the duties fixed in said title and act do not equalize the differences in costs of production in the United States and in said principal competing country, namely, Canada, and has ascertained and determined the increased rates of duty necessary to equalize the same.

Now, therefore, I, Herbert Hoover, President of the United States of America, do hereby determine and proclaim that the increases in the rates of duty provided in said act shown by said ascertained differences in said costs of production necessary to equalize the same are as follows:

An increase in said duty on milk, fresh (within the limit of total increase provided for in said act) from 2½ cents per gallon to 3¾ cents per gallon;

And an increase in said duty on cream (within the limit of total increase provided for in said act) from 20 cents per gallon to 30 cents per gallon.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this 14th day of May in the year of our Lord one thousand nine hundred and twenty-nine
[SEAL] and of the Independence of the United States of America the one hundred and fifty-third.

HERBERT HOOVER.

By the President:
HENRY L. STIMSON,
Secretary of State.

[No. 1880]

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