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PART III

RANGE AND VARIETY OF COSTS OF PRODUCTION

PART III OF ECONOMIC ANALYSIS OF THE FOREIGN TRADE OF THE UNITED STATES IN RELATION TO THE TARIFF

LETTERS

FROM

THE CHAIRMAN OF
THE UNITED STATES TARIFF COMMISSION

TRANSMITTING IN PARTIAL RESPONSE TO

S.Res. 325

SEVENTY-SECOND CONGRESS

CERTAIN INFORMATION RELATIVE TO COSTS OF PRODUCTION IN THE UNITED STATES

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1933

Submitted by Mr. COSTIGAN

IN THE SENATE OF THE UNITED STATES,
February 21 (calendar day, February 22), 1933.

Ordered, That the data called for in Senate Resolution No. 325, agreed to January 28, 1933, concerning an economic analysis of the foreign trade of the United States in relation to the tariff, when fully transmitted, be printed as a Senate document.

Attest:

EDWIN P. THAYER, *Secretary.*

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LETTERS OF TRANSMITTAL

UNITED STATES TARIFF COMMISSION,
Washington, February 1, 1933.

The PRESIDENT OF THE SENATE,
Washington, D.C.

SIR: I have the honor to transmit herewith certain information in partial response to Senate Resolution 325, present session, passed on January 28.

The material consists of certain tables containing statistical and textual information which is indicative of the form and substance of the response which will be made to paragraphs 1, 2, 3, and 4 of said resolution. There is also included a form of a table to include information bearing upon paragraph 9 of the resolution.

The tentative table prepared for information under paragraph 9, it will be observed, omits the year 1930 because during that year there was a change of the tariff. The Commission would be assisted in its work if it knew that the Senate regarded it as important that the table should contain information bearing upon that year. We may remark that to include this information would mean a considerable addition to our work, inasmuch as it will be necessary to present separately the dutiable articles imported during the months previous to and the months subsequent to the enactment of the existing tariff law.

If arrangements can be made to have these tables printed, the material with respect to other paragraphs and schedules of the tariff act will be forwarded directly to the Printing Office from time to time in order that the data completed by February 15 and March 1, the dates specified in the resolution, may be made available to Members of the Senate in printed form.

Work is also going forward upon material in response to the other paragraphs of the resolution; much of the basic material, in fact, now being in process of compilation. If agreeable, this material, insofar as it consists of tables, will also be forwarded directly to the Printing Office as it is prepared.

The textual material with respect to paragraphs 10 and 11 will be sent directly to the Senate for such disposition as it wishes to make of it.

The Commission would appreciate suggestions from the Senate, or from Members of the Senate, that might aid in perfecting the form in which the material is to be presented, with a view to being most useful to the Senate under the aforesaid resolution.

Very respectfully,

ROBERT L. O'BRIEN, *Chairman.*

UNITED STATES TARIFF COMMISSION,
Washington, March 1, 1933.

The PRESIDENT OF THE SENATE,
Washington, D.C.

SIR: I have the honor to transmit herewith in further response to Senate Resolution No. 325, practically all of the remainder of the manuscript in answer to requirements of paragraphs 1, 2, 3, 4, 6, and 9, and some of the material in response to paragraphs 5 and 7.

The material prepared in answer to the remaining requirements is now in its final stages and will be transmitted as soon as the necessary editing and correcting are completed.

Although the resolution does not require it, the Commission has added data for the calendar year 1932. Although the statistics did not become available until recently, we have taken the additional time necessary to insert them because their inclusion adds considerable value to the report.

Very truly yours,

ROBERT L. O'BRIEN, *Chairman.*

GENERAL INTRODUCTION

On January 28, 1933, the United States Senate adopted a resolution (No. 325) directing the United States Tariff Commission, with such cooperation as it might request of the Departments of State, Commerce, Agriculture, and Labor, to provide the Senate with certain information and statistics relative to the trade of the United States with other countries and as to conditions and methods of tariff bargaining. The resolution required that the Commission report successively on or before February 1, 1933, February 15, 1933, and finally March 31, 1933. To do this it was necessary that the Commission give precedence to this work over most of the work on pending investigations already ordered.

The resolution consists of a preamble and 11 paragraphs. In order to present as briefly as possible the general character of the information called for in the resolution, the preamble is given in full below, followed by a brief summary of each of the 11 paragraphs. The full text of each paragraph precedes the list prepared in response to it.

Resolved, That the United States Tariff Commission (as provided under section 334 of the Tariff Act of 1930, and so far as deemed advisable by said Tariff Commission, with the cooperation of the Departments of State, Commerce, Agriculture, Labor, and other departments or independent establishments of the Government, as and when requested by the United States Tariff Commission to cooperate) is hereby directed under section 332 (g) of the Tariff Act of 1930, and for the purposes of that section, to investigate, particularly by resort to available files and records, and to report thereon to the Senate assembled data (including tariff rates, foreign-trade statistics, production statistics, and other pertinent facts) successively on or before February 1, 1933, February 15, 1933, and, finally, March 1, 1933, on the following subjects:

(1) Any and all tariff classifications * * * with respect to which * * * imports have * * * substantially lessened or have ceased * * *.

(2) Any and all dutiable articles of which imports * * * have represented less than 5 per centum of the domestic production * * *.

(3) Any and all articles on which the tariff rates exceed 50 per centum ad valorem, * * *, and * * * separate lists showing for all agricultural products * * * carrying tariff rates exceeding 50 per centum * * *, the equivalent ad valorem of present rates based on average prices from 1920 to 1929, * * *.

(4) Dutiable articles the imports of which have increased in quantity or value since 1929, * * *.

(5) Statistics, * * * of all articles important in export trade, the exports of which have decreased * * *, with information on the extent of resulting unemployment * * *.

(6) The extent of exports of capital from the United States * * * to build or buy factories and employ labor in * * * foreign countries, together with the number of employees * * *.

(7) The range and variety of costs * * *, for each industry investigated by the Tariff Commission since 1920 * * *.

(8) * * * articles which are produced in the United States with advantages, including trade and market conditions, which were factors in causing such articles * * * to be exported in substantial quantities * * *.

(9) * * * imports * * * of more or less noncompetitive dutiable articles * * * in which foreign countries possess advantages in production, * * *.

(10) The extent to which existing * * * most-favored-nation clauses in commercial treaties, * * * may affect tariff bargaining with foreign countries, * * *.

(11) Generally to advise such ways and means for tariff bargaining as may appear relevant for most advantageously promoting expanded trade between the United States and foreign countries, * * *.

In preparing the material in response to the 11 paragraphs of the resolution, the Commission has made every effort to comply fully with the resolution in the short time allotted to its preparation. The purpose has been to make the information as useful and as significant as possible and to provide a fund of statistical and factual information which will be of service in analyzing the foreign trade of the United States in relation to the tariff. For this purpose the entire range of imports, domestic production, and exports was carefully canvassed in order to determine the items pertinent to each paragraph of the resolution and to present significant information with respect to them. With relatively few exceptions, all items are included in the material prepared in response to one or more paragraphs, and in consequence this report, taken as a whole, covers practically the entire trade of the United States with all countries. It also includes the latest available statistics, those for 1932, although their addition, as soon as they became available early in February, somewhat delayed the completion of the report. The 1932 data were not called for except in paragraphs 1 and 4, and then not specifically, but they are inserted in order to enhance the practical value of the report.

For convenience the report is divided into four parts. Part I includes the material prepared in response to paragraphs 1, 2, 3, 4, and 9 calling for information on imports into the United States; Part II includes the material prepared to supply the information called for in paragraphs 5, 6, and 8, all of them relating to exports; Part III presents data on the range and variety of costs as called for in paragraph 7; Part IV gives, mainly in textual form, the information with respect to tariff bargaining called for in paragraphs 10 and 11. All the material for Parts I and III was prepared by the Tariff Commission. In preparing the material for Part II the Tariff Commission had the cooperation of the Departments of Commerce and Agriculture and in preparing that for Part IV the cooperation of the Department of State.

RANGE AND VARIETY OF COSTS OF PRODUCTION

PART III OF ECONOMIC ANALYSIS OF THE FOREIGN TRADE OF THE UNITED STATES IN RELATION TO THE TARIFF

INTRODUCTORY STATEMENT

Paragraph 7 of Senate Resolution 325 calls for assembled data on—

The range and variety of costs of production related to the quantities produced in each cost range in the United States and in competing foreign countries, for each industry investigated by the Tariff Commission since 1920 (so far as can be given without disclosing the costs of individual concerns).

In order to determine the commodities for which significant information could be given bearing on the range and variety of costs called for in this paragraph of the resolution, a careful review was made of the cost data obtained in investigations conducted by the Tariff Commission since 1920, both under the so-called flexible provisions (section 315 of the Tariff Act of 1922 and section 336 of the Tariff Act of 1930) and under the general powers of the Commission, which have remained substantially unchanged since the establishment of the Commission. This review, which covered not only the cost data contained in published reports, but also those contained in working papers accumulated in the various investigations, disclosed that significant information of the kind required in paragraph 7 could be furnished for 44 commodities on which investigations have been completed and on which further investigations have not been instituted. These are shown in the table below, grouped according to principal source of imports. For each article the tariff paragraph in the act of 1930 is indicated.

Articles included in list 7, grouped by principal source of imports

Principal source of imports	Under sec. 315 of act of 1922		Under sec. 336 of act of 1930		Under general powers of Commission	
	Commodity	1930 par.	Commodity	1930 par.	Commodity	1930 par.
Argentina	Corn	724				
Austria			Infants' wool knit outerwear.	1529		
Belgium			Cement [1]	205		
			Window glass [2]	219		
British India			Iron in pigs [2 3]	301		
Canada	Milk and cream	707	Feldspar	207	Red cedar shingles [2]	1760
	Wheat	729	Lumber	401		
	Logs	1803	Maple sirup and sugar. [2]	503		
Chile					Copper	1658
China	Frozen eggs	713				
	Peanuts	759				

[1] In 1932 the United Kingdom rather than Belgium was the principal competing country.
[2] Second investigation.
[3] In 1932 the Netherlands rather than British India was the principal competing country.

Articles included in list 7, grouped by principal source of imports—Continued

Principal source of imports	Under sec. 315 of act of 1922		Under sec. 336 of act of 1930		Under general powers of Commission	
	Commodity	1930 par.	Commodity	1930 par.	Commodity	1930 par.
Cuba			Lima beans	765		
			Cucumbers	774		
			Eggplant	774		
			Okra	774		
			Peppers [2]	774		
Denmark	Sodium silicofluoride.	81				
	Butter [4]	709				
Germany	Gold leaf	383	Fourdrinier wires	318		
	Print rollers	395	Wire netting	397		
	Cotton hosiery	916				
Italy	Canned tomatoes	772	Sewed straw hats [2]	1504		
Japan			Crab meat	721	Dried beans	765
Mexico			Snap beans	765	Kerosene	1733
			Peas	769		
			Tomatoes	772		
Netherlands			Edible gelatin [2]	41		
Netherland West Indies.					Gasoline	1733
Spain	Onions	770				
Switzerland	Swiss cheese	710				
United Kingdom	Cresylic acid	27	Ultramarine blue	68	Dead or cresote oil	1651
			Boots and shoes, welt.	1530		
Venezuela					Crude petroleum [5]	1733

[2] Second investigation.
[4] In 1932 New Zealand rather than Denmark was the principal competing country.
[5] Two investigations.

These 44 investigations, included in list 7, represent roughly 37 percent of the 120 cost investigations completed by the Tariff Commission since 1920. Of these, 17 were conducted as surveys under the general powers of the Commission and 103 were conducted under the so-called flexible provisions—47 under section 315 of the Act of 1922 and 56 under section 336 of the Act of 1930. In addition, during this period, the Commission conducted 40 other cost investigations; 23 of these, instituted under section 315 of the Act of 1922, had not been completed at the time the Act of 1930 became effective and were thus terminated by the terms of section 336 (k) of that act; the remaining 17, instituted under sections 336 and 332 of the Act of 1930, were in progress at the time of the preparation of this material.

The most severe limitation on the number of investigations to be included in list 7 and on the significant data to be shown with respect to them, results from the consistent policy of the Tariff Commission not to publish data in such form as to make possible the disclosure of the costs or processes of individual concerns. For a number of the investigations the concerns in the industry in question, or included in the Commission's cost inquiry, were so few in number that publication of their costs might have resulted in a virtual disclosure of individual operations. Even where costs were obtained for a large number of concerns, the number for specific regions, or for particular types or grades of a given commodity, was often so small as to limit the data which could be published. In still other cases, although costs were available for many firms, those producing within certain cost intervals were too few to permit publication of data for those intervals without danger of identification.

In some investigations, moreover, one large producer was generally known to account for so great a proportion of production as to prevent publication of certain cost ranges correlated with production quantities. Sometimes, also, the fact that one large producer was generally known to be the low or high-cost producer in the industry prevented the publication of some cost ranges even when uncorrelated with quantities produced.

In a number of investigations, particularly those dealing with textiles, the presentation of cost comparisons was necessarily for specific items, or samples, selected as typical. Commonly, production data for these individual samples were not available, and so no array correlated with production was possible. In some instances also the number of companies for which cost data could be obtained for particular samples was so limited as to make impossible the presentation of data on cost variations.

The introductory statements with respect to each article in list 7 give the rates of duty to which the product is subject, the period for which costs were obtained, the scope of the investigation, and such cost averages and comparisons of domestic and foreign costs as will provide a background for the information presented on the range and variety of costs.

The kind and the extent of information with regard to the range and variety of costs which could be presented vary greatly from investigation to investigation. The minimum information of this kind given is a statement of the proportion of domestic production above and below the weighted average cost and of the variation between highest and lowest costs. The purpose, however, was to present, wherever possible, foreign and domestic delivered costs arrayed in corresponding cost ranges. This was actually done in almost half the cases, including the few in which transportation costs either were negligible or were substantially the same for foreign and domestic producers. In other cases, both foreign and domestic undelivered costs were arrayed; in still others only domestic costs, sometimes delivered and sometimes undelivered, could be presented by ranges. The last was particularly true in investigations in which invoice prices were used as evidence of foreign costs.

Transportation cost is usually an important element of delivered cost. Where this is the case, if the costs arrayed do not include delivery to the principal markets, they may not usually be taken as representing corresponding ranges of delivered costs. The general tendency, to which there may be many exceptions, of course, is for high production costs to be accompanied by low transportation costs and low production costs by high transportation costs. Where the cost array is not necessarily based on delivered costs, the accompanying statement usually gives some information with respect to transportation and other delivery costs.

The statements in the list with respect to specific articles give, in addition to the cost arrays, such significant supplementary information as may be available, particularly relative to the range of important cost elements.

Since weighting of both factory and transportation costs presents difficult problems, the basis of weighting adopted in each case is stated. Two principal bases are used—the quantity produced or the

quantity shipped at each cost. Variations of both bases are sometimes employed.

In the list, the statements on the different commodities are arranged by tariff schedules and paragraphs. At the beginning of each schedule the dutiable articles in that schedule and the related articles on the free list are listed.

Articles Investigated by the United States Tariff Commission since 1920 for Which Range and Variety of Costs Can Be Shown

SCHEDULE 1. CHEMICALS, OILS, AND PAINTS

Dutiable items:
- Cresylic acid (par. 27).
- Edible gelatin (par. 41).
- Ultramarine blue (par. 68).
- Sodium silicofluoride (par. 81).

Free list items:
- Dead or creosote oil (par. 1651).
- Crude petroleum (par. 1733).
- Gasoline (par. 1733).
- Kerosene (par. 1733).

CRESYLIC ACID (PAR. 27)

The duty on cresylic acid under paragraph 27 of the Tariff Act of 1922 was 55 percent ad valorem, based on American selling price, and 7 cents per pound. Effective September 22, 1924, the duty automatically became 40 percent ad valorem, based on American selling price, and 7 cents per pound, as the result of specific provision in the act of 1922. Upon presidential proclamation August 19, 1927, the duty became 20 percent ad valorem, based on American selling price, and 3½ cents per pound. Under paragraph 27 of the Tariff Act of 1930, the duty is 20 percent ad valorem, based on American selling price, and 3½ cents a pound.

SCOPE OF INVESTIGATION

This investigation was conducted under section 315 of the Tariff Act of 1922. The cost period covered was the years 1923, 1924, and 1925, with emphasis on the 1923 data. Great Britain was the principal competing country. Costs were obtained from two domestic and eight British producers. Cresylic acid is a joint product with phenol from the distillation of tar (see pp. 12 and 13 of the report), costs of the respective products being established by allocation. The published report is entitled "Cresylic Acid," and is dated June 15, 1927.

COST COMPARISON AND RANGE OF COSTS

Because of the confidential nature of the domestic data, a cost comparison only in general terms (expressed as percentages) could be presented in the published report. The table below (shown as table 12 in the report) gives the cost of cresylic acid in the United States expressed in percentages of the British cost (f. o. b. factory) and shows the necessity of a maximum decrease in duty in order to more nearly equalize the difference in costs.

Cresylic acid: Comparison of costs for the first 6 months of 1923 in the United States and Great Britain shown in percentages computed on British costs as a basis of 100 and duties necessary to equalize such costs

Costs	United States	Great Britain
Costs f. o. b. factory	196.7	100.0
Transportation to New York	6.0	23.0
Total delivered costs	202.7	123.0
Difference in costs	79.7	
Present compound duty (40 percent of American selling price plus 7 cents per pound)[1]	243.4	
Minimum compound duty possible under sec. 315 (20 percent of American selling price plus 3½ cents per pound)	121.7	

[1] It should be noted that if a reduced duty results in a reduced price the ad valorem of 20 percent will be slightly smaller than is shown above.

In order to supplement the cost data for the first 6 months of 1923 and to study the trend of costs since that period, the Tariff Commission in March, 1926, ascertained from the principal domestic manufacturer of cresylic acid the costs of production in 1924 and 1925. Costs in 1924 were 86.2 percent of those for the first 6 months of 1923. In 1925 domestic costs declined further and were about 81.3 percent of costs in the first half of 1923.

Analysis by the Commission of both domestic and foreign prices in 1925 confirmed the conclusion reached from the comparison of 1923 costs.

The statement of cost range must be confined to general terms similar to the cost comparison above.

The British costs for the first 6 months of 1923 are based on a production of 525,436 United States gallons. These costs fall in two groups—296,492 gallons, or slightly more than half, produced at 96 percent of the average cost or less, and 228,944 gallons produced at 105 percent of the average cost or more. The highest cost is about 140 percent of the lowest cost. Another way of presenting the variation in costs is to state that the average British cost f. o. b. factory for the low-cost group is 91.2 percent and for the high-cost group 111.2 percent (the average of all British costs being taken as 100). The average domestic cost exceeds that of the low-cost British group by 88.5 percent and that of the high-cost British group by 68.5 percent. These figures are to be contrasted with the general average cost difference of 79.7 percent shown in the table above.

EDIBLE GELATIN (PAR. 41)

Duty:

Act of 1922 (par. 42)—

Valued at less than 40 cents per pound, 20 percent and 3½ cents per pound.

Valued at 40 cents or more per pound, 20 percent and 7 cents per pound.

Act of 1930 (par. 41)—

Valued at less than 40 cents per pound, 20 percent and 5 cents per pound.

Valued at 40 cents or more per pound, 20 percent and 7 cents per pound.

Proclamation (effective April 15, 1931)—

Valued at less than 40 cents per pound, 12 percent ad valorem and 5 cents per pound.

This investigation was conducted under section 336 of the act of 1930, and pertained to the year 1929 as the cost period. Cost work covered 10 domestic companies and 1 foreign company. The report is published as no. 13, second series.

At the time of the investigation, the Netherlands was the principal competing country, replaced, in 1931, by France.

A previous investigation under section 315 of the act of 1922 was not completed, being dismissed by the provisions of the act of 1930.

COST COMPARISON AND RANGE OF COSTS

Findings in this investigation were limited to edible gelatin valued at less than 40 cents per pound (p. 3 of report). On account of the confidential character of the foreign data, there is published in the report in lieu of a cost comparison the statement that the average domestic delivered cost exceeds the average foreign delivered cost by 7.8 cents per pound. The following table shows the range of corresponding cost differences by groups of domestic plants.

Edible gelatin: Range of excess of domestic delivered cost over foreign delivered cost, 1929

Excess of domestic over foreign delivered cost	Group average, excess cost	Domestic production covered by costs	Percent total production	
			Group	Cumulation
	Cents	*Pounds*		
Less than 5 cents per pound	1.6	3,589,544	19.32	19.32
5 to 7 cents per pound	6.2	4,285,755	23.07	42.39
7 to 9 cents per pound	7.3	2,260,040	12.17	54.56
9 cents or more per pound	11.4	8,441,138	45.44	100.00
Average and total	[1] 7.8	18,576,477	100.00	----------

[1] Upon the basis of this difference the duty was fixed at 12 percent ad valorem and 5 cents per pound by proclamation of the President.

Transportation costs are a minor factor in the total delivered costs, being less than 2 percent of either the domestic or the foreign delivered cost.

ULTRAMARINE BLUE (PAR. 68)

Ultramarine blue is dutiable under paragraph 68 of the Tariff Act of 1930 as follows: 3 cents per pound if valued at 10 cents or less per pound, and 4 cents per pound if valued at more than 10 cents per pound. The Commission found it shown by the investigation that no change in the rates was necessary to equalize cost differences.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was instituted pursuant to Senate Resolution No. 309 (71st Cong.) and conducted under section 336 of the Tariff Act of 1930 with reference to the year 1929 as the cost period. The principal competing country was England. Domestic cost work covered five companies operating five plants. Invoices were used as evidence of foreign costs. The report is published as no. 11, second series.

The grades of ultramarine blue were arranged in the following groups according to the domestic selling price: Group I, selling up to 8 cents per pound; group II, 9 to 11 cents; group III, 12 to 16 cents; and group IV, 17 cents or over. Groups III and IV were the most important in quantity and value both as to domestic production and imports. Cost comparisons were, therefore, confined to these higher price groups.

COST COMPARISONS AND RANGE OF COSTS

The cost comparisons as shown in table 7, page 14 of the published report, may be tabulated as follows:

Summary of domestic and foreign costs of ultramarine blue, delivered at the principal market, New York City, by price groups, 1929

[Cents per pound]

	Group III, 12 to 16 cents	Group IV, 17 cents or over
Domestic cost	12.35	17.57
Foreign cost	9.58	13.49
Excess of domestic over foreign cost	2.77	4.08

Included in the above costs is a transportation charge to the principal market, New York City, of 0.21 cent per pound for the domestic and 0.86 cent per pound for the foreign.

Costs by individual companies can not be shown, nor can they be grouped, without revealing individual operations. Costs in each of the groups, II, III, and IV, for which domestic cost data were obtained, are sharply concentrated about the average of those groups, as is shown in the following table:

Ultramarine blue: Domestic production and average delivered cost of three important grades with notation of relation of individual costs to the average for the grade

Group	Production	Weighted average delivered cost	Proportion of production of each grade having a cost within 10 percent of the average of that group
	Pounds	*Cents per pound*	*Percent*
II (9-11 cents per pound)	838,881	9.28	89
III (12-16 cents per pound)	3,354,044	12.35	84
IV (17 cents per pound or over)	4,029,122	17.57	84

SODIUM SILICOFLUORIDE (PAR. 81)

Sodium silicofluoride was dutiable under paragraph 5 of the Tariff Act of 1922 at 25 percent ad valorem. The rate was changed by presidential proclamation, effective September 15, 1928, to 25 per-

cent ad valorem based on American selling price. The duty in the act of 1930 was fixed at 1½ cents per pound.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was made under section 315 of the act of 1922 and applies to the years 1924 and 1925 as the cost period. The principal competing country was Denmark, but cost data were also obtained from the Netherlands, and costs from these two countries were averaged to avoid disclosing operations of individual Danish firms. Domestic costs were obtained from 11 plants in 1924 and from 8 plants in 1925. Foreign costs were obtained in Denmark from four plants owned by one company and in the Netherlands from three plants owned by two companies. The published report is dated 1928.

In 1931, Germany came into second place as a source of imports replacing the Netherlands.

COST COMPARISON AND RANGE OF COSTS

Comparison of domestic and foreign costs as shown in table 16, page 17 of the published report, is reproduced below.

Sodium silicofluoride: Comparison of weighted average domestic and foreign costs, 1924 and 1925

[Cents per pound]

Item	Costs as recorded in books				Costs with depreciation adjusted			
	1924		1925		1924		1925	
	United States	Denmark and Holland	United States	Denmark and Holland	United States	Denmark and Holland	United States	Denmark and Holland
Cost of production:								
Material	0.6589	0.1986	0.6447	0.3083	0.6589	0.1986	0.6447	0.3083
Labor	1.5040	.7352	1.3123	.6403	1.5040	.7352	1.3123	.6403
Factory expense	2.0657	.9852	1.7917	.9110	1.1340	.7017	.8668	.6450
General administrative expense	1.5203	.9226	1.2805	.8442	1.7863	1.3088	1.3181	1.1641
Total manufacturing cost	5.7489	2.8416	5.0292	2.7038	5.0832	2.9443	4.1419	2.7577
Interest at 6 per cent on depreciated value of fixed assets	.4455	.4075	.2957	.3561	.4455	.4216	.2957	.3725
Total cost of production including interest	6.1944	3.2491	5.3249	3.0599	5.5287	3.3659	4.4376	3.1302
Transportation and other charges to New York	.3480	.3989	.3421	.3357	.3480	.3989	.3421	.3357
Total cost including transportation to New York	6.5424	3.6480	5.6670	3.3956	5.8767	3.7648	4.7797	3.4659
Difference	2.8944		2.2714		2.1119		1.3138	
Foreign value [1]	2.48		2.65		2.48		2.65	
United States selling price [2]	6.172		5.073		6.172		5.073	
Duty required to equalize on basis of assessment on—								
Foreign value—percent	116.71		85.71		85.16		49.58	
United States selling price—do	46.90		44.77		34.22		25.90	
Present duty (on foreign value)—do	25		25		25		25	

[1] F. o. b. value at works. Weighted average of the exports from Denmark and Holland to the United States, taken from invoices.

[2] Weighted average selling price of domestic sales by all domestic manufacturers from whom costs were obtained.

The maximum increase in duty was indicated whether or not adjustments were made for depreciation charges. Adjustment in depreciation, repairs, and maintenance as recorded on books of record was made necessary for certain domestic and foreign companies because their charges were out of line with accepted practices for such charges. The range of domestic and foreign costs as adjusted f. o. b. plants is shown below.

Sodium silicofluoride: Range of domestic costs f. o. b. plants, with production

Cost f. o. b. plant	1924 (11 companies)			1925 (8 companies)		
	Group production	Percent of total production		Group production	Percent of total production	
		Group	Cumulation		Group	Cumulation
	Pounds			*Pounds*		
Less than 3.70 cents per pound	None	None	None	1,431,860	52.7	52.7
3.70 to 4 cents per pound	None	None	None	742,324	27.3	80.0
4 to 5 cents per pound	2,035,298	64.8	64.8	None	None	80.0
5 to 6 cents per pound	298,515	9.5	74.3	(1)	(1)	(1)
6 to 7.25 cents per pound	292,355	9.3	83.6	235,216	8.7	88.7
7.25 cents per pound or more	513,143	16.4	100.0	306,015	11.3	100.0
Total	3,139,311	100.0		2,715,415	100.0	

[1] Included in succeeding item to avoid disclosure of confidential information.

Sodium silicofluoride: Range of foreign costs f. o. b. plants, with production

Cost f. o. b. plant	1924 (6 companies)			1925 (7 companies)		
	Group production	Percent of total production		Group production	Percent of total production	
		Group	Cumulation		Group	Cumulation
	Pounds			*Pounds*		
Less than 3 cents per pound	(1)	(1)	(1)	1,270,708	43.7	43.7
3 to 3.25 cents per pound	604,942	33.1	33.1	793,446	27.3	71.0
3.25 cents per pound or more	1,222,755	66.9	100.0	843,861	29.0	100.0
Total	1,827,697	100.0		2,908,015	100.0	

[1] Included in succeeding item to avoid disclosure of confidential information.

The domestic plants were located in six States from Massachusetts to Georgia. The transportation cost from the respective plants to New York City, the principal primary market, for both the domestic and foreign product, ranged from 0.13 to 0.81 cent per pound, averaging 0.348 cent in 1924 and 0.3421 cent in 1925. For the foreign product the average transportation charge from Denmark and the Netherlands was 0.3989 cent per pound in 1924 and 0.3357 cent per pound in 1925.

DEAD OR CREOSOTE OIL (PAR. 1651)

The investigation of dead or creosote oil was made under section 332 of the act of 1930 in response to Senate Resolution No. 470 (71st Cong.). The cost period, as requested by the resolution,

was the 3-year period 1928–30. This commodity is free of duty. The principal competing country was the United Kingdom. Domestic cost work covered 13 companies operating 37 plants, and foreign cost work covered 7 companies operating 13 plants. The report on the investigation is published as Report No. 42, second series.

In 1932, imports from the United Kingdom were but slightly greater than those from the Netherlands and Belgium.

AVERAGE DOMESTIC COSTS BY REGIONS

The following table, based on table 18 of the report, shows the range of costs f. o. b. plant by regions. In this connection the report states:

> The cost is lowest in district 2 (western Pennsylvania, eastern Ohio, and northern West Virginia), and this fact is wholly attributable to the low cost of tar in that district; this low cost in turn is explained by the fact that certain of the producers of creosote oil in that district are themselves producers of tar and carry the tar in their costs at its fuel value.

Costs of production of creosote oil in the United States, with production covered by costs, by producing regions, average for the period, 1928–30

[Cents per U. S. gallon]

Region	Cost at works	Production on which cost has been calculated	Percent total production
Pennsylvania-Ohio-West Virginia	9.26	94,562,406	29.0
Chicago (steel district)	10.78	61,158,371	18.8
Central interior	11.11	30,926,870	9.5
Alabama-Tennessee	11.32	41,738,140	12.8
Eastern	11.64	51,314,899	15.7
Toledo-Detroit	11.91	12,205,523	3.7
West of Mississippi River	12.72	34,133,030	10.5
Average and total	10.82	326,039,239	100.0

RANGE OF COSTS

The period 1928–30 was one of declining costs with the foreign costs declining more rapidly than the domestic. As indicated in table 16, page 23, of the report, the annual domestic average cost at works declined during the 3-year period from 11.55 to 10.41 cents per United States gallon, and the corresponding British averages declined from 11.67 to 9.01 cents per United States gallon.

The range during the 3-year period of domestic and foreign costs delivered in the principal markets of the United States together with the production at the various cost intervals is shown in the following table:

Dead or creosote oil: Range of domestic and foreign costs in corresponding intervals, with production, 3-year period, 1928–30

[Cost delivered at principal markets per U. S. gallon [1]]

Delivered cost	Domestic			
	Group average cost	Production (United States gallons)	Percent of total production	
			Group	Cumulation
Less than 11.50 cents	9.44	62,690,907	19.23	19.23
11.50 to 12.50 cents	12.32	25,920,948	7.95	27.18
12.50 to 13.50 cents	12.81	98,201,535	30.12	57.30
13.50 to 14.50 cents	14.38	23,124,566	7.09	64.39
14.50 to 15.50 cents	15.16	53,851,399	16.52	80.91
15.50 to 16.50 cents	16.11	25,848,622	7.93	88.84
Over 16.50 cents	17.15	36,401,262	11.16	100.00
Average and total	13.01	326,039,239	100.00	

Delivered cost	Foreign			
	Group average cost	Production (United States gallons) [2]	Percent of total production [2]	
			Group	Cumulation
Less than 11.50 cents	10.91	3,930,561	8.38	8.38
11.50 to 12.50 cents				
12.50 to 13.50 cents	13.38	36,354,562	77.53	85.91
13.50 to 14.50 cents	[3]	[3]	[3]	
14.50 to 15.50 cents	[4]	[4]	[4]	
15.50 to 16.50 cents	15.52	6,609,195	14.09	100.00
Over 16.50 cents				
Average and total	13.47	46,894,318	100.00	

[1] Cost of transportation for domestic plants calculated on the actual shipments to the principal markets, whereas the foreign cost is calculated on grades for export to the United States. By reason of the fact that much of the British creosote oil exported to the United States is handled through central agencies, it was impossible to ascertain how much was shipped from each plant covered by the cost investigation to each of the selected markets. Average transportation in the amount of 3.33 cents was added to each cost.

[2] Production of grades for export to United States.

[3] Combined with group 12.50 to 13.50 cents to avoid disclosure.

[4] Combined with group 15.50 to 16.50 cents to avoid disclosure.

The cost of transportation and of other delivery charges on creosote oil to the principal markets in the United States from the domestic plants, weighted according to their respective shipments to each market, was 2.19 cents per gallon during the 3-year period covered by the investigation, and the corresponding cost from the plants in the principal competing country to the same markets was 3.33 cents per gallon. These charges have been included in the cost range table shown above.

CRUDE PETROLEUM (PAR. 1733)

Crude petroleum is on the free list in paragraph 1733 of the act of 1930. It became subject to a tax amounting to 21 cents per barrel of 42 gallons, if imported, under the Revenue Act of 1932, section 601 (c) (4).

TWO INVESTIGATIONS MADE BY THE TARIFF COMMISSION

The commission has made two reports on cost of crude petroleum. The first, made in accordance with section 332 (f) of the Tariff Act of 1930, published as Report No. 4, second series, transmitted to the

Congress February 7, 1931, concerned the approximate average cost per barrel to the oil refineries located on the Atlantic seaboard of crude petroleum delivered to them from the oil fields of the United States during the 3 years preceding 1930, and the then approximate average cost per barrel of crude petroleum from Lake Maracaibo, Venezuela, delivered to the same points.

The second, in response to House Resolution 391, published as Report No. 30, second series, transmitted to the House of Representatives, November 30, 1931, concerned the differences in the cost of production of crude petroleum, fuel oil, gasoline, and lubricating oil produced in the United States and of any like or similar foreign articles exported, directly or indirectly, from countries from which there were exported, directly or indirectly, to the United States during the period January 1, 1929, to December 31, 1930, inclusive, more than 2,000,000 barrels in the aggregate of crude petroleum, fuel oil, gasoline, and lubricating oils.

COST COMPARISON UNDER THE FIRST INVESTIGATION (REPT. NO. 4, 2D SER.)

Venezuela was the principal source of imports of petroleum into the United States during the 3-year period under consideration. The Tariff Act of 1930 (sec. 332 (f)) specified that costs should be obtained from Lake Maracaibo, Venezuela, interpreted by the Commission to mean the Maracaibo Basin. The report points out that in comparing the costs of domestic and Venezuelan crude petroleums, articles are being compared which are not similar. The domestic Mid-Continent crude has an average gravity of approximately 33° Baumé scale, while the Venezuelan has a gravity of 18° to 19°. The domestic crude refined along the Atlantic seaboard yielded, largely by cracking processes, 36 to 44 percent of gasoline, while the Venezuelan yielded 9 to 12 percent gasoline and 75 to 83 percent of fuel oil, which has a much lower unit value than gasoline. It was ascertained by the Commission that in 1929 the value of products obtained from domestic crude was $2.97 per barrel and from the Venezuelan crude $1.15 per barrel. However, the cost of refining the domestic crude was higher. As the Commission did not in this investigation go to the expense of ascertaining the refinery cost, the net values of the products from the two crudes, respectively, could not be determined. In the second investigation (see below) it was determined that the ratio of value of products from a barrel of Maracaibo crude to that from a barrel of domestic crude was 67 percent in 1929 and 70.1 percent in 1930.

It was determined that the 3 years preceding 1930, for which costs were ascertained, constituted a representative period. The law required the Commission to "ascertain the approximate average cost per barrel to the oil refineries located on the Atlantic seaboard of crude petroleum delivered to them from the oil fields of the United States * * * and * * * from Lake Maracaibo."

The cost of Mid-Continent-Gulf region crude petroleum was made the basis of comparison on the domestic side, as the bulk of domestic crude refined on the Atlantic seaboard is from those areas. The costs of producing crude petroleum in the other principal fields of the United States were also ascertained and presented in the report. The costs were computed on the basis of company-interest oil, excluding oil belonging to land owners or other royalty interests.

The Commission also determined prices paid by the refineries, including costs of delivery to the Atlantic seaboard, for both domestic and Venezuelan crude oil.

The Commission based its calculation of transportation cost from the Mid-Continent-Gulf area and from Venezuela, respectively, to the Atlantic seaboard, the principal domestic market where the two crudes meet in competition, upon the charges of the carriers, not on the actual cost to the carriers for performing the transportation service. Weighted average pipe-line and tanker charges were determined for the crude petroleum moved from the Mid-Continent-Gulf area to the Atlantic seaboard.

The table following is table 8 (from p. 29) of the first report.

Crude petroleum: Cost of production and of delivery to refineries on Atlantic seaboard of Mid-Continent-Gulf and of Venezuelan oil, 1927–29

[Venezuelan costs relate only to Lake Maracaibo oil]

	Costs per barrel of production and delivery		
	Cost of production at well	Transportation and other charges	Cost delivered at Atlantic seaboard refineries
Mid-Continent-Gulf oil:			
1927	$1.2009	$0.9595	$2.2604
1928	1.0652	.8258	1.8910
1929	1.0352	.8777	1.9129
3-year weighted average	1.0983	.8845	1.9828
Venezuelan oil:			
1927	.8724	.3111	1.1835
1928	.6272	.2356	.8628
1929	.5616	.2288	.7904
3-year weighted average	.6470	.2428	.8898

The item "transportation and other charges" is made up, for the domestic companies, on the 3-year average, of pipe-line charges of $0.5078, purchasing charges of $0.10, and tanker charges of $0.2767 per barrel. The corresponding items of foreign cost could not be published without disclosing confidential information.

The foreign costs concern only four companies, and their variation therefore can not be described.

The variations of domestic costs are treated in considerable detail in the report. Diagrams will be found in the report illustrating the variations in costs. The report says:

> There are wide differences in the cost of producing oil on the part of different concerns. There are often also wide differences for a single concern as between the costs in different fields in which it operates. The data obtained by the commission showed for each producing company its costs in each of the pools, fields, or other areas distinguished in its accounts.

An array of costs is reproduced below, showing the amounts produced within certain limits, the operations of each company in each pool or field being treated as a separate unit. These costs are also arranged cumulatively, to show the amounts produced at or below certain limits. They cover all companies for which costs were

obtained, not only for the operations in the Mid-Continent-Gulf area, but in the whole country. Nevertheless, much the larger proportion of the production for which costs were obtained was in the Mid-Continent-Gulf area, and the arrays of costs shown are representative of the distribution of costs in that area, as the weighted average cost for all companies for the 3 years was $1.08 per barrel, as against a weighted average cost for the Mid-Continent-Gulf area of $1.10. The following tables are reproduced from page 40 of the first report (tables 17 and 18).

Percentage of oil reported which was produced within cost limits specified

Cost limit	Group I. Large companies			Group II. Small companies		
	1927	1928	1929	1927	1928	1929
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Less than 40 cents per barrel	11.09	10.68	13.17	13.45	8.89	3.96
40 to 79 cents per barrel	20.97	27.45	28.52	23.32	26.52	22.29
80 cents to $1.19 per barrel	30.24	35.96	32.65	21.88	20.10	23.46
$1.20 to $1.59 per barrel	22.51	11.79	14.92	21.67	23.49	23.74
$1.60 to $1.99 per barrel	6.61	6.48	5.38	7.70	8.83	9.18
$2 to $2.39 per barrel	3.91	3.03	1.87	7.04	6.87	8.01
$2.40 to $2.79 per barrel	1.80	1.02	1.01	1.22	1.56	1.41
$2.80 to $3.19 per barrel	.49	1.38	.50	1.03	1.94	1.34
$3.20 per barrel or more	2.38	2.21	1.98	2.69	1.80	6.61
Total	100.00	100.00	100.00	100.00	100.00	100.00

Percentage of oil reported which was produced at or below the cost specified

Cost limit	Group I. Large companies			Group II. Small companies		
	1927	1928	1929	1927	1928	1929
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Less than 40 cents per barrel	11.09	10.68	13.17	13.45	8.89	3.96
Less than 80 cents per barrel	32.06	38.13	41.69	36.77	35.41	26.25
Less than $1.20 per barrel	62.30	74.09	74.34	58.65	55.51	49.71
Less than $1.60 per barrel	84.81	85.88	89.26	80.32	79.00	73.45
Less than $2 per barrel	91.42	92.36	94.64	88.02	87.83	82.63
Less than $2.40 per barrel	95.33	95.39	96.51	95.06	94.70	90.64
Less than $2.80 per barrel	97.13	96.41	97.52	96.28	96.26	92.05
Less than $3.20 per barrel	97.62	97.79	98.02	97.31	98.20	93.39
$3.20 per barrel or more	2.38	2.21	1.98	2.69	1.80	6.61

In addition to the foregoing array of costs, the returns of each company considered as a whole, and independent of its operations in different fields, were classified according to an ascending scale of average unit costs. Cumulative cost curves were then drawn. (See figs. IV to IX on pp. 45–50 of the first report.) These curves were "smoothed" to prevent disclosing confidential information.

The report also treats:

Costs by States and by large and small companies (large companies, those having an output of 1,000,000 barrels or more a year; small companies, those having an output of less than 1,000,000 barrels a year). (Pp. 37–53 of the first report. (Rept. No. 4, 2d series).)

Costs by producing districts or fields. (Pp. 53–60 of the first report.)

Costs by gravity in special districts. (P. 61 of the first report.)

Costs including royalty oil. (Pp. 62–69 of the first report.)

The foregoing information is contained in part III of the same report, which deals with average costs of crude petroleum for the United States as a whole, and therefore gives a perspective on costs

additional to those of the Mid-Continent-Gulf area for which the Atlantic seaboard is a market.

COST COMPARISONS UNDER THE SECOND INVESTIGATION (REPT. NO. 30, 2D SERIES)

The second investigation made by the Tariff Commission treated costs for the 4-year period 1927–30. The cost comparisons, however, were limited to data for the years 1929 and 1930.

The second report makes two cost comparisons summarized in the tables below.

The first table shows the relation between the values realized from the domestic and the Maracaibo crude, respectively, during the 2 years 1929 and 1930, and the costs of production, including delivery to the Atlantic coast refineries, during the 4-year period 1927–29 This table is found on page 55 of the second report (table 28).

Crude petroleum: Comparison of costs of domestic and Maracaibo crude, including delivery to the Atlantic seaboard of the United States, with adjustment according to the yields and values of products derived from crude, 1929 and 1930

	Adjustments for values of products in—	
	1929	1930
Value of refined products less cost of refining, per barrel of crude:		
Domestic crude	$2.24	$2.01
Venezuelan (chiefly Maracaibo) crude used by domestic and foreign refineries for which costs were obtained	1.50	1.41
Ratio of value of products from a barrel of Maracaibo to that from a barrel of domestic crude; being that fraction of a barrel of domestic which will produce the same net value of refined products as 1 barrel of Maracaibo crude—percent	67.0	70.1
Cost of 1 barrel of domestic crude delivered to Atlantic seaboard of United States, average for 1927–30	$1.90	$1.90
Cost of above specified fraction of a barrel of domestic crude	1.27	1.33
Cost of 1 barrel of Maracaibo crude delivered to Atlantic seaboard of United States, average for 1927–30	.87	.87
Excess (per barrel) of domestic over foreign cost	.40	.46

This table shows that, assuming the products from domestic crude and Maracaibo crude to be similar in quality and of the same average unit value, the net realization from a barrel of Maracaibo oil in 1930 was almost exactly seven-tenths (70.1 percent) of the net realization from a barrel of domestic crude. In other words, seven-tenths of a barrel of domestic petroleum produced (on this assumption) the same net value of products as 1 barrel of foreign crude. The average cost of production of domestic crude (including delivery) during the 4-year period 1927–30 was $1.90 per barrel. The cost of seven-tenths of a barrel was thus $1.33. The average cost of Maracaibo crude during this same 4-year period was $0.87 per barrel. The excess of domestic costs was thus $0.46 per barrel. The possible overestimate of the value of the products from the foreign crude might reduce this cost difference by as much as 10 or 15 cents per barrel. Attention is called, in this connection, to the discussion on page 36 of the report of the pipe-line charges as a factor in the cost of the domestic product.

Accepting the calculation for 1930 as it stands, if the cost of the Maracaibo crude during the period 1927–30 had been increased, by a duty or otherwise, by 46 cents per barrel, the net value of the products obtained from the foreign crude would have exceeded its

costs by the same percentage as the net value of the products obtained from the domestic crude would have exceeded its cost.

On the basis of the yields and values of the several products for 1929, as shown in the above table, the net realization from the foreign crude was 67 percent of that from the domestic, and the excess of domestic over foreign costs during 1927–30, calculated on this basis, was 40 cents per barrel. Different relationships would result if the yields, prices, and costs of refining of other years were used in the calculation.

The comparison presented above is between domestic crude and Maracaibo crude. A similar analysis has been made with respect to the net realization from foreign crude from all the countries covered by the investigation, taken as a group. For this purpose the same figures for domestic crude are used as in the previous comparison. For foreign crude the yields used were based on the operations of (a) all foreign refineries for which costs were secured, except asphalt plants in Mexico, together with (b) all domestic refineries using 70 percent or more foreign crude, except primarily asphalt plants. The admixture of domestic crude in the operations of these two groups of refineries taken together is too small to affect the yields appreciably, being about 2½ percent. The costs of refining were taken for the same group of refineries. The table is found on page 58 of the second report (table 30).

Crude petroleum: Comparison of costs of domestic and foreign crude, including delivery to the Atlantic seaboard of the United States, with adjustment according to the yields and values of products derived from crude, 1929 and 1930

	Adjustments for values of products in—	
	1929	1930
Value of refined products less cost of refining, per barrel of crude:		
Domestic crude	$2.24	$2.01
Foreign crude used by foreign and domestic refineries combined	1.50	1.42
Ratio of value of products from a barrel of foreign to that from a barrel of domestic crude, being that fraction of a barrel of domestic which will produce the same net value of refined products as 1 barrel of foreign crude—percent	66.9	70.6
Cost of 1 barrel of domestic crude delivered to Atlantic seaboard of United States, average for 1927–30	$1.90	$1.90
Cost of above specified fraction of a barrel of domestic crude	1.27	1.34
Cost of 1 barrel of foreign crude delivered to Atlantic seaboard of United States average for 1927–30	1.15	1.15
Excess (per barrel) of domestic over foreign cost	.12	.19

ANALYSIS OF DOMESTIC COSTS OF CRUDE PETROLEUM, 1927–30

The data in the table below, a rearrangement of table 20, pages 34 and 35 of report (no. 30, 2d ser.) indicate the range of costs by domestic districts supplying refineries located on the Atlantic seaboard, 1927–30.

This table shows that the average cost of production of the crude used by Atlantic coast refineries was $1.09 per barrel for the 4-year period, having fallen from $1.28 in 1927 to $1 in 1929 and 1930. It shows further that whereas the average cost of production of all Mid-Continent-Gulf crude during the 4-year period was $1.09 per barrel

(table 18, p. 31, of the same report), the cost of production of that part of the Mid-Continent-Gulf petroleum which was shipped to the Atlantic coast was $1.02.

Crude petroleum: Cost of production by districts supplying refineries located on the Atlantic seaboard, 1927–30

	Barrels delivered	Weighted average cost, 4-year period (per barrel)
Production at cost of less than 90 cents:		
West Texas	122,756,094	$0.58
Big Lake (Texas)	73,117	.64
California	11,375,114	.74
Smackover (Arkansas)	3,057,304	.89
Total	137,261,629	
Production cost, 90 cents to $1:		
New Mexico	151,741	.96
Eldorado (Arkansas)	2,364,233	.99
Gulf coast, Texas	67,011,159	.99
Total	69,527,133	
Production cost $1 to $1.10; Seminole (Oklahoma)	21,224,306	1.01
Production cost, $1.10 to $1.20:		
Mid-Continent (other) [1]	46,959,993	1.13
Luling (Texas)	2,752,487	1.14
Oklahoma City	2,640,001	1.15
Other Oklahoma [2]	11,481,065	1.17
Total	63,833,546	
Production cost, $1.20 to $1.30:		
Sumner County (Kansas)	125,282	1.22
Other Texas (light oil) [3]	21,751,378	1.26
North Louisiana and Arkansas	2,816,659	1.28
Total	24,693,319	
Production cost, $1.30 to $1.40:		
North Central (Texas)	285,390	1.31
Gulf coast (Louisiana)	7,318,596	1.32
Panhandle (Texas)	17,167,664	1.32
Total	24,771,650	
Production cost, $1.40 or more:		
Haynesville (Louisiana)	3,729,083	1.40
North Texas	29,117,578	1.48
Burbank (Oklahoma)	16,359,693	1.52
Mexia (Texas)	15,383,854	1.88
Appalachian	18,190,797	2.80
Total	82,781,005	
Grand total, all districts	424,092,588	1.09
Total Mid-Continent-Gulf above [4]	394,526,677	1.02
Production at less than average cost of $1.09	228,013,068	
Production at more than average cost of $1.09	196,079,520	
Total	424,092,588	

[1] Districts not specified.
[2] With the exception of certain districts, included in "other Mid-Continent", where no segregation between Texas and Oklahoma is possible.
[3] Weighted average cost for similar gravity oil for the entire State used, as specific districts were not identifiable.
[4] Excluding shipments above from California and Appalachian districts.

As indicated on page 33 of report (no. 30, 2d ser.), only a part of the crude petroleum produced in the United States or in any oil-producing region is shipped to the Atlantic coast, so that average costs

of production in the United States or in any region or combination of regions do not furnish the proper basis for cost comparison. As it was not practicable to ascertain how much crude oil came to the Atlantic coast from each producing company in each district or region, the costs of production of crude petroleum in the Mid-Continent-Gulf region from which most of the oil for the Atlantic coast comes, were arranged by districts and weighted by quantities received from each district as ascertained from the refineries. The average domestic cost was obtained by weighting district costs by these quantities and by further weighting the average costs of the entire California and Appalachian regions by the relatively small quantities received by Atlantic coast refineries from these regions.

DOMESTIC TRANSPORTATION COSTS, 1927–30

The transportation and other charges for delivering the Mid-Continent-Gulf oil to Atlantic seaboard refineries, on the average for the 4 years 1927–30, were as follows: Pipe-line charges, $0.4926; ocean tanker, $0.2645; purchasing commission, $0.04; other expenses (inspection, insurance, etc.), $0.016. The pipe-line charges differ from those shown in the earlier report of the Commission because a new analysis of shipments from the various producing districts to the Atlantic seaboard was made, and also because some intrastate rates were used, whereas all rates used in the earlier investigation were those shown in interstate tariffs. For water transportation charges the Commission accepted the entries appearing on the books of the refining companies, which represented, in part, charter rates and, in part, actual costs of operating vessels. The charge for purchasing commission differs from that shown in the earlier report. Some companies reported such a charge, others included all costs of purchasing in their overhead. A third group of companies made no report on this item. The charge for companies reporting such a payment, averaged with those reporting no payment, amounted to 4 cents per barrel.

RANGE OF DOMESTIC PRODUCTION COSTS, 1927–30

The following tables, reproduced from pages 175–177, inclusive, of the second report (tables 93, 94, 95) indicate other aspects of the range of domestic costs of production.

Crude petroleum: Unit cost and unit sales value in the United States, by groups of companies, according to quantity produced, 1927–30

Classification of companies by number of barrels produced	1927			1928			1929			1930		
	Production (company interest)	Unit cost [1]	Unit sales value	Production (company interest)	Unit cost [1]	Unit sales value	Production (company interest)	Unit cost [1]	Unit sales value	Production (company interest)	Unit cost [1]	Unit sales value
	Barrels	*Per barrel*	*Per barrel*	*Barrels*	*Per barrel*	*Per barrel*	*Barrels*	*Per barrel*	*Per barrel*	*Barrels*	*Per barrel*	*Per barrel*
10,000,000 or more	277,440,212	$1.11	$1.30	274,448,128	$1.01	$1.15	344,176,400	$0.98	$1.26	337,189,713	$1.02	$1.15
7,500,000–10,000,000	50,432,464	1.32	1.27	39,793,493	.99	1.18	34,129,906	.80	1.22	7,748,472	1.41	1.28
5,000,000–7,500,000	44,292,674	1.03	1.25	51,116,052	1.18	1.05	80,093,521	1.00	1.22	58,522,657	.86	1.18
2,500,00–5,000,000	47,373,479	1.05	1.21	59,444,933	.98	1.14	49,534,472	.96	1.27	71,759,252	.99	1.14
1,000,000–2,500,000	37,027,980	1.10	1.23	39,230,555	.96	1.21	56,709,163	1.00	1.35	42,294,490	1.02	1.17
900,000–1,000,000	1,863,077	1.37	1.33	1,841,992	.84	1.27	6,559,349	.93	1.18			
800,000–900,000	7,636,259	1.32	1.23	6,008,433	1.01	1.25	5,098,259	1.18	1.43	5,150,220	1.25	1.45
700,000–800,000	4,473,802	1.57	1.45	6,875,556	1.48	1.12	4,385,574	.98	1.23	4,538,025	1.38	1.08
600,000–700,000	2,595,156	1.11	1.39	4,407,239	.88	1.09	3,919,194	1.41	1.34	6,462,596	1.08	1.44
500,000–600,000	3,755,506	1.25	1.23	4,326,292	1.32	1.18	4,373,225	1.21	1.46	5,442,737	1.37	1.19
400,000–500,000	3,195,055	.96	1.21	5,398,058	1.30	1.21	6,761,185	1.45	1.40	5,627,046	1.08	1.32
300,000–400,000	2,785,658	1.15	1.30	2,097,516	.73	1.05	1,756,742	1.32	1.26	3,818,714	1.25	1.55
200,000–300,000	4,134,504	1.41	1.21	4,557,194	1.27	1.16	4,728,431	1.44	1.36	4,795,024	1.68	1.21
100,000–200,000	4,415,381	1.43	1.33	6,149,074	1.52	1.34	5,910,573	1.48	1.53	6,646,027	1.53	1.33
50,000–100,000	3,940,977	1.57	1.34	3,766,777	1.52	1.29	3,841,767	1.54	1.51	3,927,350	1.50	1.33
25,000–50,000	1,707,332	1.67	1.22	1,572,384	1.83	1.23	1,733,553	1.75	1.24	1,755,427	1.72	1.13
Under 25,000	744,766	2.40	1.65	956,305	2.33	1.44	1,197,881	2.27	1.46	1,085,893	1.92	1.26
Total and average	497,814,282	1.14	1.28	511,989,981	1.04	1.15	614,909,195	1.00	1.27	566,763,643	1.03	1.17

[1] Net cost, including interest on investment.

Crude petroleum: Quantity produced within various cost limits, based on net cost, including interest on investment, 1930

GROUP I. LARGE COMPANIES

[Barrels]

State	Total production (company interest)	$0.00–$0.1999	$0.20–$0.3999	$0.40–$0.7999	$0.80–$1.1999	$1.20–$1.5999	$1.60–$1.9999	$2.00–$2.3999	$2.40–$2.7999	$2.80–$3.1999	$3.20 and over
California, group A	141,740,283	3,576,938	31,425,710	61,840,932	26,657,062	10,150,675	4,799,362	1,206,965	658,780	781,908	641,951
Oklahoma	135,587,955		1,696,539	18,550,152	53,874,381	42,940,612	11,845,900	4,106,602	1,477,699	105,071	990,999
Texas	183,727,576	6,368,471	17,429,281	75,137,813	56,135,009	18,531,800	5,365,584	2,291,315	650,349	631,253	1,186,701
Arkansas	10,827,125		62,849	2,469,275	4,894,907	1,794,389	1,318,401	157,908	93,193		36,203
Louisiana	14,566,044		122,865	2,167,525	2,250,825	3,207,500	5,164,428	952,627	56,176	329,221	314,877
Kansas	22,854,925			255,429	8,404,886	9,259,915	2,259,856	1,338,595	851,659	21,320	463,265
New Mexico	4,819,589			56,860		3,521,774	532,346	3,403	322,685	217,520	165,001
Total, group B	372,383,214	6,368,471	19,311,534	98,637,054	125,560,008	79,255,990	26,486,515	8,850,450	3,451,761	1,304,385	3,157,046
Wyoming	3,587,951		423,819	1,720,865	207,615	214,638	69,151	98,244	453,655	19,693	380,271
Colorado	726,663				262,892			38,374			425,397
Montana	817,781				201,786	194,810	127,741	117,248	143,026	18,639	14,531
Total, group C	5,132,395		423,819	1,720,865	672,293	409,448	196,892	253,866	596,681	38,332	820,199
Illinois	2,979,570				128,674	2,733,857			116,532		507
Indiana	120,955	313						120,642			
Ohio	1,014,639						459,209	408,959	15,309	14,390	116,772
Michigan	1,508,864			122		1,501,754					6,988
Kentucky	410,620			19,775	376,469		11,791				2,585
West Virginia	472,912				2,622	470,290					
Pennsylvania	5,525,018						829,760	956,013	3,396,902	182,870	159,473
Total, group D	12,032,578	313		19,897	507,765	4,705,901	1,300,760	1,485,614	3,528,743	197,260	286,325
Total, all States	531,288,470	9,945,722	51,161,063	162,218,748	153,397,128	94,522,014	32,783,529	11,796,895	8,235,965	2,321,885	4,905,521
Percent	100.000	1.872	9.630	30.533	28.872	17.791	6.170	2.220	1.550	0.439	0.923

Crude petroleum: Quantity produced within various cost limits, based on net cost, including interest on investment, 1930—Continued

GROUP II. SMALL COMPANIES

[Barrels]

State	Production (company interest)	$0–$0.1999	$0.20–$0.3999	$0.40–$0.7999	$0.80–$1.1999	$1.20–$1.5999	$1.60–$1.999	$2–$2.3999	$2.40–$2.7999	$2.80–$3.1999	$3.20 and over
California, group A	11,327,307	173,150	192,772	4,273,991	4,527,398	596,105	735,182	139,571	88,804	45,133	555,201
Oklahoma	6,035,225		483,027	938,481	897,031	769,898	2,501,764	182,187	202,947	30,646	29,244
Texas	8,213,877		161,098	1,003,500	2,677,633	2,013,388	538,589	1,636,573	45,039	1,089	136,968
Arkansas	898,504			4,918	452,972	108,514	328,971			2,044	1,085
Louisiana	1,046,279			352,107	125,227	399,009	95,616	42,340			31,980
Kansas	564,261		586		78,823	366,166	97,336	12,960	2,115		6,275
New Mexico	24,403								1,661		22,742
Total, group B	16,782,549		644,711	2,299,006	4,231,686	3,656,975	3,562,276	1,874,060	251,762	33,779	228,294
Wyoming	1,756,103			708,212	714,936		80,919	108,757	130,729		12,550
Montana	568,262			58,960	176,817	84,098	166,858	99,529			
Total, group C	2,342,365			767,172	891,753	84,098	247,777	208,286	130,729		12,550
Illinois	724,802			131,573	165,460	341,437	43,464	30,430	2,938	9,073	427
Indiana	129,471				21,933	13,497	90,508				3,533
Ohio	596,778					95,073	353,228	126,551	6,564	12,042	3,320
Kentucky	1,530,611			758	579,333		857,686	87,286	420	5,128	
West Virginia	461,710							447,256	5,498		8,956
Pennsylvania	821,515				23,424			232,373	23,511	142,000	400,207
New York	758,065						166,082		158,220	234,950	198,813
Total, group D	5,022,952			132,331	790,150	450,007	1,510,968	923,896	197,151	403,193	615,256
Total, all States	35,475,173	173,150	837,483	7,472,500	10,440,987	4,787,185	6,056,203	3,145,813	668,446	482,105	1,411,301
Percent	100.000	.488	2.361	21.064	29.432	13.494	17.072	8.868	1.884	1.359	3.978

FOREIGN COSTS OF PRODUCTION OF CRUDE PETROLEUM, 1927–30

Only limited data can be given on the unit cost per barrel of Venezuelan oil (Lake Maracaibo) delivered at deep-sea loading points, 1927–30 (table 22, p. 44, of second report), as it relates to the output of only four companies. It may be noted that the production in 1930 was 121,776,127 barrels, and that 57 percent of the production was below the average cost ($0.5997 per barrel).

The average cost per barrel (company-interest oil) at wells in Mexico (heavy oil), Trinidad, Colombia, Peru, Ecuador, and eastern Venezuela for 1927–30 (table 23, p. 45 of the second report), relates to the operations of 9 companies in Mexico and 8 in the other countries. Little detail can be given without disclosing confidential data. The average cost of $0.6650 per barrel for 1930 relates to a production of 46,620,712 barrels. The lowest individual cost was less than a quarter of the highest, but some 30,000,000 barrels were produced at within 10 percent of the average cost. In 1930, Mexican production of 9,803,672 barrels had an average cost of $0.6095 per barrel. About 60 percent was produced at below this average cost, and only about 2,300,000 barrels were produced at within 20 percent of the average cost. In 1930, production in other countries referred to, amounting to 36,817,040 barrels, had an average cost of $0.6797 per barrel. More than 80 percent of this production was below the average cost. Although the highest cost was more than five times the lowest, and the range from high to low was nearly three times the average, much of the production was at close to average cost.

FOREIGN TRANSPORTATION COSTS, 1927–30

In the Maracaibo Basin of Venezuela most of the oil is produced close to the shores of Lake Maracaibo, either on water or on land. The transportation from the lake to ocean terminals is by shallow-draft tankers. The local pipe lines, the tanker vessels on Lake Maracaibo, and the facilities for transferring to ocean vessels are all owned and controlled by oil-producing companies. Since some of the companies did not distinguish costs of certain of the transportation operations from those of crude-oil production, the report combines cost of production and transportation to ocean tankers. What appears as the separate transportation item of cost ($0.248 average for the 4 years 1927–30) is the charge for transportation from deep-sea loading points to the Atlantic seaboard of the United States.

The movement of Venezuelan crude and of products refined therefrom to domestic Atlantic coast ports from the ocean port of transshipment, or from refineries in the Netherland West Indies, is also chiefly in tankers belonging to or controlled by the owners of the cargoes, although here there is also some movement in boats belonging to others. In the movement by ocean tankers, as in that of lake tankers, however, the Commission took the cost reported as paid by the owners of cargo.

The pipe lines from the heavy-oil district in Mexico to the coast are owned by the producing companies, and the charge ($0.2635 average for the 4 years 1927–30) for transporting the oil is reported on the basis of cost of operation. There was also an export tax on the Mexican oil of $0.1569 on the avreage and an ocean tanker charge of $0.3095.

The transportation costs for all other countries, except Venezuela and Mexico were: Pipe line, $0.5581; ocean tanker, $0.3237. As for Venezuelan oil and domestic oil transported from Gulf ports to the Atlantic seaboard, the tanker charges from all countries to the United States were based on amounts reported.

GASOLINE (PAR. 1733)

At the time the investigation was conducted gasoline was on the free list in paragraph 1733 of the Tariff Act of 1930. In June, 1932, gasoline was made taxable at 2½ cents per gallon under the revenue act.

The investigation of gasoline was made under section 332 of the Tariff Act of 1930 pursuant to House Resolution No. 391 (71st Cong.). This resolution requested a general study of the differences in the cost of production of crude petroleum, fuel oil, gasoline, and lubricating oil produced in the United States and of any like or similar foreign articles exported, directly or indirectly, from countries from which there were exported, directly or indirectly, to the United States during periods from January 1, 1929, to December 31, 1930, inclusive, more than 2,000,000 barrels in the aggregate of crude petroleum, fuel oil, gasoline, and lubricating oils.

Cost period covered was 1929 and 1930. The cost work on which the report was based covered comparable gasoline (other than premium) delivered only to the Atlantic seaboard, in which region alone the domestic product came into competition with gasoline refined from foreign crude petroleum. Domestic costs covered 10 refineries in the Atlantic district, 14 in the Gulf district, and 30 in the California district. The foreign costs covered 12 foreign refineries located in the Netherland West Indies, Venezuela, Mexico, Trinidad, Colombia and Peru, and 4 domestic refineries, more than 70 percent of whose consumption was foreign oil. Publication is in Report No. 30, second series.

This investigation follows another limited to study of cost of crude petroleum and published earlier in 1931 in Report No. 4, second series.

RANGE OF DOMESTIC AND FOREIGN COSTS

Two tables which follow show range of costs of the domestic and the foreign product delivered on the Atlantic seaboard in 1930. A third table shows range of costs of production not including transportation for Atlantic, Gulf, and California districts, in 1930.

Cost comparisons will be found in the report in tables 40 and 41 on pages 76 and 77. The domestic cost for 1930 delivered to Atlantic coast is shown as 7.62 cents per gallon, including the weighted average transportation cost of 0.56 cent. The foreign cost for 1930 is shown as 6.70 cents per gallon, including transportation from foreign refineries to Atlantic coast markets of 0.64 cent. Corresponding delivered costs for 1929 were 7.71 cents domestic and 7.21 foreign.

Gasoline: Range of costs delivered on Atlantic seaboard, domestic product, 1930

Cost f. o. b. refinery per gallon	Group average cost f. o. b. refinery	Companies included			Group average transportation [1]	Range of delivered cost		Group average delivered cost	Group output (thousands of gallons)	Percent of total	
		Atlantic	Gulf	California		From—	To—			Group	Cumulation
		Weighted in ratio to production							*Production*		
Less than 5 cents	4.42	------	------	6	1.59	5.31	6.54	6.01	1,500,045	20.5	20.5
5 to 6 cents	5.57	------	1	6	1.31	6.46	7.39	6.88	548,604	7.5	28.0
6 to 7 cents	6.51	2	6	10	1.00	6.15	8.35	7.51	1,984,319	27.1	55.1
7 to 8 cents	7.53	3	6	6	.51	7.38	9.41	8.04	2,705,116	37.0	92.1
8 cents or more	8.68	5	1	2	.08	8.11	11.82	8.76	578,641	7.9	100.0
Average and total	6.56	10	14	30	.47	5.31	11.82	7.03	7,316,725	100.0	------
		Weighted in ratio to shipments [2]							*Shipments*		
Less than 5 cents	4.41	------	------	6	1.59	5.31	6.54	6.00	378,602	10.2	10.2
5 to 6 cents	5.65	------	1	6	1.12	6.46	7.39	6.77	180,243	4.9	15.1
6 to 7 cents	6.53	2	6	10	.66	6.15	8.35	7.19	916,673	24.8	39.9
7 to 8 cents	7.58	3	6	6	.38	7.38	9.41	7.96	1,674,985	45.3	85.2
8 cents or more	8.71	5	1	2	.35	8.11	11.82	8.96	547,476	14.8	100.0
Average and total	7.06	10	14	30	.56	5.31	11.82	7.62	3,697,979	100.0	------

[1] Transportation from Atlantic refineries (nothing); from Gulf (0.56 cent); from California (1.59 cents).
[2] Shipments prorated from district totals.

Gasoline: Range of costs delivered on Atlantic seaboard, foreign product, 1930

[Costs per gallon weighted in ratio to production]

Cost f. o. b. refinery per gallon	Group average cost f. o. b. refinery	Range of delivered cost [1]		Group average delivered cost [1]	Group production (thousands of gallons)	Percent of total production	
		From—	To—			Group	Cumulation
Less than 5 cents	3.73	(2)	(2)	4.37	417,320	29.8	29.8
5 to 6 cents	5.76	(2)	(2)	6.40	145,667	10.4	40.2
6 to 7 cents	6.79	6.91	7.63	7.43	101,166	7.2	47.4
7 to 8 cents	7.13	(2)	(2)	7.77	605,386	43.2	90.6
8 cents or more	8.20	8.76	10.31	8.84	130,980	9.4	100.0
Average and total	6.06	3.96	10.31	6.70	1,400,519	100.0	----------

[1] Including average transportation of 0.64 cent.
[2] Confidential.

Gasoline: Range of costs of production, not including transportation, for three principal districts delivering to Atlantic seaboard, domestic product, 1930

Cost f. o. b. refinery per gallon	Atlantic district			Gulf district			California district		
	Production (thousands of gallons)	Percentage of total production		Production (thousands of gallons)	Percentage of total production		Production (thousands of gallons)	Percentage of total production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Less than 5 cents	----------	------	------	----------	------	------	1,500,045	47.7	47.7
5 to 6 cents	----------	------	------	(1)	(1)	------	398,669	12.7	60.4
6 to 7 cents	316,523	21.6	21.6	790,914	29.2	29.2	1,026,816	32.7	93.1
7 to 8 cents	626,757	42.8	64.4	1,918,950	70.8	100.0	217,922	6.9	100.0
8 cents or more	520,130	35.6	100.0	(2)	(2)	------	(2)	(2)	------
Total production	1,463,410	100.0	------	2,709,864	100.0	------	3,143,452	100.0	------
Shipments to Atlantic seaboard	(3)	------	------	[4]1,440,852	------	------	[5]793,716	------	------

[1] Included with higher cost group to avoid disclosure of confidential information.
[2] Included with lower cost group to avoid disclosure of confidential information.
[3] In situ.
[4] Subject to average transportation of 0.56 cent per gallon.
[5] Subject to average transportation of 1.59 cents per gallon.

KEROSENE (PAR. 1733)

Kerosene is on the free list in paragraph 1733 under the Tariff Act of 1930. A tax of 21 cents a barrel equivalent to one-half cent a gallon has subsequently been established by inclusion in the Revenue Act of 1932 (sec. 601 (c) (4)).

The investigation was made under section 332 of the Tariff Act of 1930 pursuant to House Resolution No. 391 (71st Cong.). This inquiry was in connection with the general study of the differences in the cost of production of crude petroleum, fuel oil, gasoline, and lubricating oil produced in the United States, and of any like or similar foreign articles exported, directly or indirectly, to the United States during periods from January 1, 1929, to December 31, 1930, inclusive, more than 2,000,000 barrels in the aggregate of crude petroleum, fuel oil, gasoline, and lubricating oils.

Cost period covered was 1929 and 1930. The cost work on which the report was based covered comparable kerosene delivered only to the Atlantic seaboard in which region alone the domestic product came into competition with kerosene refined from foreign crude petroleum. Domestic costs covered 7 refineries in the Atlantic district, 11 in the Gulf district, and 21 in the California district. The foreign costs covered 9 foreign refineries located in Mexico, the Netherland West Indies, Venezuela, Trinidad, Colombia, and Peru, and 2 domestic refineries, more than 70 percent of whose consumption was foreign oil. The findings of the Commission are published in Report No. 30, second series.

This investigation follows another limited to study of cost of crude petroleum and published earlier in 1931 in Report No. 4, second series.

COST COMPARISON

Cost comparisons will be found in the report in tables 40 and 41 on pages 76 and 77. The domestic cost for 1930 delivered to Atlantic coast is shown as 5.87 cents per gallon, including weighted average transportation cost of 0.29 cent. The foreign cost for 1930 is shown as 5.78 cents per gallon including weighted average transportation from foreign refineries to Atlantic coast markets of 0.52 cent. (Corresponding delivered costs for 1929 were 6.07 cents domestic and 6.10 foreign.)

RANGE OF DOMESTIC AND FOREIGN COSTS

Two tables which follow show range of costs of the domestic and foreign product delivered on the Atlantic seaboard in 1930. A third table shows the range of costs of production not including transportation for Atlantic, Gulf, and California districts in 1930.

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Kerosene: Range of cost delivered on Atlantic seaboard, domestic product, 1930

Cost f. o. b. refinery per gallon	Group average cost f. o. b. refinery	Companies included			Group average transportation[1]	Range of delivered cost		Group average delivered cost	Group output (thousands of gallons)	Percent of total	
		Atlantic	Gulf	California		From—	To—			Group	Cumulation
	Weighted in ratio to production								*Production*		
Less than 3 cents	2.68	------	------	6	1.59	2.24	4.46	4.27	100,266	9.5	9.5
3 to 4 cents	3.47	------	1	3	.71	3.97	5.44	4.18	13,282	1.2	10.7
4 to 5 cents	4.68	2	4	7	.69	4.45	6.48	5.37	401,584	37.9	48.6
5 to 6 cents	5.53	1	5	3	.64	5.65	7.04	6.17	412,653	38.9	87.5
6 to 7 cents	6.62	2	------	2	.43	6.23	8.45	7.05	85,542	8.1	95.6
7 cents and over	7.56	2	1	------	.002	7.54	7.88	7.56	46,301	4.4	100.0
Average and total	5.09	7	11	21	.71	2.24	8.45	5.80	1,059,628	100.0	------
	Weighted in ratio to shipments[2]								*Shipments*		
Less than 3 cents	2.68	------	------	6	1.59	2.24	4.46	4.27	4,344	1.0	1.0
3 to 4 cents	3.42	------	1	3	.58	3.97	5.44	4.00	3,791	.9	1.9
4 to 5 cents	4.69	2	4	7	.29	4.45	6.48	4.98	160,137	38.3	40.2
5 to 6 cents	5.59	1	5	3	.46	5.65	7.04	6.05	140,859	33.6	73.8
6 to 7 cents	6.65	2	------	2	.25	6.23	8.45	6.90	63,576	15.2	89.0
cents and over	7.55	2	1	------	.07	7.54	7.88	7.62	46,170	11.0	100.0
Average and total	5.58	7	11	21	.29	2.24	8.45	5.87	418,877	100.0	------

[1] Transportation from Atlantic refineries, nothing; from Gulf, 0.56 cent; from California, 1.59 cents.
[2] Shipments prorated from district totals.

Kerosene: Range of costs delivered on Atlantic seaboard, foreign product, 1930

[Costs weighted in ratio to production]

Cost f. o. b. refinery per gallon	Group average cost f. o. b. refinery	Range of delivered cost[1]		Group average delivered cost	Group production (thousands of gallons)	Percent of total production	
		From—	To—			Group	Cumulation
Less than 3 cents	------	------	------	------	------	------	------
3 to 4 cents	(2)	------	------	------	(2)	(2)	------
4 to 5 cents	4.56	4.25	5.26	5.08	28,561	44.4	44.4
5 to 6 cents	5.72	6.12	6.46	6.24	34,500	53.7	98.1
6 to 7 cents	------	------	------	------	------	------	------
7 cents or more	8.65	8.48	12.49	9.17	1,230	1.9	100.0
Average and total	5.26	4.25	12.49	5.78	64,291	100.0	------

[1] Including average transportation, 0.52 cent per gallon.
[2] Confidential, included in next higher group.

Kerosene: Range of costs of production, not including transportation, for three principal districts delivering to Atlantic seaboard, domestic product, 1930

Cost f. o. b. refinery per gallon	Atlantic district			Gulf district			California district		
	Production (thousands of gallons)	Percentage of total production		Production (thousands of gallons)	Percentage of total production		Production (thousands of gallons)	Percentage of total production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Less than 3 cents							100,266	37.2	37.2
3 to 4 cents				[1]	[1]		1,904	.7	37.9
4 to 5 cents	[1]	[1]		232,949	41.0	41.0	96,273	35.7	73.6
5 to 6 cents	113,333	51.0	51.0	335,104	59.0	100.0	71,106	26.4	100.0
6 to 7 cents	[1]	[1]	[1]						
7 cents and over	108,690	49.0	100.0	[2]	[2]		[2]	[2]	
Total production	222,023	100.0		568,053	100.0		269,549	100.0	
Shipments to Atlantic seaboard	[3]			[4] 185,178			[5] 11,676		

[1] Included with higher cost group to avoid disclosure of confidential information.
[2] Included with lower cost group to avoid disclosure of confidential information.
[3] In situ.
[4] Subject to average transportation of 0.56 cent per gallon.
[5] Subject to average transportation of 1.59 cents per gallon.

SCHEDULE 2. EARTHS, EARTHENWARE, AND GLASSWARE

Dutiable items:
Cement (par. 205).
Crude feldspar (par. 207).
Window glass (par. 219).

Free list items:
None.

CEMENT (PAR. 205)

Portland cement, conditionally free under the act of 1922, is dutiable under paragraph 205(b) of the Tariff Act of 1930 at 6 cents per hundred pounds including the weight of the container. The Commission concluded, one commissioner dissenting, that the 1930 duty substantially equalized the cost differences.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was instituted pursuant to Senate Resolution No. 295 (71st Cong.) and conducted under section 336 of the Tariff Act of 1930. Costs were obtained for the year 1929, during which period Belgium was the principal competing foreign country, since replaced by England. The report is published as no. 38, second series.

The investigation covered costs of 61 domestic companies with 125 plants and 8 Belgian companies with 13 plants. Costs from 10 of the domestic plants were not included in the final calculations because of low production compared with capacity or because of noncomparability of product. The remaining plants were grouped as follows: (*a*) Coastal with 62 plants, and (*b*) interior with 53 plants. The coastal group which constituted the basis for comparison with foreign costs had a production in 1929 of 271,989,925 hundredweight; the interior group had a production of 224,493,535 hundredweight. Costs of this group of plants, not included in the final cost comparisons, are shown by districts on page 25 of the published report. The Belgian group produced 38,845,948 hundredweight in 1929.

RANGE OF COSTS

Costs f. o. b. factory ranged as follows:

Cement: Range of costs f. o. b. factory, domestic and Belgian products, 1929

Range of costs f. o. b. factory (cents per cwt.)	Average cost	Percent of total production	Cumulative percent of total production
Domestic product:			
Under 25 cents	24.0	11.1	11.1
25 to 27½ cents	26.8	8.8	19.9
27½ to 30 cents	29.3	14.3	34.2
30 to 32½ cents	31.0	26.7	60.9
32½ to 35 cents	33.7	11.4	72.3
35 to 37½ cents	36.2	15.4	87.7
37½ to 40 cents	39.3	2.5	90.2
40 to 42½ cents	41.1	2.4	92.6
42½ to 45 cents	43.5	5.1	97.7
45 to 47½ cents	46.4	.8	98.5
47½ cents and over	50.7	1.5	100.0
Average and total	32.2	100.0	
Belgian product:			
Under 16 cents	15.4	42.0	42.0
16 to 18½ cents	17.3	30.7	72.7
18½ to 21 cents			72.7
21 cents and over	22.5	27.3	100.0
Average and total	18.0	100.0	

The above does not reveal the importance of transportation costs in the total delivered costs to principal domestic markets. This factor is developed in tables 11 to 16, pages 15 to 21, of the report. Illustration of the variability and magnitude of the transportation factor in delivered costs is provided by comparisons of ranges of delivered costs at New York and Boston of the competitive domestic cement from the Hudson Valley and Lehigh Valley districts and the Belgian cement. The production of these two domestic districts for which costs were obtained was 165,138,563 hundredweight, or approximately 60 percent of the total for the coastal group. The total for Belgian production was 38,845,948 hundredweight.

Cement: Range of domestic costs for Hudson Valley and Lehigh Valley districts and foreign costs in corresponding intervals with production, 1929

COST DELIVERED AT BOSTON

Delivered cost	Domestic			Foreign		
	Production	Percent of total production		Production	Percent of total production	
		Group	Cumulation		Group	Cumulation
	Hundredweight			*Hundredweight*		
Under 30 cents				(1)	(1)	(1)
30 to 32½ cents				28,254,926	72.7	72.7
32½ to 35 cents				(2)	(2)	(2)
35 to 37½ cents				7,811,934	20.1	92.8
37½ to 40 cents				2,779,088	7.2	100.0
40 to 42½ cents	(1)	(1)	(1)			
42½ to 45 cents	30,291,428	18.3	18.3			
45 to 47½ cents	27,729,112	16.8	35.1			
47½ to 50 cents	47,701,830	28.9	64.0			
50 to 52½ cents	19,841,568	12.0	76.0			
52½ to 55 cents	22,624,163	13.7	89.7			
55 to 57½ cents	6,220,406	3.8	93.5			
57½ cents and over	10,730,056	6.5	100.0			
Total production	165,138,563	100.0		38,845,948	100.0	
Average delivered cost weighted by—	*Cents*			*Cents*		
Production	49.1			32.9		
Shipments	48.8			30.9		

[1] Combined with higher cost group to avoid disclosure.
[2] Combined with lower cost group to avoid disclosure.

Cement: Range of domestic costs for Hudson Valley and Lehigh Valley districts and foreign costs in corresponding intervals with production, 1929—Continued

COST DELIVERED AT NEW YORK

Delivered cost	Domestic			Foreign		
	Production	Percent of total production		Production	Percent of total production	
		Group	Cumulation		Group	Cumulation
	Hundredweight			*Hundredweight*		
Under 35 cents	30,291,428	18.3	18.3			
35 to 37½ cents	10,282,644	6.2	24.5	19,791,786	50.9	50.9
37½ to 40 cents	38,846,279	23.5	48.0	8,463,140	21.8	72.7
40 to 42½ cents	26,478,169	16.0	64.0	None		72.7
42½ to 45 cents	21,778,773	13.2	77.2	10,591,022	27.3	100.0
45 to 47½ cents	19,797,905	12.0	89.2			
47½ to 50 cents	8,352,925	5.1	94.3			
50 to 52½ cents	(2)	(2)	(2)			
52½ cents and over	9,310,440	5.7	100.0			
Total production	165,138,563	100.0		38,845,948	100.0	
Average delivered cost weighted by—	*Cents*			*Cents*		
Production	41.3			38.7		
Shipments	40.7			36.8		

[2] Combined with lower cost group to avoid disclosure.

The higher transportation cost of Belgian cement delivered at New York was due principally to the practice of shipping partial cargoes which not only had to pay a higher ocean freight rate than full cargoes but also had to bear lighterage costs from the carrier's wharf to the importer's wharf. The quantities of Belgian cement shipped to New York and Boston in 1929 were, respectively, 62,250 and 254,998 barrels (of 380 pounds). New York was in 1929, and is to-day, the chief port of entry for foreign cement, and it is likely that transportation cost for Belgian cement to that point was higher than for cement from other foreign countries. It should be added that since 1929 ocean freights have declined substantially.

CRUDE FELDSPAR (PAR. 207)

The duty on crude feldspar under the act of 1930 of $1 per ton was reduced to 50 cents per ton by presidential proclamation, effective January 1, 1932, as the result of an investigation conducted under section 336 of the Tariff Act of 1930.

Costs were obtained for the year 1930, at which time Canada was the principal competing foreign country, as it still is. The report is published as no. 37, second series.

The investigation covered costs of 6 domestic companies operating 12 mines and 4 Canadian companies operating 5 mines. Domestic production for which costs were obtained was 75,487 long tons; Canadian, 16,472 long tons.

The cost comparison in the report (table 3, p. 9) contrasts a domestic delivered cost of $14.49 per long ton with a Canadian delivered cost of $16.93 per long ton, indicating a foreign cost excess of $2.44 per long ton. These average costs include transportation weighted by shipments as indicated in the following table, which also shows average costs including transportation weighted by production.

Crude feldspar: Range of costs f. o. b. factory and delivered to principal markets, 1930

Range of costs f. o. b. factory (per long ton)	Group average cost	Transportation expense to principal market	Cost delivered principal market	Percent of total production	Cumulative percent total production
Domestic production:					
Under $6.50	$5.22	$7.72	$12.94	26.8	26.8
$6.50 to $8.50	7.00	7.15	14.15	68.0	94.8
$8.50 to $10.50					94.8
$10.50 or over	14.13	9.74	23.87	5.2	100.0
Average cost with transportation weighted by—					
Production	6.90	7.44	14.34		
Shipments	6.90	7.59	14.49		
Foreign production:					
Under $6.50	6.19	7.01	13.20	38.9	38.9
$6.50 to $10.50					38.9
$10.50 or over	11.94	6.40	18.34	61.1	100.0
Average cost with transportation weighted by—					
Production	9.76	6.64	16.40		
Shipments	9.76	7.17	16.93		

GRINDING AND TRANSPORTATION

As indicated in the report on page 6, competition between any two sections of this country, or between the United States and Canada, does not develop until the crude feldspar has been made available to the consuming trades by grinding. The cost of transportation of the ground product from the grinding mills to the principal markets is therefore a necessary component of the total cost of transportation and has been included in the transportation figures given in the table. The cost of grinding is not computed or included in the final cost figures, however, because domestic mills grind both imported and domestic crude spar, and no ground spar is imported.

The principal markets are located in several Eastern and Midwestern States, which, for purposes of determining average transportation costs from the producing districts, were divided into four consuming districts, defined in the report on page 7.

WINDOW GLASS (PAR. 219)

This investigation was instituted pursuant to Senate Resolution No. 313 (71st Cong.) and conducted under section 336 of the Tariff, Act of 1930 and duties were reduced by presidential proclamation effective January 1, 1932. Costs were obtained for the year 1929 during which Belgium was the principal competing foreign country for common window glass and Czechoslovakia for heavy window glass. These countries remain the chief sources of imports.

The report is published as no. 33, second series.

The investigation covered costs of 8 domestic companies with 12 plants; 9 Belgian companies with 10 plants; and 4 Czechoslovakian companies with 5 plants. These plants were classified by process of manufacture as (a) sheet-drawing (10 domestic and 7 Belgian) and (b) cylinder. The final cost comparison was limited to costs of glass produced by the sheet-drawing process as more significant than average costs based on both processes since the relatively small production by the cylinder process was rapidly declining (p. 17 of report).

An earlier investigation covering the year 1926, upon which a report was transmitted to the President, March 26, 1929, resulted in an increase in the duties on window glass, effective June 13, 1929.

Brackets of common window glass	Rate of duty (in cents per pound)			
	Act of 1922	By proclamation, effective June 13, 1929	Act of 1930[1]	By proclamation, effective Jan. 1, 1932[2]
Not exceeding 150 square inches	1¼	1⅞	1⅞	1²⁶⁄₆₄
Above 150 and not exceeding 384 square inches	1⅜	2¹⁄₁₆	2¹⁄₁₆	1³⁵⁄₆₄
Above 384 and not exceeding 720 square inches	1⅝	2⁷⁄₁₆	2⁷⁄₁₆	1⁵³⁄₆₄
Above 720 and not exceeding 864 square inches	1¾	2⅝	2⅝	1⁶²⁄₆₄
Above 864 and not exceeding 1,200 square inches	2	3	3	2¼
Above 1,200 and not exceeding 2,400 square inches	2¼	3⅜	3⅜	2³⁴⁄₆₄
Above 2,400 square inches	2½	3¾	3¾	2⁵⁷⁄₆₄

[1] *Provided*, That none of the foregoing weighing less than 16 ounces but not less than 12 ounces per square foot shall be subject to a less rate of duty than 50 per centum ad valorem.

[2] *Provided*, That none of the foregoing weighing less than 16 ounces but not less than 12 ounces per square foot shall be subject to a less rate of duty than 37½ per centum.

COST COMPARISON AND RANGE OF COSTS

Costs of heavy window glass were not used in final cost comparisons shown in the report. The average cost f. o. b. factory for 28,054,162 pounds for which costs were obtained in the United States was 4.47 cents and for approximately 55,000,000 pounds for which costs were obtained in Czechoslovakia, 2.50 cents. Delivered costs of heavy window glass to principal domestic markets were not calculated, since, of the three types of window glass, viz, thin, common, and heavy, common, which constituted the largest class of imports, was used as the basis for cost comparisons.

On common window glass the average domestic cost of 4.27 cents per pound exceeded the average foreign cost of 2.58 cents by 1.69 cents per pound. The cost range for common window glass covering domestic production of 404,297,000 pounds and Belgian production of 209,588,000 pounds follows:

Common window glass: Range of domestic and foreign costs f. o. b. plant plus average transportation, 1929

Range of cost f. o. b. factory in cents per pound	Group average cost	Transportation expense to principal markets	Cost delivered principal markets	Per cent of total production	Cumulative per cent of total production
Domestic product:					
Under 3.25 cents	3.123	0.530	3.653	25.6	25.6
3.25 to 3.75 cents	3.664	.530	4.194	39.8	65.4
3.75 to 4.25 cents	4.099	.530	4.629	10.5	75.9
4.25 cents and over	4.360	.530	4.890	24.1	100.0
Average	3.740	.530	4.270	100.0	
Belgian product:					
Under 2.10 cents	2.056	.450	2.506	36.8	36.8
2.10 to 2.20 cents	2.111	.450	2.561	37.7	74.5
2.20 cents and over	2.252	.450	2.702	25.5	100.0
Average	2.127	.450	2.577	100.0	

The weighted average costs f. o. b. plant in the above table correspond to those in tables 13 and 14, pages 18 and 19 of the report. Transportation costs shown were calculated on basis of shipments to principal markets as follows:

Window glass: Calculation of transportation costs to principal markets

Transportation of domestic and Belgian product to market indicated	From—	Total pounds shipped (produced by sheet-drawing process)	Weighted average transportation cost
DOMESTIC			*Cents*
New York	7 plants	51,880,177	0.51
Detroit	9 plants	23,882,436	.57
Philadelphia	7 plants	10,933,901	.45
Cleveland	7 plants	7,174,360	.34
Boston	4 plants	6,934,602	.50
Los Angeles	3 plants	4,963,646	.82
San Francisco	4 plants	3,481,697	.75
Total shipments and average transportation cost		109,250,819	.53
BELGIAN			
San Francisco	(1)	8,555,270	.42
Los Angeles	(1)	5,738,954	.54
New York	6 plants	4,269,639	.39
Boston	7 plants	1,334,869	.39
Philadelphia	(1)	629,640	.39
Cleveland	(1)	138,655	.84
Detroit	(1)	772	.88
Total shipments and average transportation cost		20,667,799	.45

[1] Total imports of all Belgian window glass used because of lack of data on shipments by companies and type of glass.

SCHEDULE 3. METALS AND MANUFACTURES OF

Dutiable items:
- Iron in pigs (par. 301).
- Fourdrinier wires (par. 318).
- Gold leaf (par. 383).
- Print rollers (par. 395).

Dutiable items—Continued.
- Woven-wire fencing and netting (par. 397).

Free list items:
- Copper (par. 1658).

IRON IN PIGS (PAR. 301)

Iron in pigs was dutiable under paragraph 301 of the Tariff Act of 1922 at 75 cents per ton. This rate was increased to $1.12½ per ton by proclamation, effective March 25, 1927, following the Commission's first investigation of this commodity.

Under paragraph 301 of the act of 1930 the $1.12½ per ton duty was retained. The Commission found as a result of its second investigation under section 336 of the Tariff Act of 1930 that this rate substantially equalized the differences in costs of production.

COST PERIOD AND SCOPE

In the Commission's first investigation, conducted under section 315 of the Tariff Act of 1922, 1924 was taken as the cost period. The published report of this investigation, "Iron in Pigs," 1927, contains costs by grades and the cost range applying to that period but those data are not reproduced here because of the similar data available from the later investigation.

In the Commission's second investigation, instituted pursuant to Senate Resolution No. 309 (71st Cong.) and conducted under section 336 of the Tariff Act of 1930, the cost period extended from January 1, 1929, to June 30, 1930. Data for this investigation are herewith presented. The principal competing country at the time of this investigation was British India, but the Netherlands has since become the principal source of imports. Costs were obtained from 27 domestic companies, of which only 24, operating 24 plants, were found to have adequate data. Invoices of imports were used as evidence of foreign costs. The results of this investigation are published in Report No. 23, second series. Cost comparisons in the second investigation were limited to those grades of outstanding importance in international trade—foundry and malleable iron. These cost comparisons were by districts and can not be conveniently abstracted. They appear on pages 16–18 of the published report. The details of the average delivered cost of the foreign product, amounting to $19.07 per ton, are confidential.

DOMESTIC COST RANGE BY DISTRICTS

Costs of production were obtained in four domestic districts for the following percentages of production: Eastern, 100 per cent; Alabama, 90 per cent; Buffalo, 73 per cent; midwestern, 39 per cent.

The cost of pig iron f. o. b. plant is influenced largely by the cost of freight in assembling raw materials. The eastern and Buffalo districts have long hauls. The midwestern district has relatively short hauls on coal and coke. Alabama has local hauls only. In the following table, costs and production are shown by districts.

Iron in pigs: Costs and production, by districts, 1929–30

District	Number of companies	Production for which costs were obtained			Total production		
		Tons	Percent of total	Unit cost [1]	Tons produced	Percent of total	Unit cost [1]
Eastern	8	789,282	18.81	$18.92	789,282	12.87	$18.92
Buffalo	4	666,180	15.87	19.48	910,546	14.85	19.48
Alabama	5	1,788,232	42.61	13.31	1,993,651	32.51	13.31
Midwestern	7	952,977	22.71	16.68	2,438,952	39.77	16.68
Total	24	4,196,671	100.00	16.11	6,132,431	100.00	16.29

[1] Cost f. o. b. plant per ton.

The following table shows total domestic production represented by dollar intervals of costs, in relation to production actually covered by costs. This presentation permits finer intervals than the one in the table next succeeding, showing costs obtained by districts.

Iron in pigs: Range of domestic costs f. o. b. plant, all districts, 1929–30

Cost f. o. b. plant	Production covered by costs	Production represented	Percent of production represented	
			Group	Cumulation
	Tons	*Tons*		
Under $15	[1] 1,766,003	1,968,867	32.1	32.1
$15 to $16	247,041	600,193	9.8	41.9
$16 to $17	444,985	1,138,741	18.6	60.5
$17 to $18	565,676	726,650	11.9	72.4
$18 to $19	217,408	533,684	8.7	81.1
$19 to $20	464,507	616,108	10.0	91.1
$20 or more	491,051	548,188	8.9	100.0
Total	4,196,671	6,132,431	100.0	

[1] The low-cost group, accounting for 42 per cent of the production for which costs were obtained, consists of only 4 of the 24 companies covered.

The proportion produced at various costs in each of the domestic districts, together with the average transportation charge from each district to the principal market, is shown in the table below:

Iron in pigs: Range of costs f. o. b. plant by districts with production in tons at each indicated cost range, transportation, and average delivered cost, Jan. 1, 1929, to June 30, 1930

Cost f. o. b. plant	Eastern district		Buffalo district		Alabama district	
	Group average cost	Percent of production covered by costs	Group average cost	Percent of production covered by costs	Group average cost	Percent of production covered by costs
Under $16 per ton	None	None	None	None	$13.31	100.0
$16 to $18 per ton	$17.54	49.2	[1]	[1]	None	None
$18 to $20 per ton	19.01	8.3	$19.48	100.0	None	None
$20 and more per ton	20.44	42.5	[2]	[2]	None	None
Weighted average cost at plant per ton	18.92	100.0	19.48	100.0	13.31	100.0
Average transportation to principal markets	2.01		4.36		5.91	
Weighted average cost delivered	20.93		23.84		19.22	
Total production for which costs were obtained (tons)		789,282		666,180		1,788,232
Total production represented (tons)		789,282		910,546		1,993,651

Cost f. o. b. plant	Midwestern district		All districts	
	Group average cost	Percent of production covered by costs	Group average cost	Percent of production covered by costs
Under $16 per ton	$15.92	23.6	$13.58	48.0
$16 to $18 per ton	16.43	55.1	16.95	24.1
$18 to $20 per ton	18.31	21.3	19.24	16.2
$20 and more per ton	None	None	20.35	11.7
Weighted average cost at plant per ton	16.68	100.0	16.11	100.0
Average transportation to principal markets	[3]		[3]	
Weighted average cost delivered				
Total production for which costs were obtained (tons)		952,977		4,196,671
Total production represented (tons)		2,438,952		6,132,431

[1] Included in succeeding group to avoid disclosures.
[2] Included in group to avoid disclosures.
[3] Average transportation for midwestern district not available.

FOURDRINIER WIRES (PAR. 318)

Fourdrinier wires were dutiable under paragraph 318 of the Tariff Act of 1930 at 50 percent ad valorem. By proclamation, effective April 15, 1931, the duty on Fourdrinier wires suitable for use in paper-making machines was increased to 75 percent ad valorem.

COST PERIOD AND SCOPE OF INVESTIGATION

The cost investigation by the commission under section 336 of the Tariff Act of 1930, instituted pursuant to Senate Resolution 313 (71st Cong.), was confined to Fourdrinier wires of certain meshes as representative of a group of products including Fourdrinier wires, woven-wire cloth, and cylinder wires. Fourdrinier wires having from 60 to 80 meshes per lineal inch in the warp constitute the bulk of domestic production and of imports, and the cost differences for these meshes were held to be representative of the cost differences of all Fourdrinier wires, of cylinder wires having over 55 meshes, and of all woven-wire cloth having over 55 meshes per lineal inch in warp or filling and suitable for use in the manufacture of Fourdrinier or cylinder wires.

The cost period was the year 1929. Invoice data were used as evidence of costs of imports from Germany, the chief competing country, as well as from Austria, the second most important source. Domestic costs were obtained from 10 companies. The report, entitled "Fourdrinier Wires, Woven-Wire Cloth, and Cylinder Wires," is published as no. 14, second series.

COST COMPARISON AND RANGE OF COSTS

Table 13 from page 13 of the published report compares the costs of production as determined by the Commission for the comparable domestic and foreign articles.

Fourdrinier wires: Comparison of domestic and foreign costs of production, including transportation and other expenses of delivery to the principal markets in the United States, 1929

	Cents per square foot
Domestic costs:	
Weighted average cost of production	46. 0
Weighted average cost of transportation to the principal markets	. 6
Total	46. 6
Foreign costs:	
Cost of production as evidenced by weighting average invoice prices	24. 2
Transportation and other expenses to port of importation	1. 4
Weighted average cost of transportation and delivery in the United States to the principal markets	1. 4
Total	27. 0
Amount by which domestic costs exceed foreign costs	19. 6
Dutiable value	25. 2

Specific costs were compiled separately for brass and bronze Fourdrinier wires of 60, 65, 70, 75, and 80 mesh, constituting about 98 percent of the total production of Fourdrinier wires. Weighted aver-

ages were calculated for each kind and mesh of Fourdrinier wire for which costs were obtained, and those averages combined, weighted on the basis of sales to the principal markets, to obtain an average of all domestic Fourdrinier wires. The individual costs and the averages derived therefrom appear in the following table:

Fourdrinier wires: Cost of production in the United States, 1929

[Cents per square foot]

Mesh	Brass	Bronze	Average
60	40.82	47.76	44.61
65	44.30	47.25	45.03
70	43.70	48.25	44.43
75	49.38	51.65	49.93
80	50.67	55.22	50.89
Average	45.06	48.34	46.04

Data are presented below on the range of cost of 60-mesh and 70-mesh wires in both brass and bronze as representative of Fourdrinier wires in general. These four varieties account for nearly half (46.5 percent) of the domestic production covered by the investigation.

FOURDRINIER WIRES: RANGE OF DOMESTIC COSTS OF REPRESENTATIVE TYPES, 1929

60-mesh brass

Cost per square foot	*Percent of production covered by costs*
Less than 40.82 cents (the average of the group)	[1] 52.2
40.82 cents to 45 cents	26.2
45 cents or more	21.6
Total, 697,616 square feet, produced by 10 companies	100.0

60-mesh bronze

Less than 47.76 cents (the average of the group)	32.4
47.76 cents or more	[2] 67.6
Total, 837,331 square feet, produced by 9 companies	100.0

70-mesh brass

Less than 43.70 cents (the average of the group)	41.5
43.70 cents to 46 cents	14.3
46 cents to 49 cents	39.0
49 cents or more	5.2
Total, 1,102,651 square feet, produced by 10 companies	100.0

70-mesh bronze

Less than 48.25 cents (the average of the group)	29.8
48.25 cents to 50 cents	22.8
50 cents to 63 cents	45.1
63 cents or more	2.3
Total, 210,814 square feet, produced by 9 companies	100.0

[1] Slight variation in cost within this group.
[2] Except for a small amount this production was at a cost of less than 50.50 cents.

Since Fourdrinier wires have a high value relative to their weight, the item of transportation costs is a small percentage of total delivered costs. All producers and importers are reported to be able to distribute to the several domestic markets. The element of transportation in the domestic costs, shown at an average of 0.6 of a cent per square foot in the summary table shown above is derived from rates ranging from 0.473 to 1.028 cents per square foot as indicated by table 11 of the published report. Eleven States are given consideration as consuming markets. In the foreign costs the item of transportation and other expenses to port of importation, shown in the summary table, at an average of 1.4 cents consists of an average item of 0.74 cent for inland freight and 0.68 cent for ocean freight, insurance, and consular fee. The item of transportation and delivery of the foreign product in the United States to the principal markets shown in the summary table at 1.4 cents, consists of 0.5 cent for miscellaneous expenses to importers and 0.916 cent for transportation in the United States. This last figure is derived in table 11 of the published report from transportation rates ranging from 0.37 cent to 2.20 cents per square foot.

GOLD LEAF (Par. 383)

Gold leaf was dutiable under paragraph 383 of the Tariff Act of 1922 at 55 cents per hundred leaves for the basic size, 3⅜ by 3⅜ inches, additional duties being assessed in proportion to size. By presidential proclamation, effective March 25, 1927, the basic rate per hundred leaves was increased to 82½ cents per hundred leaves and additional duties for large sizes, proportionately. These new rates were retained in the act of 1930, gold leaf in that act being dutiable under paragraph 383.

COST PERIOD AND SCOPE

The investigation was conducted under section 315 of the act of 1922 and covered the 18 months from January 1, 1923, to July 1, 1924, as the cost period. The principal competing country was Germany. The domestic cost work covered 76 companies each operating 1 shop. The foreign cost work covered an unspecified number of German shops. In Germany, prime cost and factory expense were secured by investigators of the Commission from individual manufacturers' books; overhead was ascertained from the books of a cooperative concern controlling the output of approximately 83 percent of household production and 75 percent of the total German production. Because of these circumstances the range of German costs can not be specified. The results of this investigation are set forth in the report entitled, "Gold Leaf," dated 1926.

COST COMPARISON AND COST RANGE

Cost comparison in the final report shows an average domestic cost per hundred leaves of $2.067 and an average foreign cost of $1.229, or a cost difference of $0.838. In lieu of cost comparison the costs of the 76 domestic plants for which data were obtained have been brought together in a number of groups which are shown in the following table. In this table the average cost for each group and the relative proportion of each group are shown.

Gold leaf: Range of domestic costs per 100 leaves, 1923, and first 6 months of 1924

Shops by cost groups	Group average cost	Percent total production	
		Group	Cumulation
10 lowest cost shops	$1.860	15.0	15.0
10 next higher	1.919	13.1	28.1
Do	1.964	5.1	33.2
Do	2.016	9.1	42.3
Do	2.078	28.5	70.8
Do	2.112	7.3	78.1
Do	2.185	10.5	88.6
6 highest	2.428	11.4	100.0
Total and average (76 shops)	2.067	100.0	

Some of the costs in the published report are shown per pack and others per 100 leaves. There are 500 leaves in a pack. A slight adjustment was required to convert domestic costs for all sizes and all colors to the "square deep" type, the average cost of the former being $10.46 per pack and the latter, $10.337 (p. 8 of published report).

A reliable basis for calculating interest could not be obtained and, therefore, no interest charge is included in the final calculations nor in the range of costs shown above. Interest on investment would, however, have been a relatively unimportant item of cost.

Transportation is also a relatively unimportant item in this investigation; the domestic plants being located near the principal market, no transportation charge was included for them. For the foreign product there was included a transportation charge of 20 cents per pack or 4 cents per hundred leaves.

PRINT ROLLERS (PAR. 395)

Act of 1922, paragraph 396, 60 percent ad valorem.
By proclamation, effective July 21, 1926, 72 percent ad valorem.
Act of 1930, paragraph 395, $5 each plus 72 percent ad valorem.

This investigation was conducted under section 315 of the act of 1922 and covered the year 1925 as the cost period. The principal competing country was Germany. Domestic costs were obtained from 15 shops, but 2 were not included in the final calculations because their costs were extremely high and clearly out of line. Foreign costs were obtained from four shops. As a result of the investigation the Commission published a report entitled, "Print Rollers," under date of October 7, 1925.

Costs were obtained for 1923 and adjusted to a 1925 basis as indicated on page 9 of the report. Data obtained on overhead expense and interest were not used in making cost comparison; this being based on prime cost. Domestic production occurred at the principal market. The average delivered cost of print rollers made abroad, amounting to $18.26, includes $1.23 transportation to New York.

Because the domestic costs by shops are specified in the report (p. 17), they can not be presented here with production data in groups of less than three. Since the foreign costs were for only four shops, only the average can be shown.

COST COMPARISON

The basic cost comparison found in table 6, page 39 of the report, contrasts an average domestic cost of $32.23 per roller with an average foreign cost of $18.26, resulting in a domestic cost excess of $13.97, equivalent to 72 percent ad valorem on a dutiable value of $19.40.

In connection with the range of domestic costs, it should be noted that wall-paper shops tend to show higher costs than do contract shops.

Print rollers: Range of domestic costs f. o. b. factory, per roller, 1925

Shops by cost groups	Group domestic cost per roller		Production (rollers)		Percent of total production	
	Range	Average	Group	Cumulation	Group	Cumulation
3 with lowest cost	$21.19–$27.20	$25.92	2,557	2,557	19.53	19.53
3 next lowest cost	27.44– 31.66	28.72	4,386	6,943	33.50	53.03
3 next lowest cost	33.34– 35.37	34.36	3,469	10,412	26.50	79.53
4 with highest cost	37.65– 44.82	41.25	2,679	13,091	20.47	100.00
Total and average	21.19– 44.82	32.23	13,091		100.00	

WOVEN-WIRE FENCING AND NETTING (PAR. 397)

Woven-wire fencing and netting were dutiable at 40 percent ad valorem under paragraph 399 of the act of 1922 and at 45 percent ad valorem under paragraph 397 of the act of 1930. As a result of an investigation by the Tariff Commission, the duty was changed by presidential proclamation, effective March 7, 1931, to 50 percent ad valorem on fencing and netting, galvanized before weaving, and to 60 percent ad valorem on fencing and netting, galvanized after weaving.

This investigation was instituted pursuant to Senate Resolution No. 295 (71st Cong.) and conducted under section 336 of the Tariff Act of 1930, with reference to Germany as the principal competing country. Invoices were used as evidence of foreign costs. The year 1929 was the period covered. Domestic costs were obtained from 11 companies operating 13 plants, 8 of which were covered by questionnaire. Costs were established for 6 kinds of fencing and netting. galvanized before weaving, and 5 kinds, galvanized after weaving, Publication is in Report No. 5, second series.

COST COMPARISON AND RANGE OF COSTS

The Commission found that the relative costs of transportation and delivery, both of domestic wire netting and the imported product, to the entire marketing area of the country could be determined with substantial accuracy on the basis of the transportation rates to six major distributing centers, namely, Los Angeles and San Francisco (taken as one market and having nearly equal transportation costs), Seattle, Houston, Atlanta, Philadelphia, and Chicago.

In order to arrive at the rate of duty necessary to equalize cost differences for wire netting sold in the country considered as a whole,

the cost differences, expressed as percentages of the dutiable values of the imported netting, for each kind of netting in each market, were combined into general weighted averages, distinguishing between wire netting galvanized before weaving and that galvanized after weaving. In calculating these general averages, the relative importance of the different kinds of netting and the relative importance of the consumption of domestic and imported netting combined, in the several markets, were taken into account.

The following table, from page 14 of the published report, shows that the weighted average difference in costs of domestic and foreign wire netting sold in the principal markets of the United States is equal in the case of netting galvanized before weaving to 51.9 percent of the dutiable value of the wire netting imported from Germany. The corresponding ratio in the case of wire netting galvanized after weaving is 61.7 percent. These are the percentages on the basis of which the Commission made its finding as to the rates of duty necessary to equalize the differences in costs.

Wire netting: Differences in domestic and foreign costs of production, expressed as percentages of the values in the chief competing country, by items and markets, 1929

Item	Atlanta	Houston	Philadelphia	Chicago	Seattle	Los Angeles and San Francisco	Weighted average
Galvanized before weaving:							
2-inch mesh, 20-gage wire, 48-inch width	32.39	46.61	36.91	26.67	49.86	50.95	38.53
2-inch mesh, 20-gage wire, 60-inch width	38.69	49.38	41.31	33.59	53.48	52.45	43.03
2-inch mesh, 20-gage wire, 72-inch width	37.12	47.14	38.98	31.30	51.96	52.31	41.18
1-inch mesh, 20-gage wire, 24-inch width	56.38	70.03	62.61	55.13	74.11	74.50	63.96
1-inch mesh, 20-gage wire, 36-inch width	56.32	70.62	61.78	56.39	77.99	70.61	64.03
1-inch mesh, 20-gage wire, 48-inch width	52.18	66.60	59.17	52.28	72.51	69.39	60.53
Average	45.51	58.40	50.13	42.56	63.32	61.70	51.88
Galvanized after weaving:							
2-inch mesh, 16-gage wire, 36-inch width			65.82	53.19		77.98	62.86
2-inch mesh, 20-gage wire, 36-inch width			51.75	41.84	65.88	67.72	52.59
1-inch mesh, 18-gage wire, 36-inch width			77.21	64.72	91.80	90.42	76.52
1-inch mesh, 19-gage wire, 36-inch width			52.93	42.85		64.40	50.9
1-inch mesh, 20-gage wire, 36-inch width			70.68	46.89	88.10	76.98	64.41
Average			63.68	49.90	81.93	75.50	61.69

Some aspects of domestic cost range are evident from the following table taken from page 10 of the report relating to costs f. o. b. plant. Costs were also obtained from the Pacific coast district but can not be shown separately without disclosing confidential information.

Wire netting: Average cost of production in the United States

Item	Cost per bale of 150 lineal feet, 1929		
	Eastern district	Midwest and Rocky Mountain district	Average, United States [1]
Galvanized before weaving:			
1-inch mesh, 20-gage wire, 24-inch width	$2.388	$1.947	$2.242
1-inch mesh, 20-gage wire, 36-inch width	3.380	2.853	3.202
1-inch mesh, 20-gage wire, 48-inch width	4.363	3.773	4.180
2-inch mesh, 20-gage wire, 48-inch width	2.198	1.736	2.049
2-inch mesh, 20-gage wire, 60-inch width	2.650	2.318	2.646
2-inch mesh, 20-gage wire, 72-inch width	3.142	2.714	3.136
Galvanized after weaving:			
1-inch mesh, 18-gage wire, 36-inch width	5.803	5.021	5.564
1-inch mesh, 19-gage wire, 36-inch width	4.381	3.998	4.305
1-inch mesh, 20-gage wire, 36-inch width	3.648	3.532	3.644
2-inch mesh, 16-gage wire, 36-inch width	4.702	3.831	4.405
2-inch mesh, 20-gage wire, 36-inch width	1.975	1.538	1.836

[1] Eastern, Midwest, Rocky Mountain, and Pacific coast districts.

To illustrate the variation of costs of specific kinds of netting, data are shown below for the "2-inch mesh, 20-gage wire, 72-inch wide" netting as representative of types galvanized before weaving and for the "1-inch, 19-gage wire, 36-inch wide" netting as representative of types galvanized after weaving. Production is expressed in percentages of the total production of all wire netting in all plants from which costs were obtained.

Wire netting: Range of domestic costs of representative types, 1929

[Galvanized before weaving, 2-inch mesh, 20-gage wire, 72-inch width]

Cost per bale	*Percent of production covered by costs*
Less than $3	35.7
$3 to $3.75	51.6
$3.75 or more	12.7
Total, 8 companies	100.0

Average cost, $3.136 per bale.

[Galvanized after weaving, 1-inch mesh, 19-gage wire, 36-inch width]

Cost per bale	*Percent of production covered by costs*
Less than $4.10	55.7
$4.10 to $4.60	None.
$4.60 to $5	39.2
$5 or more	5.1
Total, 9 companies	100.0

Average cost, $4.305 per bale.

Details of the cost comparison for each kind of netting at each of the markets shown in the first table above are presented on pages 12 and 13 of the report, from which the following is abstracted relative to the two kinds for which cost range is shown above. This clearly indicates the variation of the factor of transportation cost and the variation in cost differences by markets.

Wire netting: Comparisons of cost (or price) of representative types delivered to principal markets, per bale of 150 lineal feet, 1929

	Atlanta		Houston		Philadelphia	
	Domestic [1]	Foreign	Domestic [2]	Foreign	Domestic [1]	Foreign
Galvanized before weaving						
2-inch mesh, 20-gage wire, 72-inch width:						
Cost of production	$3.062	$2.190	$3.062	$2.132	$3.062	$2.150
Transportation and other charges to indicated market	.291	.350	.220	.145	.138	.212
	3.353	2.540	3.282	2.277	3.200	2.362
Difference		.813		1.005		.838
Dutiable value		2.190		2.132		2.150
Ad valorem percentage required to equalize cost difference		37.12		47.14		38.98
Galvanized after weaving						
1-inch mesh, 19-gage wire, 36-inch width:						
Cost of production					4.245	2.677
Transportation and other charges to indicated market					.208	.359
					4.453	3.036
Difference						1.417
Dutiable value						2.677
Ad valorem percentage required to equalize cost difference						52.93

	Chicago		Seattle [3]		Los Angeles and San Francisco	
	Domestic [1]	Foreign	Domestic [3]	Foreign	Domestic [3 4]	Foreign
Galvanized before weaving						
2-inch mesh, 20-gage wire, 72-inch width:						
Cost of production	$3.062	$2.150	$3.136	$2.140	$3.136	$2.139
Transportation and other charges to indicated market	.185	.424	.336	.220	.332	.210
	3.247	2.574	3.472	2.360	3.468	2.349
Difference		.673		1.112		1.119
Dutiable value		2.150		2.140		2.139
Ad valorem percentage required to equalize cost difference		31.30		51.96		52.31
Galvanized after weaving						
1-inch mesh, 19-gage wire, 36-inch width:						
Cost of production	4.245	2.677			4.305	2.677
Transportation and other charges to indicated market	.204	.625			.452	.356
	4.449	3.302			4.757	3.033
Difference		1.147				1.724
Dutiable value		2.677				2.677
Ad valorem percentage required to equalize cost difference		42.85				64.40

[1] Weighted on production in 8 plants—5 Eastern, 3 Midwest.
[2] Weighted on production in 9 plants—5 Eastern, 4 Midwest.
[3] Weighted, for netting galvanized before weaving, on production in 11 plants—5 Eastern, 4 Midwest, 2 Pacific coast.
[4] Weighted, for netting galvanized after weaving, on production in 10 plants—5 Eastern, 3 Midwest, 2 Pacific coast.

COPPER (PAR. 1658)

Copper has been on the free list since 1894; in the Tariff Act of 1930 it is listed under paragraph 1658. It became subject to tax, if imported, under the Revenue Act of 1932, at 4 cents per pound.

COST PERIOD AND SCOPE OF INVESTIGATION

The Commission conducted an investigation with respect to copper, under section 332 of the act of 1930 in response to Senate Resolution No. 434 (71st Cong.). Foreign cost data were obtained for 20 producers operating 57 producing plants in Chile, Canada, Mexico, Cuba, Peru, Africa, Spain, and Yugoslavia. Chile is the largest foreign producer and now potentially the chief competing country. The domestic cost data covered 40 producers operating 102 producing plants. The results of the investigation are published in Report No. 29, second series.

The cost study covers the 3 years 1928, 1929, and 1930. Final cost comparisons are based on the data for 1928 which was found to be more nearly normal in volume of production and in costs of mining than either of the succeeding years.

The most important form in which foreign copper has entered the United States is that of blister. This blister is refined in domestic plants and enters into competition with domestic refined copper or into the United States exports of refined copper.

If all copper were smelted into blister the most significant cost comparison would be that between the cost of producing blister in the United States and in foreign countries, including in each case transportation to refineries in the United States. However, a considerable fraction of the domestic refined copper is produced by other methods and is not smelted into blister. The comparison between the average cost of production of all refined copper from domestic ores and the cost of production of blister in foreign countries plus the cost of transporting it to and refining it in the United States, whether or not it is so transported and refined, is shown on page 7 of the report in table A reproduced below. The calculations of costs in this table are based on the assumption that if the United States were a consistent net importer of copper, blister copper produced in any of the foreign countries for which costs were obtained could be reasonably expected to compete in the American markets. Transportation cost is the average cost of shipping all foreign blister for which costs are available to the most accessible refinery in the United States.

Copper: Comparison of the cost of production of refined copper from domestic ores with the cost of production of blister copper in foreign countries plus the cost of refining such blister in the United States, 1928

[In cents per pound of recoverable copper]

Item	Including depletion and interest	Without depletion or interest
Domestic costs: Costs of refined copper per pound of recoverable content in all ore mined:		
Mining, including freight outward	8.42	4.65
Concentrating, including freight outward	2.08	1.92
Smelting	1.37	1.29
Transportation of blister to refineries	.37	.37
Refining	1.05	.99
Total cost of refined copper produced from domestic ores	13.29	9.22

Copper: Comparison of the cost of production of refined copper from domestic ores with the cost of production of blister copper in foreign countries plus the cost of refining such blister in the United States, 1928—Continued

[In cents per pound of recoverable copper]

Item	Including depletion and interest	Without depletion or interest
Foreign costs: Costs of blister made in foreign countries from foreign materials with refining in the United States:		
Cost of blister—		
Mining, including freight outward	5.02	2.53
Concentration, including freight outward	1.77	1.54
Smelting	3.17	2.80
Cost of blister at smelters	9.96	6.87
Transportation to the United States	1.03	1.03
Total delivered at United States refineries	10.99	7.90
Cost of refining foreign blister in the United States	.88	.83
Total cost of refined copper	11.87	8.73
Excess of domestic over foreign cost of refined copper	1.42	.49

The excess of domestic over foreign cost is explained almost wholly by the higher cost of mining in the United States; an important factor is the lower percentage of copper content in the domestic ore. The cost of smelting the foreign material is materially higher than that for the domestic product, but this is partly due to the fact that less of the foreign ore is concentrated before entering the smeltery.

The following table shows the range of cost f. o. b. principal refineries in the United States. The foreign costs here shown are on the basis of actual shipments and therefore differ slightly from those in the preceding table. Supplementing the table, it is pertinent to state that 45 percent of domestic production was produced at below the domestic average cost of 13.3 cents per pound of recoverable copper, and 64 percent of foreign production was produced at below the foreign average cost of 11.3 cents.

Copper: Comparison of the cost of production, including depletion and interest, of refined copper from domestic ore with the cost of production of blister copper in foreign countries plus cost of transportation and refining such blister in principal refineries in the United States, 1928

[In cents per pound of recoverable copper]

Cost f. o. b. principal refineries in United States	Domestic			Foreign		
	Average cost	Percent production		Average cost	Percent production	
		Group	Cumulation		Group	Cumulation
Under 11 cents	9.68	21.05	21.05	8.97	42.24	42.24
11 to 13 cents	12.40	18.52	39.57	11.68	38.59	80.83
13 to 15 cents	14.17	46.42	85.99	14.19	11.08	91.91
15 to 17 cents	16.17	10.10	96.09	[1]	[1]	
Over 17 cents	19.73	3.91	100.00	17.15	8.09	100.00
Weighted average and total	13.29	100.00		11.34	100.00	

[1] Consolidated with higher cost group to avoid disclosure of confidential information.

Other tables in the report show the costs for each of the 3 years, 1928, 1929, and 1930, and for the 3-year period by processing steps and by areas of production for both domestic and foreign operations.

SCHEDULE 4.—WOOD AND MANUFACTURES OF

Dutiable items:	Free list items:
Lumber (par. 401).	Red cedar shingles (par. 1760). Logs of fir, spruce, cedar, or western hemlock (par. 1803).

LUMBER (Par. 401)

The duty of $1 per thousand board feet provided in paragraph 401 of the act of 1930 was not changed as a result of the investigation. Lumber covered by paragraph 401 of the Tariff Act of 1930 is now also subject to a tax of $3 per thousand imposed by the Revenue Act of 1932.

This investigation, instituted pursuant to Senate Resolution No. 321 (71st Cong.), was conducted under section 336 of the act of 1930 and concerned the year 1929 as the cost period. The principal competing country was Canada. Costs were obtained from 178 domestic and 60 Canadian mills. These are the totals for all mills investigated including a number producing lumber from mixed species not considered in the final comparisons. The results of this investigation are set forth in detail in a report published as no. 32, second series.

COST COMPARISON

The investigation was concerned with costs of lumber of a number of species, and the following, abstracted from table 1, page 3, shows the variety of results.

Costs of domestic and Canadian lumber delivered at New York and Chicago, 1929 (per thousand feet, board measure)

Comparison		Excess of domestic cost	
Domestic	Canadian	At New York	At Chicago
1. Douglas fir	Douglas fir	$0.80	$0.43
2. Southern pine	do	7.08	[1] −1.93
3. 1 and 2 combined	do	3.65	[1] −1.56
4. Northern pine	Northern pine	2.11	[1] −2.66
5. Eastern spruce	Eastern spruce	1.11	1.27

[1] Excess of Canadian cost over domestic.

RANGE OF DOMESTIC AND FOREIGN COSTS

The four tables following illustrate the range of domestic and foreign costs. The first two pertain to the costs involved in comparison no. 1, in which domestic Douglas fir is compared with Canadian Douglas fir. Transportation is included at average rates for the two groups of mills, as these mills are located in a narrow area with a slight variation in transportation. The second two pertain to comparison no. 2, in which domestic Southern pine is compared with Canadian Douglas fir. Southern pine delivered at New York includes longleaf, shortleaf, and North Carolina pine; delivered at Chicago includes only longleaf and shortleaf pine. Transportation is included at average rates for each group of mills.

Tables are not presented for the remaining three comparisons. The third is simply a summary of the first and second. The fourth, concerning Northern pine, and the fifth, concerning Eastern spruce, involve confidential data.

Douglas fir: Range of domestic and foreign costs in corresponding intervals with production, 1929

COST DELIVERED AT NEW YORK

Delivered cost	Domestic			Foreign		
	Production in thousand board feet	Percent of total production		Production in thousand board feet	Percent of total production	
		Group	Cumulation		Group	Cumulation
Under $26	9,679	0.3	0.3	None	None	None
$26 to $27	56,758	1.8	2.1	(1)	(1)	(1)
$27 to $28	115,312	3.6	5.7	75,975	8.8	8.8
$28 to $29	90,302	2.9	8.6	68,981	7.9	16.7
$29 to $30	122,215	3.9	12.5	140,574	16.2	32.9
$30 to $31	750,371	23.8	36.3	(2)	(2)	(2)
$31 to $32	329,174	10.4	46.7	161,099	18.5	51.4
$32 to $33 [3]	340,256	10.7	57.4	62,252	7.2	58.6
$33 to $34 [4]	196,360	6.2	63.6	52,104	6.0	64.6
$34 to $35	523,095	16.6	80.2	173,110	19.9	84.5
$35 to $36	(2)	(2)	(2)	(2)	(2)	(2)
$36 to $37	118,975	3.8	84.0	(1)	(1)	(1)
$37 to $38	162,419	5.1	89.1	None	None	84.5
$38 to $39	None	None	89.1	108,952	12.5	97.0
$39 or over	343,265	10.9	100.0	25,203	3.0	100.0
Weighted average cost	3,158,181	100.0 $33.41		868,250	100.0 $32.61	

COST DELIVERED AT CHICAGO

Under $32	(1)	(1)	(1)	None	None	None
$32 to $33	24,028	0.8	0.8	None	None	None
$33 to $34	42,409	1.3	2.1	(1)	(1)	(1)
$34 to $35	142,101	4.5	6.6	75,975	8.7	8.7
$35 to $36	99,840	3.2	9.8	(1)	(1)	(1)
$36 to $37	85,888	2.7	12.5	209,555	24.1	32.8
$37 to $38	793,206	25.1	37.6	(2)	(2)	(2)
$38 to $39	346,906	11.0	48.6	161,099	18.6	51.4
$39 to $40 [5]	362,607	11.4	60.0	62,252	7.2	58.6
$40 to $41 [6]	113,442	3.6	63.6	(1)	(1)	(1)
$41 to $42	523,095	16.6	80.2	212,830	24.5	83.1
$42 or over	624,659	19.8	100.0	146,539	16.9	100.0
Weighted average cost	3,158,181	100.0 $40.24		868,250	100.0 $39.81	

[1] Combined with higher cost group to avoid disclosing confidential information.
[2] Combined with lower cost group to avoid disclosing confidential information.
[3] Typical Canadian group, as indicated by weighted average ($32.61 delivered).
[4] Typical domestic group as indicated by weighted average ($33.41 delivered).
[5] Typical Canadian group, as indicated by weighted average ($39.81 delivered).
[6] Typical domestic group as indicated by weighted average ($40.24 delivered).

Domestic southern pine and Canadian Douglas fir: Range of domestic and foreign costs in corresponding intervals with production, 1929

COST DELIVERED AT NEW YORK

Delivered cost per thousand board feet	Shortleaf pine mills			Longleaf pine mills		
	Production in thousand board feet	Percent of total production		Production in thousand board feet	Percent of total production	
		Group	Cumulation		Group	Cumulation
Under $35 [1]	(2)	(2)	(2)	None	None	None
$35 to $36	None	None	None	(2)	(2)	(2)
$36 to $37	97,469	11.3	11.3	(2)	(2)	(2)
$37 to $38	121,016	14.0	25.3	160,995	25.1	25.1
$38 to $39 [3]	84,999	9.8	35.1	(2)	(2)	(2)
$39 to $40	105,195	12.1	47.2	None	None	25.1
$40 to $41 [4]	None	None	47.2	86,910	13.6	38.7
$41 to $42 [5]	102,802	11.9	59.1	(2)	(2)	(2)
$42 to $43	None	None	59.1	41,902	6.5	45.2
$43 to $44	235,491	27.2	86.3	212,696	33.2	78.4
$44 to $45	(2)	(2)	(2)	65,633	10.2	88.6
$45 to $46	None	None	86.3	(6)	(6)	(6)
$46 or over	118,859	13.7	100.0	72,809	11.4	100.0
	865,831	100.0		640,945	100.0	
Weighted average cost		$40.94			$41.91	

Delivered cost per thousand board feet	North Carolina pine mills			Canadian Douglas fir mills		
	Production in thousand board feet	Percent of total producton		Production in thousand board feet	Percent of total production	
		Group	Cumulation		Group	Cumulation
Under $35 [1]	35,369	18.0	18.0	765,727	88.2	88.2
$35 to $36	None	None	18.0	(6)	(6)	(6)
$36 to $37	None	None	18.0	(6)	(6)	(6)
$37 to $38	(2)	(2)	(2)	None	None	88.2
$38 to $39 [3]	116,041	58.9	76.9	(2)	(2)	(2)
$39 to $40	(6)	(6)	(6)	102,523	11.8	100.0
$40 to $41 [4]	(6)	(6)	(6)	(6)	(6)	(6)
$41 to $42 [5]	(2)	(2)	(2)	None	None	
$42 to $43	(2)	(2)	(2)	None	None	
$43 to $44	45,414	23.1	100.0	None	None	
$44 or over	None	None				
	196,824	100.0		868,250	100.0	
Weighted average cost		$38.34			$32.61	

[1] Typical Canadian cost group, Douglas fir mills, as indicated by weighted average ($32.61 delivered).
[2] Combined with higher cost group to avoid disclosing confidential information.
[3] Typical domestic cost group, North Carolina pine mills, as indicated by weighted average ($38.34 delivered).
[4] Typical domestic cost group, shortleaf pine mills, as indicated by weighted average ($40.94 delivered).
[5] Typical domestic cost group, longleaf pine mills, as indicated by weighted average ($41.91 delivered).
[6] Combined with lower-cost group to avoid disclosing confidential information.

Domestic southern pine and Canadian Douglas fir: Range of domestic and foreign costs in corresponding intervals with production, 1929—Continued

COST DELIVERED AT CHICAGO

Delivered cost per thousand board feet	Shortleaf pine mills			Longleaf pine mills			Canadian Douglas fir mills		
	Production in thousand board feet	Percent of total production		Production in thousand board feet	Percent of total production		Production in thousand board feet	Percent of total production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Under $33	66,640	7.7	7.7	(4)	(4)	(4)	None	None	None
$33 to $34	109,751	12.7	20.4	160,995	25.1	25.1	(4)	(4)	(4)
$34 to $35	127,093	14.7	35.1	None	None	25.1	75,975	8.7	8.7
$35 to $36	50,077	5.8	40.9	(4)	(4)	(4)	(4)	(4)	(4)
$36 to $37	55,118	6.3	47.2	70,836	11.1	36.2	209,555	24.1	32.8
$37 to $38 [1]	(4)	(4)	(4)	32,818	5.1	41.3	(5)	(5)	(5)
$38 to $39 [2]	102,802	11.9	59.1	(4)	(4)	(4)	161,099	18.6	51.4
$39 to $40 [3]	159,367	18.4	77.5	187,222	29.2	70.5	62,252	7.2	58.6
$40 to $41	110,987	12.8	90.3	80,784	12.6	83.1	(4)	(4)	(4)
$41 to $42	59,621	6.9	97.2	35,481	5.5	88.6	212,830	24.5	83.1
$42 or over	24,375	2.8	100.0	72,809	11.4	100.0	146,539	16.9	100.0
	865,831	100.0		640,945	100.0		868,250	100.0	
Weighted average cost		$37.46			$38.43			$39.81	

[1] Typical domestic group, shortleaf pine mills, as indicated by weighted average ($37.46 delivered).
[2] Typical domestic group, longleaf pine mills, as indicated by weighted average ($38.43 delivered).
[3] Typical Canadian group, Douglas fir mills, as indicated by weighted average ($39.81 delivered).
[4] Combined with higher cost group to avoid disclosing confidential information.
[5] Combined with lower cost group to avoid disclosing confidential information.

RED CEDAR SHINGLES (PAR. 1760)

Red cedar shingles were on the free list under paragraph 1660 of the act of 1922 and continued on the free list in paragraph 1760 of the act of 1930.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation, instituted upon request of the President dated July 9, 1926, was conducted under section 318 of the Tariff Act of 1922 with respect to Canada as the principal competing country. Costs were obtained from 29 domestic companies operating 34 mills in Washington and Oregon and from 19 Canadian companies operating 20 mills in British Columbia; these two States and this Province being the principal producing areas. The cost period was the year 1925. The results of the Commission's investigation are shown in a report, "The Red Cedar Shingle Industry", dated 1927.

Costs were obtained f. o. b. mill because freight rates from mills on either side of the line to the majority of consuming markets were approximately the same. Costs were obtained for the following grades of shingles:

Grades, comparable:
- Royals No. 1, 24-inch, 4/2.
- Royals No. 2, 24-inch. 4/2.
- Perfections No. 1, 18-inch, 5/2–¼.
- Perfections No. 2, 18-inch, 5/2–¼.
- Perfects (or XXXXX) No. 1, 16-inch, 5/2.
- Perfects (or XXXXX) No. 2, 16-inch, 5/2.

Grade probably comparable: Extra Clears, 16-inch, 5/2.
Grades of doubtful comparability:
- Extra Star A Star, 16-inch, 6/2.
- Others (Eureka, No. 1; Eureka, No. 2; Common Clears; Extra Star A Star, 5/2; Common Stars, 6/2).

Costs of shingles by specific grades were established by three methods, as follows:

1. By charging piecework labor (for sawing and packing) direct to each grade, allocating time labor in the ratio that the total time labor for all grades is to the total piece labor, allocating supplies and miscellaneous expenses on a uniform rate per thousand, and allocating general and administrative expenses, log cost, and interest according to the ratio of the sales value of production of each grade to the total sales value of production of all grades. This method is designated as method no. 1.

2. By charging piecework labor directly to each grade as above and allocating all other items of cost according to the ratio of the sales value of production of each grade to the total sales value of production of all grades. This method is designated as method no. 2.

3. By charging piecework labor directly to each grade as in the other two methods, by distributing time labor and all items of overhead, including interest, on a uniform rate per thousand, and by distributing log costs to the various grades of shingles on what may be called the modified sales allocation basis. On this basis piecework labor, time labor, overhead and selling expenses are deducted, both from the total sales value of production and the sales value of production by grades, before distributing material costs according to the relative sales value of production of each grade. This method is designated as method no. 3.

COST COMPARISON AND RANGE OF COSTS

Tables 13, 14, and 15 of the report give details of costs which are summarized in the table below. The tables referred to and the summary make comparisons by grades, classified according to whether comparable, probably comparable, or doubtfully comparable. They also show the number of mills and the quantity of production represented by the average cost for each grade. In the tables cited costs are shown without interest, with interest, and with interest and selling expenses.

Red cedar shingles: Summarized unit cost of production in Washington-Oregon and British Columbia of grades of shingles classified by degree of comparability, 1925

	Method No. 1			Method No. 2			Method No. 3		
	Cost per thousand with interest		Ratio of British Columbia cost to Washington-Oregon cost (Washington-Oregon=100)	Cost per thousand with interest		Ratio of British Columbia cost to Washington-Oregon cost (Washington-Oregon=100)	Cost per thousand with interest		Ratio of British Columbia cost to Washington-Oregon cost (Washington-Oregon=100)
	Washington-Oregon	British Columbia		Washington-Oregon	British Columbia		Washington-Oregon	British Columbia	
Companies buying their raw material:									
Grades comparable	$3.794	$3.825	100.82	$3.966	$3.843	96.90	$4.054	$3.910	96.45
Grades probably comparable	2.893	2.857	98.76	2.852	2.861	100.32	2.870	2.762	96.24
Grades of doubtful comparability	2.563	2.698	105.27	2.474	2.601	105.13	2.372	2.476	104.38
All grades	2.968	3.530	118.94	2.954	3.530	119.50	2.948	3.547	120.32
Companies producing their raw material:									
Grades comparable	3.978	4.183	105.15	4.099	4.271	104.20	4.192	4.322	103.10
Grades probably comparable	(1)	(1)	125.12	(1)	(1)	118.11	(1)	(1)	117.73
Grades of doubtful comparability	2.480	3.187	128.51	2.377	3.109	130.80	2.317	3.017	130.21
All grades	3.310	4.030	121.75	3.340	4.087	122.37	3.364	4.116	122.35
Conbined for companies buying and companies producing their raw material:									
Grades comparable	3.877	3.953	101.96	4.077	3.994	97.96	4.175	4.055	97.13
Grades probably comparable	2.848	2.895	101.65	2.776	2.880	103.75	2.780	2.785	100.18
Grades of doubtful comparability	2.545	2.841	111.63	2.407	2.744	114.00	2.325	2.632	113.20
All grades	3.043	3.688	121.20	3.027	3.705	122.40	3.032	3.725	122.86

[1] Cost data for these grades are included in the weighted averages, but are not separately shown, as their publication might reveal confidential information.

By method no. 1 the average costs, inclusive of interest but not selling expenses on grades designated as comparable, are 7.6 cents per thousand lower in Washington and Oregon than in British Columbia. However, by methods nos. 2 and 3, they are 8.3 cents and 12 cents, respectively, higher in Washington and Oregon than in British Columbia. On the Perfects and Perfections No. 1, the two grades on which competition is keenest between the United States and Canada, comparisons by all three methods show higher costs in British Columbia than in Washington and Oregon. This is true whether figures for mills buying their logs, mills doing their own logging, or for all mills are taken; and whether costs are computed without interest and selling expenses, with interest, or with interest and selling expense. Likewise in whatever way comparison is made, Royals No. 1, a highly competitive grade though nowhere manufactured in large quantities, cost more to produce in British Columbia than in Washington and Oregon. On Perfects (or XXXXX) No. 2 United States costs are higher than British Columbia costs, except by methods no. 1 and no. 2 for mills producing their own logs. On Perfections No. 2, British Columbia costs are always higher, but on Royals No. 2 the reverse is true.

On Extra Clears, designated as probably comparable, by whatever method computed, the costs in Washington and Oregon mills, except for mills producing their own logs, do not differ materially from those in British Columbia mills; in fact, costs, including interest but not selling expenses, vary from only 10.4 cents per thousand lower to 10.8 cents per thousand higher, according to the method used in computing costs and according to whether comparisons are for all mills or only for mills buying their logs.

For mills producing their own logs, costs on this grade in Washington and Oregon vary from 45 cents to 66.3 cents per thousand lower in Washington and Oregon than in British Columbia. The same sort of difference between costs of mills doing their own logging and other mills occurs with respect to the grades designated as doubtfully comparable. The average costs, including interest but not selling expenses, for all of these grades made in mills producing their own logs vary from 70 cents to 73.2 cents per thousand lower in Washington and Oregon than in British Columbia, whereas the average costs in all mills and in mills buying the logs used vary from only 10.4 cents to 33.7 cents per thousand.

To illustrate the range of costs, "Perfections, no. 1, 18-inch, 5/2¼" have been chosen as representative of grades comparable, and "Perfects (or XXXXX), no. 1, 16-inch, 5/2" as another grade representative of shingles in general. The following table indicates the degree of variation in costs of these two grades of shingles by classifications of domestic and Canadian mills.

Red cedar shingles: Cost f. o. b. mill of representative grades with interest and without selling expense, 1925

[Reference to report: Table 13, pages 36, 37, and 38]

Grade and classification	Number of mills	Average cost per thousand	Ratio of highest to lowest cost	Proportion of production below average cost	Production in thousands
Perfections No. 1 18-inch, 5/2¼:			*Percent*	*Percent*	
Domestic mills—					
Producing their raw material	7	$4.047	167.7	45.8	105,621
Buying their raw material	10	3.997	137.7	53.8	66,626
Producing and buying [2]	17	4.028	167.7	48.0	172,247
British Columbia mills—					
Producing their raw material	5	4.402	108.9	70.4	[1] 95,685
Buying their raw material	8	4.478	113.3	22.5	148,983
Producing and buying [2]	13	4.448	113.3	39.0	[3] 244,671
Perfects No. 1, 16-inch, 5/2:					
Domestic mills—					
Producing their raw material	7	3.378	153.5	67.0	111,771
Buying their raw material	18	3.411	136.2	61.2	190,795
Producing and buying [2]	25	3.399	153.5	63.3	302,566
British Columbia mills—					
Producing their raw material	6	3.714	108.2	69.3	[4] 190,436
Buying their raw material	13	3.665	134.3	66.9	386,795
Producing and buying [2]	19	3.681	134.3	67.6	[5] 577,231

[1] Reduced to 78,590 thousands by elimination of one mill as not fully representative.
[2] Further details follow.
[3] Reduced to 227,573 thousands by elimination of one mill as not fully representative.
[4] Reduced to 149,046 thousands by elimination of one mill as not fully representative.
[5] Reduced to 536,046 thousands by elimination of one mill as not fully representative.

The table which follows relates to the cost groups bearing the reference mark "2," above, covering both mills producing and buying their raw material:

Red cedar shingles: Range of domestic and foreign costs of representative grades f. o. b. mill in corresponding intervals with production, 1925

PERFECTIONS NO. 1, 18-INCH, 5/2¼

Cost per thousand f.o.b. mill	Domestic			Foreign		
	Production in thousands	Percent production		Production in thousands	Percent production	
		Group	Cumulation		Group	Cumulation
Less than $3.60	45,893	26.64	26.64			
$3.60 to $4	38,386	22.29	48.93			
$4 to $4.50 [1]	46,091	26.76	75.69	94,717	41.62	41.62
$4.50 to $4.60			75.69	88,720	38.98	80.60
$4.60 or more	41,877	24.31	100.00	44,136	19.40	100.00
Total	172,247	100.00		227,573	100.00	
PERFECTS (XXXXX) NO. 1, 16-INCH, 5/2						
Less than $3	79,122	26.15	26.15	[2]	[2]	[2]
$3 to $3.25	76,602	25.32	51.47			
$3.25 to $3.50 [3]	63,574	21.01	72.48	72,758	13.57	13.57
$3.50 to $4 [4]	32,599	10.77	83.25	463,288	86.43	100.00
$4 or more	50,669	16.75	100.00			
Total	302,566	100.00		536,046	100.00	

[1] Typical domestic-cost group as indicated by weighted average $4.028 (table 13, p. 38 of report). Also typical foreign cost group as indicated by weighted average $4.448 (table 13, p. 38 of report).
[2] Combined with higher cost group to avoid disclosing confidential information.
[3] Typical domestic-cost group as indicated by weighted average $3.399 (table 13, p. 38 of report).
[4] Typical foreign cost group as indicated by weighted average $3.681 (table 13, p. 38 of report).

TRANSPORTATION

Compared with other roofing materials, cedar shingles are at some competitive disadvantage because they are produced almost wholly in Washington, Oregon, and British Columbia at a great distance from the principal shingle consuming areas in the Midwest, East, and South. An analysis of sales distribution was not practicable, and average transportation rates were not ascertained for purposes of the report.

The bulk of shingles shipped is by rail, but most of the shipments to Atlantic coast ports are by water. The costs for regularly established service from British Columbia and the Washington-Oregon district show little difference. Some of the shingles are reshipped to interior points but the length of the possible back haul is very limited.

In the matter of rail freight rates British Columbia and Washington-Oregon mills are in general on an equality. The western portions of these areas, where most of the shingle manufacturers are located, are in the same rate zone as far as the eastern freight movement is concerned. On movements to California, mills in Oregon have some advantage over those in Washington, and a greater advantage over those in British Columbia.

LOGS OF FIR, SPRUCE, CEDAR, OR WESTERN HEMLOCK (PAR. 1803)

Under the act of 1922 logs of fir, spruce, cedar, or western hemlock were dutiable under paragraph 401 at $1 per thousand feet, board measure, with a proviso for an exemption from duty when importation was from a country which did not maintain any embargo, prohibition, or other restriction upon the exportation of such class of logs. No change in duty resulted from the Commission's investigation. Logs of these species were placed on the free list in the act of 1930 under paragraph 1803.

This investigation was conducted under section 315 of the act of 1922 with reference to the year 1923 as a cost period. Canada was the principal competing country. Costs were obtained from 38 domestic companies with 43 operations and 18 Canadian companies with 20 operations. The findings of the Commission are published in a report dated March 14, 1928.

COST COMPARISON

The average costs used in the several cost comparisons in the report are the same as those shown in the three tables which follow. The first table shows comparison of costs of logs in boom, and the other two tables differ only by the inclusion of specified charges for delivery to the American market.

Logs: Range of domestic and foreign costs in boom, in corresponding intervals with production, 1923

Delivered cost per thousand feet	Domestic			Foreign		
	Production in thousand feet	Percent of total production		Production in thousand feet	Percent of total production	
		Group	Cumulation		Group	Cumulation
Under $12	(3)	(3)	(3)	216,213	31.7	31.7
$12 to $13	110,806	6.2	6.2	(4)	(4)	(4)
$13 to $14	101,587	5.7	11.9	(3)	(3)	(3)
$14 to $15 [1]	187,764	10.5	22.4	95,297	14.0	45.7
$15 to $16	235,558	13.1	35.5	164,567	24.1	69.8
$16 to $17 [2]	520,356	29.1	64.6	(3)	(3)	(3)
$17 to $18	258,313	14.4	79.0	144,944	21.2	91.0
$18 to $19	146,068	8.2	87.2	(4)	(4)	(4)
$19 to $20	138,506	7.7	94.9	(3)	(3)	(3)
$20 to $21	(3)	(3)	(3)	None	None	91.0
$21 to $22	22,549	1.2	96.1	None	None	91.0
$22 or over	69,510	3.9	100.0	61,173	9.0	100.0
Total	1,791,017	100.0		682,194	100.0	
Weighted average cost		$16.63			$14.97	

[1] Typical Canadian-cost group as indicated by weighted average ($14.97 in boom).
[2] Typical domestic-cost group as indicated by weighted average ($16.63 in boom).
[3] Combined with higher cost group to avoid disclosing confidential information.
[4] Combined with lower cost group to avoid disclosing confidential information.

Logs: Range of domestic and foreign costs delivered at Bellingham, Wash., in corresponding intervals with production, 1923

ALTERNATE 1 FOR TOWING CHARGES AND TIMBER TAX

Delivered cost per thousand feet	Domestic [1]			Foreign [2]		
	Production in thousand feet	Percent of total production		Production in thousand feet	Percent of total production	
		Group	Cumulation		Group	Cumulation
Under $14	(3)	(3)	(3)	155,932	22.9	22.9
$14 to $15	212,393	11.9	11.9	(3)	(3)	(3)
$15 to $16	187,764	10.5	22.4	130,967	19.2	42.1
$16 to $17 [4]	235,558	13.1	35.5	38,301	5.6	47.7
$17 to $18 [5]	520,356	29.1	64.6	202,231	29.6	77.3
$18 to $19	258,313	14.4	79.0	(3)	(3)	(3)
$19 to $20	146,068	8.2	87.2	93,590	13.7	91.0
$20 to $21	138,506	7.7	94.9	(6)	(6)	(6)
$21 to $22	(3)	(3)	(3)	(6)	(6)	(6)
$22 to $23	22,549	1.2	96.1	61,173	9.0	100.0
$23 or over	69,510	3.9	100.0	(6)	(6)	(6)
Total	1,791,017	100.0		682,194	100.0	
Weighted average cost		$17.72			$16.57	

[1] Including towage charge, $1.09 (pp. 24 and 25 of published report).
[2] Including towage charge, $1.60, but excluding timber tax (export royalty), (pp. 24 and 25 of the report).
[3] Combined with higher cost group to avoid disclosing confidential information.
[4] Typical Canadian cost group as indicated by weighted average, $16.57 delivered.
[5] Typical domestic cost group as indicated by weighted average, $17.72 delivered.
[6] Combined with lower cost group to avoid disclosing confidential information.

Logs: Range of domestic and foreign costs delivered at Bellingham, Wash., in corresponding intervals with production, 1923—Continued

ALTERNATE 2 FOR TOWING CHARGES AND TIMBER TAX

Delivered cost per thousand feet	Domestic [7]			Foreign [8]			Foreign [9]		
	Production per thousand feet	Percent of total production		Production in thousand feet	Percent of total production		Production in thousand feet	Percent of total production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Under $14	156,389	8.7	8.7	(3)	(3)	(3)	155,932	22.9	22.9
$14 to $15	221,499	12.3	21.0	155,932	22.9	22.9	(3)	(3)	(3)
$15 to $16	218,110	12.2	33.2	(3)	(3)	(3)	130,967	19.2	42.1
$16 to $17 [10]	546,073	30.5	63.7	130,967	19.2	42.1	38,301	5.6	47.7
$17 to $18 [11]	211,900	11.8	75.5	38,301	5.6	47.7	202,231	29.6	77.3
$18 to $19	129,050	7.2	82.7	202,231	29.6	77.3	(3)	(3)	(3)
$19 to $20	132,596	7.4	90.1	(3)	(3)	(3)	93,590	13.7	91.0
$20 to $21	85,224	4.8	94.9	93,590	13.7	91.0	(6)	(6)	(6)
$21 to $22	(3)	(3)	(3)	(6)	(6)	(6)	(3)	(3)	(3)
$22 to $23	38,812	2.2	97.1	(3)	(3)	(3)	61,173	9.0	100.0
$23 or over	51,364	2.9	100.0	61,173	9.0	100.0	(6)	(6)	(6)
Total	1,791,017	100.0		682,194	100.0		682,194	100.0	
Weighted average cost		$17.07			$17.66			$16.74	

[7] Including towage charge $0.44 (p. 42 of the report).
[8] Including foreign average timber tax (export royalty), $0.92, and towage charge, $1.77 (p. 42 of the report).
[9] Including towage charge, $1.77, but excluding timber tax (export royalty), (p. 42 of the report).
[10] Typical foreign cost group, including towage charge but excluding timber tax (export royalty) as indicated by weighted average ($16.74 delivered).
[11] Typical domestic cost group as indicated by weighted average, $17.07 delivered; also typical foreign cost group including towage charge and timber tax (export royalty), as indicated by weighted average, $17.66 delivered.

SCHEDULE 5.—SUGAR, MOLASSES, AND MANUFACTURES OF

Dutiable items:	Free list items:
Maple sirup and sugar (par. 503).	None.

MAPLE SIRUP (PAR. 503)

Par. 503. Act of 1922, 4 cents per pound. No change resulted from the first investigation.

Par. 503. Act of 1930, 5½ cents per pound.

By proclamation, effective March 7, 1931, 4 cents per pound.

The Commission has made two investigations of the costs of production of maple sirup; the first, conducted under section 315 of the act of 1922, pursuant to Senate Resolution No. 313 (71st Cong.), was based on costs in 1925; the second, conducted under section 336 of the act of 1930, was based on revision of 1925 costs to a 1930 basis (pp. 9 to 12 of the second report). Complete costs were not obtained from producers in 1930. Canada was found to be the principal competing country in both years. The two reports, each entitled "Maple Sugar and Maple Sirup," were dated April 23, 1928, and February 2, 1931, respectively.

The costs for 1930 differ from those for 1925 only in the determination of interest on investment, for discussion of which see page 9 of 1930 report. Interest on investment represents 11.2 per cent of the revised domestic and 15.2 percent of the revised Canadian costs.

Costs were obtained from 620 domestic and 220 Canadian groves.

COST COMPARISON

Cost data were obtained from individual producers in both the United States and Canada upon the per gallon basis. Only the average costs for all producers were converted to a pound basis—the basis of the duty. For this reason the array of costs is presented upon the gallon basis. The average domestic cost per gallon, as shown in the Commission's later report, was $1.4751, and the Canadian cost was $1.0569. Stated per pound upon the basis of 11 pounds to the gallon, these costs become: Domestic, $0.1341; Canadian, $0.0961. The table shows an aggregate domestic production for which costs were obtained of 146,405 gallons as against 127,070 gallons stated in the 1925 report (p. 20), and an aggregate Canadian production of 48,724 gallons as against 31,912 gallons stated in the 1925 report (p. 20). The differences are due to the fact that the larger figures include both the sirup sold as such and that converted into sugar.

Maple sirup: Range of domestic and foreign costs in corresponding cost intervals with production, 1925 [1]

[Costs per gallon, exclusive of containers and interest on grove]

Cost of production, including marketing expense and interest on equipment [2]	Domestic				Canadian			
	Production (U. S. gallons)		Percent of total production		Production (U. S. gallons)		Percent of total production	
	Group	Cumulation	Group	Cumulation	Group	Cumulation	Group	Cumulation
Less than $0.75	1,094	1,094	0.75	0.75	3,757	3,757	7.71	7.71
$0.75 to $1	16,793	17,887	11.47	12.22	19,040	22,797	39.08	46.79
$1 to $1.25 [3]	37,194	55,081	25.40	37.62	16,400	39,197	33.66	80.45
$1.25 to $1.50 [4]	40,606	95,687	27.74	65.36	5,575	44,772	11.44	91.89
$1.50 to $1.75	27,175	122,862	18.56	83.92	2,317	47,089	4.76	96.65
$1.75 to $2	12,397	135,259	8.47	92.39	922	48,011	1.89	98.54
$2 to $2.25	4,760	140,019	3.25	95.64	422	48,433	.86	99.40
$2.25 to $2.50	2,706	142,725	1.85	97.49	190	48,623	.39	99.79
$2.50 to $2.75	2,194	144,919	1.50	98.99				99.79
$2.75 to $3	681	145,600	.46	99.45	101	48,724	.21	100.00
$3 and over	805	146,405	.55	100.00				
Total	146,405		100.00		48,724		100.00	

[1] As adjusted to 1930 basis.
[2] Average marketing expense included: Domestic $0.0397; Canadian, $0.0254. Average interest included: Domestic, $0.1651; Canadian, $0.1605.
[3] Typical Canadian group as indicated by weighted average of $1.0569.
[4] Typical domestic group as indicated by weighted average of $1.4751.

MAPLE SUGAR (PAR. 503)

Maple sugar was dutiable at 4 cents per pound under paragraph 503 of the Tariff Act of 1922. No change resulted from the first investigation. The rate of 8 cents per pound imposed in paragraph 503 of the Tariff Act of 1930 was decreased to 6 cents per pound by proclamation, effective March 7, 1931.

In each of the two investigations of maple sirup mentioned above, costs of production of maple sugar were also obtained. The basic steps in the development of sugar costs are the segregation of farms producing sugar, the conversion of sirup costs to a basis of pounds of sugar produced, and the addition of small items for cost of conversion. Since the cost of sirup constitutes approximately 85 percent of the cost of sugar (85 percent in the United States and 83 percent in Canada), the statement of range of sirup costs above discloses the main facts concerning variability of sugar costs.

SCHEDULE 7. AGRICULTURAL PRODUCTS AND PROVISIONS

Dutiable items:
- Milk and cream (par. 707).
- Butter (par. 709).
- Swiss cheese (par. 710)
- Frozen eggs (par. 713).
- Crab meat (par. 721).
- Corn or maize (par. 724).
- Wheat, wheat flour, and wheat mill feed (pars. 729 and 730).
- Peanuts (par. 759).
- Dried beans (par. 765).
- Onions (par. 770).
- Canned tomatoes (par. 772).
- Fresh vegetables—
  - Lima beans in their natural state (par. 765).
  - Beans, snap or string, green or unripe (par. 765).
  - Peas, green or unripe (par. 769).
  - Tomatoes in their natural state (par. 772).
  - Cucumbers in their natural state (par. 774).
  - Eggplant in its natural state (par. 774).
  - Okra in its natural state (par. 774).
  - Peppers in their natural state (par. 774).

Free list items:
- None.

MILK AND CREAM (PAR. 707)

The duties on milk and cream have been as follows:

	Act 1922, par. 707	By proclamation, effective June 13, 1929	Act 1930, par. 707
Milk, cents per gallon	2½	3¾	6½
Cream, cents per gallon	20	30	56⅝0

This investigation, instituted pursuant to Senate Resolution No. 146 (69th Cong.), was conducted under section 315 of the act of 1922 and pertained to the year 1925–26 as the cost period. Canada was found to be the principal competing country. Domestic costs were obtained for 984 farms and 77 creameries; Canadian costs for 197 farms and 22 creameries. The results of the investigation are set forth in the published report entitled "Milk and Cream," dated December 20, 1928.

MILK—COST COMPARISON

Costs were obtained for the domestic areas supplying milk for fluid consumption to the cities of Philadelphia, New York, and Boston and for the contiguous areas in Quebec and Ontario. It was determined that 60 percent of the imported milk was sold to border creameries for conversion into other milk products, and that 37 per cent was shipped to New York for fluid consumption and 3 percent to Boston.

On the basis of the above facts the Commission developed two cost comparisons (see pp. 26 and 27 of the report): Method 1, limiting the cost comparisons to domestic and Canadian areas adjacent to the border and therefore limiting transportation to charges from these producing areas to milk plants near the border in the United States; method 2, including all the domestic areas within the New York

milk shed and transportation costs from both the Canadian and domestic areas to New York City.

The cost comparison based on method 1 (p. 28 of the published report) upon which the adjustment in duty was premised is as follows:

TABLE 1.—*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 1), May 1, 1925, to Apr. 30, 1926*

[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, see table 11, p. 24, of the report.

One commissioner dissenting (see pp. 29–31 of the report) favored a cost comparison based on method 2, as follows:

TABLE 2.—*Milk for fluid use: Summary of costs of production in the United States and Canada, including transportation to New York City (method 2), May 1, 1925, to Apr. 30, 1926*

[Per gallon]

	New York milk shed	Canada
Average butterfat test.....percent..	3.54	3.40
Farm cost of producing milk including interest	[1] $0.254	[1] $0.211
Plant-handling costs	[2] .039	[3] .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, of the report.

[2] For details see table 12, p. 25, of the report.

[3] Instead of using the plant costs shown in table 12, the average costs of 4 plants near the border were used.

The exhibit below, table 3, summarizes the farm and plant costs, including interest, of milk for fluid use for all domestic areas supplying Philadelphia, New York, and Boston, and Canadian areas shipping to New York and Boston. (See tables 10, 12, and 13, pp. 22, 25, and 26 of the published report.)

TABLE 3.—*Costs of milk for fluid use per gallon including interest, for areas furnishing the cities of Philadelphia, New York, and Boston*

Area	Weighted by sales of milk sold as fluid milk				
	Farm costs		Plant costs		Total cost per gallon
	Butterfat test	Cost per gallon	Butterfat test	Cost per gallon	
	Percent		*Percent*		
Philadelphia milk shed	3.64	$0.266	3.60	$0.025	$0.290
New York milk shed	3.54	.254	3.59	.039	.293
Boston milk shed	3.70	.295	3.74	.039	.334
Domestic average	3.59	.265	3.62	.036	.301
Canadian average	3.40	.211	3.51	.060	.271

RANGE OF COSTS: MILK

The farm cost of milk, as is apparent from the above table, constitutes about 80 to 90 percent of the total cost excluding transportation to market. The cost range study below covers the farm costs of the domestic areas supplying the cities of New York and Boston, and the Canadian areas shipping milk to the same points with production for which costs were obtained.

TABLE 4.—*Milk: Range of farm costs, including hauling to creamery, for the New England States, New York, and the northeastern part of Pennsylvania compared with 4 adjacent Canadian areas in the Provinces of Quebec and Ontario for the period May 1, 1925, to Apr. 30, 1926*

Farm cost per gallon	United States			Canada		
	Production in gallons	Percent of production		Production in gallons	Percent of production	
		Group	Cumulation		Group	Cumulation
Less than 10 cents	12,660	0.18	0.18			
10 to 12 cents			.18	32,923	2.34	2.34
12 to 14 cents	30,527	.44	.62	113,461	8.07	10.41
14 to 16 cents	142,269	2.04	2.66	163,632	11.64	22.05
16 to 18 cents	488,308	7.00	9.66	288,712	20.53	42.58
18 to 20 cents	577,611	8.28	17.94	208,817	14.85	57.43
20 to 22 cents	657,431	9.42	27.36	180,120	12.81	70.24
22 to 24 cents	903,175	12.95	40.31	126,246	8.98	79.22
24 to 26 cents	853,888	12.24	52.55	76,219	5.42	84.64
26 to 28 cents	661,267	9.48	62.03	44,310	3.15	87.79
28 to 30 cents	851,583	12.21	74.24	45,628	3.24	91.03
30 to 32 cents	500,835	7.18	81.42	45,212	3.21	94.24
32 to 34 cents	388,579	5.57	86.99	29,310	2.08	96.32
34 to 36 cents	254,102	3.64	90.63			96.32
36 to 38 cents	202,836	2.91	93.54	8,074	.57	96.89
38 to 40 cents	165,784	2.38	95.92	5,181	.37	97.26
40 to 42 cents	101,218	1.45	97.37			97.26
42 to 44 cents	69,653	1.00	98.37	16,588	1.18	98.44
44 to 46 cents	10,162	.15	98.52			98.44
46 to 48 cents	35,184	.50	99.02	21,933	1.56	100.00
48 to 50 cents	29,607	.42	99.44			
50 cents or more	38,724	.56	100.00			
Total	6,975,403	100.00		1,406,396	100.00	

CREAM—COST COMPARISON

Several cost comparisons are shown on page 39 of the published report for domestic and Canadian cream of standard butterfat content of 40 percent. On the basis of the facts developed in the investigation, either Boston or New York City might be considered the principal market in the United States, or these two together with Philadelphia might be taken as the principal market for purposes of the investigation. Three methods for summarizing the costs were employed: Method 1, taking Boston as the principal competing market; method 2, New York City; and method 3, employing an average of the actual expended transportation cost in moving all the cream from the three eastern milk sheds and from the North Central States to the three eastern metropolitan areas. Summaries of cream costs by these three methods, in each of which costs have been weighted by shipments, are shown below.

TABLE 5.—*Cream: Summary of cost of production in the United States and Canada, for cream with an average butterfat test of 40 percent, including transportation to Boston, Mass. (method 1), May 1, 1925, to Apr. 30, 1926*

[Per gallon]

	Boston milk shed	Canada
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 6.—*Cream: Summary of cost of production in the United States and Canada, for cream with an average butterfat test of 40 percent, including transportation to New York, N. Y. (method 2), May 1, 1925, to Apr. 30, 1926*

[Per gallon]

	New York milk shed	Canada
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 7.—*Cream: Summary of cost of production in the United States and Canada, for cream with an average butterfat test of 40 percent, including transportation to the normal principal market for each of the respective milk sheds (method 3), May 1, 1925, to Apr. 30, 1926*

[Per gallon]

	United States					Canada
	North Central States	Philadelphia milk shed	New York milk shed	Boston milk shed	Weighted average	
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

It will be noted that tables 5 and 6 each deals with a single domestic region supplying a single domestic market in competition with imported Canadian cream, whereas table 7 shows all domestic regions shipping to their normal eastern markets in competition with Canadian cream. Any one of these three comparisons showed an excess of domestic over Canadian costs sufficient to warrant the maximum increase in the rate of duty. In a dissenting opinion (p. 41 of the report) one commissioner questioned the validity of comparing "domestic costs (of milk for cream) in areas given over to the production of higher cost milk to be consumed as fluid milk" with "Canadian costs (of milk for cream) in areas which are more largely given over to the production of lower cost milk to be used for cream and milk products." He further questioned the comparability of costs on the ground that (1) imported Canadian cream is the product of summer dairying, wherein the herd is largely pasture fed; (2) 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; (3) 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.

RANGE OF COSTS: CREAM

The above tables, particularly table 7, indicate clearly that the farm cost of producing milk is the major element in the cost of cream and also show the variation in the transportation factors.

The cost-range study below covers the farm costs of milk of all areas in the United States and Canada with the production for which costs were obtained.

TABLE 8.—*Cream: Range of farm costs per gallon of milk, including hauling to creamery for the New England States, New York, parts of Pennsylvania, New Jersey, Maryland, Delaware, and the North Central States compared with six adjacent areas in the Provinces of Quebec and Ontario, for the period May 1, 1925, to Apr. 30, 1926*

Farm cost per gallon of milk	United States			Canada		
	Production in gallons	Percent of production		Production in gallons	Percent of production	
		Group	Cumulation		Group	Cumulation
Less than 10 cents	59,075	0.61	0.61			
10 to 12 cents	65,980	.68	1.29	45,821	2.44	2.44
12 to 14 cents	150,758	1.54	2.83	111,480	5.95	8.39
14 to 16 cents	472,777	4.84	7.67	206,240	11.00	19.39
16 to 18 cents	708,426	7.26	14.93	340,746	18.17	37.56
18 to 20 cents	941,148	9.64	24.57	243,420	12.98	50.54
20 to 22 cents	1,051,107	10.77	35.34	228,524	12.19	62.73
22 to 24 cents	1,239,728	12.70	48.04	201,659	10.75	73.48
24 to 26 cents	1,078,177	11.04	59.08	107,528	5.73	79.21
26 to 28 cents	787,870	8.07	67.15	99,263	5.29	84.50
28 to 30 cents	1,005,434	10.30	77.45	72,076	3.84	88.34
30 to 32 cents	596,534	6.11	83.56	58,435	3.12	91.46
32 to 34 cents	472,727	4.84	88.40	40,489	2.16	93.62
34 to 36 cents	299,212	3.07	91.47	15,989	.85	94.47
36 to 38 cents	260,730	2.67	94.14	20,331	1.08	95.55
38 to 40 cents	186,271	1.91	96.05	18,921	1.01	96.56
40 to 42 cents	127,123	1.30	97.35	3,104	.17	96.73
42 to 44 cents	91,076	.93	98.28	26,532	1.42	98.15
44 to 46 cents	10,162	.10	98.38	2,584	.14	98.29
46 to 48 cents	40,524	.42	98.80	21,933	1.17	99.46
48 to 50 cents	49,686	.51	99.31			99.46
50 cents or more	67,298	.69	100.00	10,207	.54	100.00
Total	9,761,823	100.00		1,875,282	100.00	

BUTTER (PAR. 709)

Butter was dutiable at 8 cents per pound under paragraph 709 of the act of 1922. By proclamation, effective April 5, 1926, the duty was increased to 12 cents per pound. Under paragraph 709 of the act of 1930 the duty is 14 cents per pound.

This investigation was instituted pursuant to Senate Resolution No. 226 (68th Cong.) and conducted under section 315 of the act of 1922. Denmark was held to be the principal competing country by five commissioners, one commissioner dissenting and another offering certain comment. Domestic costs were obtained from 691 farms producing milk for butter and from 161 creameries. Foreign costs were obtained through cooperative associations. Certain costs were also estimated for Canada and New Zealand.

Since the year covered by the investigation, imports from New Zealand and Canada have continually exceeded those from Denmark, and New Zealand has generally been the chief source of imports, as it was in 1932.

The Commission's report on the investigation is entitled "Butter," and bears the date of February 25, 1926.

COST COMPARISON AND RANGE

Comparison of the two following tables will indicate the several cost differences obtained by different methods of calculation. Data for first table on domestic cost are drawn from table 31, page 57, table 32, page 58, and table 1, page 87, of the published report. The second table indicates the several costs of production obtained for

Denmark by different methods of calculation and bases of exchange conversion, drawn from table 32 on page 58 and table 2 on page 88 of the published report.

Butter: Costs of production in the United States, 1923–24

[Costs in cents per pound, including interest]

Items of cost	Cooperatives	All independents	Small independents only	Centralizers	Average for cooperatives and independents	Average for cooperatives and independents, excluding Nebraska	Average for cooperatives and centralizers	Average for cooperatives, independents, and centralizers
Farm cost of butterfat	59.57	66.80	(1)		61.50	60.60		
Price paid for butterfat by centralizer				42.24				
Average per cent of overrun	23.14	24.05	(1)	23.56	23.38	23.47	23.37	23.47
Butterfat cost of the quantity of butterfat in 1 pound of butter	48.38	53.85	35.49	34.19	49.85	49.07	40.66	42.55
Factory or conversion costs:								
Buying butterfat		3.25	3.25	4.42			2.40	2.52
Conversion cost	3.41	5.37	5.37	4.21	4.80	4.24	3.85	4.06
Total cost of producing butter, not including transportation cost	51.79	62.47	44.11	42.82	54.65	53.31	46.91	49.13
Transportation cost to New York	1.50	1.17	1.17	1.45	1.41	1.37	1.47	1.43
Total cost, including transportation to New York City	53.29	63.64	45.28	44.27	56.06	54.68	48.38	50.56

[1] Data not available.

Butter: Costs of production in Denmark

	Costs converted on indicated basis [1]				
	Average exchange rate for fiscal year [2]		Average exchange rate of 3 farm cost-accounting years ended Apr. 30, 1924		Moving average on the basis of group of 21 months beginning January, 1919, applied to the conversion period [3]
	Alternate I [3]	Alternate II [3]	Alternate I [3]	Alternate II [3]	
Exchange rate (cents per krone) used in converting:					
Agricultural costs	17.27	17.38	18.83	18.88	19.57
Factory costs	18.72	18.85	18.83	18.88	19.84
Reference to report	([4])	([5])	([4])	([5])	([5])
Items of cost in cents per pound including interest:					
Cost of producing butterfat	43.71		47.34		
Average percent of overrun	20.48		20.48		
Farm cost of the quantity of butterfat used in 1 pound of butter	36.28	35.23	39.29	38.27	39.67
Factory or conversion cost	3.33	4.68	3.35	4.69	4.91
Total cost of production, not including transportation cost	39.61	39.91	42.64	42.96	44.58
Transportation to New York	1.50	1.61	1.50	1.61	1.64
Total cost, including transportation to New York	41.11	41.52	44.14	44.57	46.22

[1] Detailed comment on conversion appears in report, p. 50ff and p. 88.
[2] Farm accounting year ended Apr. 30, 1924, and factory accounting year ended Oct. 31, 1923.
[3] Alternate I based upon recommendation of 5 commissioners; Alternate II and moving average method recommended by the dissenting commissioner.
[4] P. 58.
[5] P. 88.

DOMESTIC FARM COST OF BUTTERFAT

The costs for cooperative and independent creameries are based on the costs of producing butterfat; in the costs of centralizers the price paid for butterfat is used. The lowest cost is shown by the centralizers with an average of 34.19 cents per pound; the highest cost is shown by the independents (without segregation of large companies from small companies) the average being 53.85 cents per pound.

The table which follows is condensed from table 36, page 102, of the report. It presents the range of domestic farm costs of butterfat per pound.

Butterfat costs: Number of farms, number of cows, and pounds of butterfat produced at varying costs per pound—Summary for 7 States, May 1, 1923, to Apr. 30, 1924

Net cost per pound [1]	Farms			Cows			Butterfat		
	Number of farms	Cumulative number of farms	Cumulative percent of total	Number of cows [2]	Cumulative number of cows	Cumulative percent of total	Number of pounds	Cumulative number of pounds	Cumulative percent of total
Less than 30 cents	7	7	1.0	113.75	113.75	1.37	25,407.4	25,407.4	1.67
31 to 35 cents	13	20	2.9	112.25	226.00	2.73	25,444.4	50,851.8	3.34
36 to 40 cents	30	50	7.2	374.75	600.75	7.25	87,050.1	137,901.9	9.06
41 to 45 cents	43	93	13.5	581.70	1,182.45	14.26	127,196.0	265,397.9	17.45
46 to 50 cents	72	165	23.9	912.95	2,095.40	25.28	193,012.3	458,410.2	30.13
51 to 55 cents	73	238	34.4	958.50	3,053.90	36.84	197,978.7	656,388.9	43.15
56 to 60 cents	102	340	49.2	1,322.55	4,376.45	52.79	254,700.6	911,089.5	59.89
61 to 65 cents [3]	65	405	58.6	724.20	5,100.65	61.53	129,358.0	1,040,447.5	68.39
66 to 70 cents	71	476	68.9	788.00	5,888.65	71.04	137,123.9	1,177,571.4	77.40
71 to 75 cents	54	530	76.7	662.05	6,550.70	79.02	106,635.0	1,284,206.4	84.41
76 to 80 cents	39	569	82.3	447.00	6,997.70	84.41	73,201.8	1,357,408.2	89.23
81 to 85 cents	28	597	86.4	316.50	7,314.20	88.23	46,091.7	1,403,499.9	92.26
86 to 90 cents	19	616	89.1	203.00	7,517.20	90.68	26,732.0	1,430,231.9	94.01
91 to 95 cents	15	631	91.3	174.80	7,692.00	92.79	21,943.3	1,452,175.2	95.45
96 cents to $1	15	646	93.5	168.75	7,860.75	94.82	27,658.8	1,479,834.0	97.27
$1.01 to $1.05	8	654	94.6	50.75	7,911.50	95.44	6,182.3	1,486,016.3	97.68
$1.06 to $1.10	6	660	95.5	66.00	7,977.50	96.23	6,504.8	1,492,521.1	98.11
$1.11 to $1.15	3	663	95.9	22.00	7,999.50	96.50	2,830.3	1,495,351.4	98.29
$1.16 to $1.20	8	671	97.1	84.50	8,084.00	97.52	8,832.4	1,504,183.8	98.87
$1.21 to $1.25	4	675	97.7	39.75	8,123.75	98.00	4,583.7	1,508,767.5	99.17
$1.26 to $1.30	4	679	98.3	47.50	8,171.25	98.57	3,636.3	1,512,403.8	99.41
$1.31 to $1.35	6	685	99.1	68.75	8,240.00	99.40	5,156.6	1,517,560.4	99.75
$1.36 and over	6	691	100.0	49.75	8,289.75	100.00	3,761.6	1,521,322.0	100.00

[1] Based on condensation of table 36, pp. 102–3 of published report, in which costs are shown to nearest cent.
[2] Figures for the number of cows are averages for the 12-month period.
[3] Typical cost group as indicated by weighted average, $0.6150 (table 32, p. 58, of the report).

The costs of producing butterfat are averaged by areas and by States in accordance with the classification of creamery to which delivery was made. The following data drawn from table 33, page 92 of the report, show for cooperatives and independents, the average costs of production, by States covered in the investigation. Corresponding figures for small independents and for centralizers are not readily available.

Butter: Summary of production costs per pound of butterfat for principal butter-producing sections serving cooperatives and independents in the United States, May 1, 1923, to Apr. 30, 1924

Net agricultural cost of producing butterfat, including interest, in cents per pound, by States:	
Michigan	55.4
Iowa	57.8
Wisconsin	58.2
Ohio	62.7
Minnesota	62.8
Indiana	68.3
Nebraska	71.3
Average, 7 States (24 areas)	61.5

PRICE PAID FOR BUTTERFAT BY CENTRALIZER

The prices paid by centralizers, which average 42.24 cents per pound, show the following variations in State averages:

Prices paid for butterfat by centralizers, 1923–24

Price groups per pound [1]	States	Production of butterfat	Percent of total production	
			Group	Cumulation
		Pounds		
Less than 40 cents	Oklahoma, Colorado	5,299,880	2.9	2.9
40 to 41 cents	Nebraska, South Dakota	40,067,638	22.0	24.9
41 to 42 cents	Iowa, Missouri, North Dakota, Minnesota	69,619,646	38.2	63.1
42 to 44 cents [2]	Kansas, Indiana	17,990,998	9.9	73.0
45 to 46 cents	Illinois, New York	24,546,599	13.5	86.5
46 cents or more	Ohio, Michigan, Wisconsin	24,659,553	13.5	100.0
Total		182,184,314	100.0	

[1] On the basis of State averages.
[2] Typical price group as indicated by weighted average, 42.24 cents (table 37, p. 57 of the report).

OVERRUN

The overrun percentage is the second important factor in the cost of butter. States where high percentages of overrun were found in the investigation with a consequent tendency toward a low cost of production were (1) Oklahoma and Colorado, (2) Kansas, (3) Indiana, and (4) Michigan. States where low percentages of overrun were found with a consequent tendency toward a high cost of production were (1) New York, (2) Ohio, and (3) Iowa.

COST OF BUYING BUTTERFAT

Cooperatives do not incur buying costs such as are incurred by independents and centralizers. Costs of buying butterfat for independents range by areas from 0.34 cent to 5.10 cents per pound, averaging 3.25 cents per pound. These costs were obtained in four States, of which Michigan showed the lowest average cost, 1.49

cents per pound, and Nebraska the highest average, 4.73 cents per pound. Costs, by States, follow:

Costs of buying butterfat for independents, 1923–24

State	Cost, in cents per pound	Butter production	Percent of total production	
			Group	Cumulation
		Pounds		
Michigan	1.49	534,899	0.9	0.9
Ohio	1.90	20,791,066	36.3	37.2
Indiana	4.04	21,184,692	36.9	74.1
Nebraska	4.73	14,854,674	25.9	100.0
Average and total	3.25	57,365,331	100.0	

Costs of buying butterfat for centralizers range by areas from 0.41 cent to 6.42 cents per pound, averaging 4.42 cents per pound. Costs were obtained in 15 States, of which Wisconsin showed the lowest average, 2.79 cents per pound, and Nebraska the highest average, 5.53 cents per pound. Range of costs, by States, follows:

Costs of buying butterfat for centralizers, 1923–1924

Buying costs per pound [1]	States	Production	Percent of total production	
			Group	Cumulation
		Pounds		
Less than 3 cents	Wisconsin, Michigan	15,805,722	7.0	7.0
3 to 3½ cents	New York, Ohio, Kansas	27,756,148	12.3	19.3
3½ to 4½ cents [2]	Illinois, Minnesota, Missouri, Indiana.	79,103,203	35.2	54.5
4½ to 5 cents	Oklahoma, North Dakota, South Dakota.	21,036,651	9.4	63.9
5 cents or more	Iowa, Colorado, Nebraska	81,403,736	36.1	100.0
Total		225,105,460	100.0	

[1] On the basis of State averages.
[2] Typical group as indicated by weighted average of 4.42 cents per pound (table 31, p. 57, of report).

CONVERSION COSTS

Data can be presented on variation of conversion cost to cooperatives by areas and by States. By areas there is a range from 2.01 to 5.91 cents per pound; the average cost is 3.41 cents per pound. The following table shows the range of these costs by main groups with production:

Conversion costs of butter incurred by cooperatives, 1923–24

Costs in cents per pound	Butter production	Percent of total production	
		Group	Cumulation
	Pounds		
Less than 2½ cents	4,263,159	18.6	18.6
2½ to 3 cents	2,686,100	11.7	30.3
3 to 3½ cents [1]	7,118,973	31.0	61.3
3½ to 4 cents	2,800,427	12.2	73.5
4 cents or more	6,081,658	26.5	100.0
Total	22,950,317	100.0	

[1] Typical group as indicated by weighted average of 3.41 cents per pound (table 31, p. 57, of published report).

Costs of conversion were obtained from cooperatives in four States, of which Wisconsin shows the lowest average cost, 2.74 cents per pound, and Michigan the highest average, 3.79 cents per pound, Iowa and Minnesota being intermediate.

Costs of conversion to independents range by areas from 3.84 to 7.09 cents per pound, averaging 5.37 cents per pound. Such costs were obtained in four States, of which Ohio showed the lowest cost, 4.84 cents per pound, and Nebraska the highest, 6.43 cents per pound, Michigan and Indiana being intermediate.

Costs of conversion to centralizers range by States from 2.45 to 7.39 cents per pound, averaging 4.21 cents per pound. These costs were obtained in 15 States, North Dakota showing the lowest, 2.45 cents per pound, and Colorado the highest, 7.39 cents per pound.

Conversion costs of butter incurred by centralizers, 1923–24

Cost groups per pound [1]	States	Production	Percent of total production	
			Group	Cumulation
		Pounds		
Less than 3½ cents	New York, North Dakota	15,805,665	7.0	7.0
3½ to 4 cents	Illinois, Oklahoma, Minnesota	42,239,941	18.8	25.8
4 to 4½ cents [2]	Kansas, Nebraska, South Dakota, Iowa.	93,150,076	41.4	67.2
4½ to 5 cents	Indiana, Missouri	39,493,971	17.5	84.7
5 to 6½ cents	Michigan	10,155,691	4.5	89.2
6½ to 7 cents	Ohio, Wisconsin	20,292,476	9.0	98.2
7 cents or more	Colorado	3,967,640	1.8	100.0
Total		225,105,460	100.0	

[1] On the basis of State averages.
[2] Typical group as indicated by weighted average of 4.21 cents per pound (table 31, p. 57, of published report).

COST OF PRODUCTION F.O.B. CREAMERY

The group average costs f. o. b. creamery show a wide range. The low cost is that of the centralizers, calculated on the basis of prices paid for butterfat; their group average is 42.82 cents per pound. The high cost group is the independents (without separation of large and small companies); their group average is 62.47 cents per pound. The average cost for cooperatives, independents, and centralizers combined is 49.13 cents per pound.

TRANSPORTATION

The following table shows average domestic cost of transportation, by States.

Average domestic costs of transportation of butter to New York, by States, 1923–24

[Cents per pound]

State	Centralizers	Cooperatives	Independents	State	Centralizers	Cooperatives	Independents
New York	0.56			Kansas	1.78		
Ohio	.76		0.81	Minnesota	1.79	1.75	
Michigan	.78	0.89	.89	South Dakota	1.80		
Indiana	.93		.89	North Dakota	2.17		
Wisconsin	1.00	1.44		Oklahoma	2.26		
Illinois	1.05			Colorado	2.64		
Missouri	1.50						
Iowa	1.58	1.33		Weighted average	1.45	1.50	1.17
Nebraska	1.64		1.93				

FOREIGN COSTS

The range of cost of production of butter per pound is shown by the following table, which in the report is table 44 on page 113.

Butter: Number of farms, number of cows, and pounds of butter produced at varying costs per pound, interest included, Denmark, 1923–24

Net cost per pound of butter	Farms			Cows			Butter		
	Number of farms	Cumulative number of farms	Cumulative per cent of total	Number of cows [1]	Cumulative number of cows	Cumulative per cent of total	Number of pounds	Cumulative number of pounds	Cumulative per cent of total
Less than 30 cents	37	37	16.8	850.6	850.6	14.4	289,791.0	289,791.0	18.2
31 to 35 cents	84	121	55.0	1,951.8	2,802.4	47.4	554,721.8	844,512.8	53.2
36 to 40 cents	55	176	80.0	1,751.0	4,553.4	77.1	436,382.1	1,280,894.0	80.6
41 to 45 cents	23	199	90.4	802.1	5,355.5	90.7	191,524.2	1,472,419.1	92.7
46 cents or more	21	220	100.0	550.0	5,905.5	100.0	116,500.7	1,588,979.8	100.0
Total	220			5,905.5			1,588,979.8		

[1] Figures for the number of cows are averages for the period.

Tables on page 118 of the published report show range of butter conversion costs for the fiscal years ended October 31, 1922 and 1923, to one representative Danish association; in both years the highest cost within the association was more than double the lowest cost.

SWISS CHEESE (PAR. 710)

Swiss cheese was dutiable under paragraph 710 of the act of 1922 at 5 cents per pound but not less than 25 percent ad valorem. The duty was changed by proclamation, effective July 8, 1927, to 7½ cents per pound and not less than 37½ percent ad valorem. Under paragraph 710 of the act of 1930 the duty is 7 cents per pound, but not less than 35 percent ad valorem.

The investigation, instituted on request of the President dated July 24, 1924, was conducted under section 315 of the act of 1922 with Switzerland as the principal competing country. Foreign costs and domestic farm costs were obtained for the fiscal year 1923–1924; domestic factory costs for 1925. Domestic farm costs were obtained from 202 farms in Wisconsin and 65 in Ohio; foreign farm costs, from 34 farms. Domestic factory costs were obtained from 20 cooperatives in Wisconsin, 6 cooperatives in Ohio, and 6 independents in Ohio. Foreign factory costs were obtained from 4 cooperatives.

The Commission published a report on the investigation under the title "Swiss Cheese," dated April 16, 1927.

COST COMPARISON

The costs of production of Swiss cheese were calculated by three methods.

Method A, "The farm basis."—By this method milk costs were obtained from the total farm costs by allocating such total farm costs to the dairy and the other farm enterprises on the basis of sales returns.

Method B, "The enterprise basis."—This method charges directly to the herd the costs of feed, pasture, labor, milk hauling, miscellaneous expenses, overhead, etc. From the total cost thus obtained the sales of by-products incidental to milk production are deducted to

obtain the net cost of the milk. The costs by the enterprise method, unlike those obtained on the farm basis, are not affected, therefore, by profits and losses incurred on other farm enterprises.

Method C, "Amount returned to the farmer basis."—By this method, the amount returned to the farmers by the cooperative factories and the prices paid for milk by the independent (noncooperative) factories are used in lieu of the costs of production of milk.

Methods B and C give essentially the same results in the United States; in Switzerland method B was applicable to only four farms. For this reason only methods A and C were used in the final cost comparisons.

Costs of production of Swiss cheese in the United States and in Switzerland as calculated by methods A and C are reproduced below from table 18, page 29, of the published report.

Swiss cheese: Summary of production, transportation, and concentrators' costs

[Cents per pound]

Method and cost item	United States—areas in which both farm and factory costs were obtained			Switzerland—for cooperative factories	Amount by which costs for United States exceed costs for Switzerland
	For independent factories	For cooperative factories	Average cooperative and independent factories		
Method A, farm basis (including interest):					
Farm cost of milk	34.13	32.62	32.75	19.00	----------
Conversion cost	7.44	4.93	5.11	3.03	----------
Total cost at factory	41.57	37.55	37.86	22.03	----------
Local concentrators' cost of receiving, storing, and selling	2.71	2.35	2.37	4.73	----------
Cost of delivery to New York	.67	1.14	1.11	1.43	----------
Total cost of Swiss cheese delivered to New York	44.95	41.04	41.34	28.19	13.15
Method C, farmers' return for milk basis (including interest):					
Amount returned for milk	26.67	26.20	26.34	19.70	----------
Conversion cost	7.44	4.93	5.11	3.03	----------
Total cost at factory	34.11	31.13	31.45	22.73	----------
Local concentrators' cost of receiving, storing, and selling	2.71	2.35	2.37	4.73	----------
Cost of delivery to New York	.67	1.14	1.11	1.43	----------
Total cost of Swiss cheese delivered to New York	37.49	34.62	34.93	28.89	6.04
Adjustments of cost to take into consideration the price advantage of the imported over the domestic Swiss cheese (see p. 34 of published report):					
1. By taking into consideration differences of 2.36 cents per pound in concentrators' cost	----------	----------	----------	----------	8.40
2. By taking into consideration differences of 7.9 cents per pound in average price of cheese for 5-year period, 1922–26	----------	----------	----------	----------	13.94
3. By taking into consideration differences of 4.9 cents per pound in average price of cheese for the year 1926	----------	----------	----------	----------	10.94

Four commissioners supported the results shown in the above table which showed that the maximum increase in the rate of duty on Swiss cheese was warranted whether method A was employed or method C, with proper adjustment for price differential between imported and domestic Swiss cheese. Another commissioner favored the use of the return-to-the-farmer method C, asserting that a sufficient number of

farms were studied on the enterprise basis B in Switzerland to furnish a clue that method B would yield substantially the same results as method C. The cost difference of 6.04 cents per pound obtained by this method (C), together with the price differential between domestic and imported Swiss cheese, resulted in an amount which justified the maximum increase in the rate of duty.

Still another commissioner dissented, holding that the data were unsatisfactory and inconclusive, but that method C was much more reliable than method A as applied to the facts as set forth in the report.

RANGE OF COSTS

Farm cost of milk constitutes the major element in the cost of production of Swiss cheese; conversion cost is the next most important cost element. This is clearly shown by the above table. Range of costs and other data are shown separately below for milk production and conversion.

FARM COST OF MILK

Costs of milk per pound of cheese for the United States and for Switzerland are reproduced below from table 14, page 23 of the published report.

Swiss cheese: Cost of milk per pound of cheese, 1923 [1]

Item	United States				Switzerland—cooperative factories
	Areas in which factory costs only were obtained—New York and Pennsylvania factories	Areas in which both farm and factory costs were obtained			
		For independent factories	For cooperative factories	Average for cooperative and independent factories	
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Cost of milk chargeable to Swiss cheese	85.69	83.73	84.02	84.00	79.61
Average yield of Swiss cheese per 100 pounds of milk	6.40	7.50	7.48	7.48	8.58
	Cents per pound	*Cents per pound*	*Cents per pound*	*Cents per pound*	*Cents per pound*
Cost of raw material (milk) per pound of cheese:					
(A) Farm basis		34.13	32.62	42.75	19.00
(B) Enterprise basis		26.27	26.34	26.34	
(C) Farmer's return for milk	27.97	26.67	26.20	26.34	19.70

[1] For details see tables in Appendix C of report, nos. C–1, C–2, and C–3, pp. 53 and 54.

Domestic farm cost of milk.—Farm costs were obtained in Wisconsin and Ohio, the principal producing areas of Swiss cheese. Costs were obtained for 24,840,800 pounds of milk in Wisconsin and 4,167,800 pounds in Ohio, or 29,008,600 pounds in these two States. In the table which follows, the range of the costs of producing milk in these two States is shown for costs obtained by the enterprise method which was practically identical with the results shown by the "return-to-the-farmer" basis. The range of costs is shown in terms of (1) cost per hundred pounds of milk, and (2) cost of milk per pound of cheese. Cost of milk per pound of cheese for any producing area or for any cost interval is obtained by multiplying the cost of milk per hundred pounds by the area percentage cost of milk chargeable to Swiss cheese, and dividing the product by the area yield of cheese in pounds per hundred pounds of milk. (See above table for area percentages and yields.)

Swiss cheese: Range of farm costs per 100 pounds of milk and milk cost equivalent per pound of cheese, computed on enterprise basis (method B)
United States, year 1923–24

Cost per 100 pounds of milk	Wisconsin			Ohio			Total Wisconsin and Ohio		
	Cost of milk per pound of cheese	Percent of production		Cost of milk per pound of cheese	Percent of production		Cost of milk per pound of cheese	Percent of production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Less than $1.50	Less than 16.84 cents	5.55	5.55	Less than 16.80 cents	4.62	4.62	Less than 16.84 cents	5.41	5.41
$1.50–$1.75	16.84 to 19.65 cents	10.90	16.45	16.80 to 19.60 cents	15.35	19.97	16.84 to 19.65 cents	11.54	16.95
$1.75–$2	19.65 to 22.46 cents	20.08	36.53	19.60 to 22.27 cents	7.86	27.83	19.65 to 22.46 cents	18.32	35.27
$2–$2.25	22.46 to 25.27 cents	16.41	52.94	22.27 to 25.07 cents	19.23	47.06	22.46 to 25.27 cents	16.82	52.09
$2.25–$2.50 [1]	25.27 to 28.07 cents	13.08	66.02	25.07 to 27.87 cents	21.59	68.65	25.27 to 28.07 cents	14.30	66.39
$2.50–$2.75	28.07 to 30.88 cents	9.88	75.90	27.87 to 30.67 cents	10.33	78.98	28.07 to 30.88 cents	9.95	76.34
$2.75–$3	30.88 to 33.69 cents	8.82	84.72	30.67 to 33.47 cents	9.49	88.47	30.88 to 33.69 cents	8.91	85.25
$3–$3.25	33.69 to 36.50 cents	7.55	92.27	33.47 to 36.27 cents	2.73	91.20	33.69 to 36.50 cents	6.86	92.11
$3.25–$3.50	36.50 to 39.30 cents	2.49	94.76	36.27 to 39.07 cents	3.91	95.11	36.50 to 39.30 cents	2.70	94.81
$3.50–$3.75	39.30 to 42.11 cents	2.52	97.28	39.07 to 41.87 cents	.86	95.97	39.30 to 42.11 cents	2.28	97.09
$3.75–$4	42.11 to 44.92 cents	.51	97.79	41.87 to 44.67 cents	.84	96.81	42.11 to 44.92 cents	.55	97.64
$4–$4.25	44.92 to 47.73 cents	.71	98.50	44.67 to 47.47 cents	1.02	97.83	44.92 to 47.73 cents	.76	98.40
$4.25–$4.50	47.73 to 50.53 cents	.45	98.95	47.47 to 50.27 cents	1.32	99.15	47.73 to 50.53 cents	.58	98.98
$4.50 or more	50.53 cents or more	1.05	100.00	50.27 cents or more	.85	100.00	50.53 cents or more	1.02	100.00
Total		100.00			100.00			100.00	

[1] Typical group as indicated by weighted average costs shown on tables 12, 14, and 17 of report.

Farm cost of milk in Switzerland.—The table which follows shows the range of costs of producing milk in Switzerland on the farm-cost basis (method A); this table, similar to the table for the United States, shows the cost per hundred pounds of milk and the equivalent cost per pound of cheese. The data cover production of 3,067,100 pounds of milk. The weighted average cost of milk is $2.05 per hundred pounds of milk and 19 cents per pound of cheese.

Swiss cheese: Range of farm costs per 100 pounds of milk and milk cost equivalent per pound of cheese, computed on farm basis (method A), Switzerland, year 1923–24

Cost per 100 pounds of milk	Cost of milk per pound of cheese	Percent of production	
		Group	Cumulation
Less than $1.75	Less than 16.20 cents	14.42	14.42
$1.75 to $2	16.20 to 18.53 cents	24.75	39.17
$2 to $2.25 [1]	18.53 to 20.87 cents	22.16	61.33
$2.25 to $2.50	20.87 to 23.19 cents	24.48	85.81
$2.50 or more	23.19 cents or more	14.19	100.00
Total		100.00	

[1] Typical group as indicated by weighted average costs shown in tables 13, 14, and 17 of published report.

CONVERSION COST

Range of conversion cost can be shown only for the domestic factories, as costs were obtained from only four factories in Switzerland.

Domestic costs were obtained from 26 cooperatives (20 in Wisconsin and 6 in Ohio) and from 6 independent factories in Ohio. The independent factories fall in two groups from the standpoint of costs—one producing 74 percent of the total at costs of less than the average of 7.44 cents, the other producing 26 percent of the total at costs of over 11 cents. The highest cost for independent factories was 535 percent of the lowest cost.

The following table shows range of cost of conversion for 20 of the 26 cooperative factories investigated. These are all located in Wisconsin. The six cooperative factories located in Ohio have been segregated because of the difference of location. Fifty-four percent of the Ohio production for which costs were obtained was at a cost of less than 5 cents per pound and 46 percent at a cost of more than 5 cents. The highest Ohio cost was 150 percent of the lowest Ohio cost. The weighted average cost for all cooperative factories investigated was 4.93 cents per pound.

Swiss cheese: Range of conversion costs per pound of cheese, Wisconsin cooperative factories, year 1925

Conversion cost per pound of cheese	Production of Swiss cheese		Percent of production	
	Group	Cumulation	Group	Cumulation
	Pounds	*Pounds*		
Less than 4½ cents	226,631	226,631	11.32	11.32
4½ to 4¾ cents	245,712	472,343	12.28	23.60
4¾ to 5 cents [1]	561,878	1,034,221	28.07	51.67
5 to 5¼ cents	717,891	1,752,112	35.86	87.53
5¼ to 5½ cents	138,012	1,890,124	6.90	94.43
5½ cents or more	111,541	2,001,665	5.57	100.00
Total	2,001,665		100.00	

[1] Typical group as indicated by weighted average of 4.93 cents per pound (table 15 of report).

FROZEN EGGS (PAR. 713)

Frozen eggs were dutiable under paragraph 713 of the act of 1922 at 6 cents per pound. The duty was increased to 7½ cents per pound by proclamation, effective March 22, 1929. Under paragraph 713 of the Tariff Act of 1930, the duty became 11 cents per pound.

An investigation of eggs and egg products was instituted under section 315 of the Tariff Act of 1932. Because of lack of direct competition between domestic and imported eggs in the shell and because an adequate cost comparison in respect of dried eggs was not practicable at the time, the investigation was confined to frozen eggs. China is the chief competing country and is the only country which exports frozen eggs in important quantities.

COST PERIOD AND SCOPE OF INVESTIGATION

The cost period covered by the investigation was the year 1926. Consideration was also given to trends of raw-material prices during the succeeding 2 years. Data were obtained from 10 companies in the United States operating 39 plants, which produced 53 per cent of the estimated domestic production, and from four producing units located at Shanghai, China. Prices paid for breaking stock were used as cost of raw material in both the United States and China. In 1926, the price paid for such eggs was 90 percent of the total cost of frozen eggs in the United States and 80 percent of the total cost of production in China. The Commission's findings were published under the title of "Eggs and Egg Products," dated February 1, 1929.

COST COMPARISON AND RANGE OF COSTS

Details of the 1926 comparison, reproduced from table 26, p. 32, of the published report, are as follows:

Frozen eggs: Comparison of weighted average costs of production of domestic and Chinese frozen eggs, including transportation and other charges to New York, 1926

[Cents per pound]

Item	United States	China [1]
Manufacturing cost [2]	24.480	15.242
Transportation and other charges from plants to New York, weighted by production	[3] 1.511	[4] 3.091
Total cost, including transportation and other charges from plants to New York, weighted by production	25.991	18.333
Amount by which domestic cost exceeds foreign cost	*7.658*	
Transportation and other charges from plants to New York, weighted by actual shipments	[3] 1.384	[4] 3.091
Total cost, including transportation and other charges from plants to New York, weighted by actual shipments	25.864	18.333
Amount by which domestic cost exceeds foreign cost	*7.531*	

[1] Foreign cost data were converted to United States money by the following methods: Raw material and labor at the average rate of exchange for the breaking season of 1926 (March to July, inclusive); all other manufacturing costs at the average for the year 1926; transportation charges at the rate of exchange in effect on the date of the invoice.

[2] Interest is not included in either foreign or domestic costs.

[3] Includes freight, refrigeration in transit, and storage charges at New York for 1 month, weighted by production.

[4] Includes packing charges; marine insurance; ocean freight; consular charges, wharfage, river, harbor, and conservancy dues at Shanghai, China; and storage charges for 1 month at New York.

The report asserts that in the United States the 1927 and 1928 prices of breaking stock were not substantially different from those for the cost period, 1926, and that the corresponding prices in China

were only slightly higher than for 1926, and concludes that the costs for 1926, for which year only detailed data were obtained, were representative of the cost conditions for the 3 years, 1926, 1927, and 1928.

The following table shows range of domestic cost, including transportation charges weighted by production and with transportation charges weighted by shipments, in comparison with corresponding foreign delivered costs. Since a number of the domestic companies operate several plants, the two methods of weighting have resulted in different average costs by companies. Weighting by shipments in the case of the domestic plants is on the basis of actual shipments to New York as tabulated, and in the case of the foreign plants on the basis of representative shipments, described in table 24, page 30, of the published report. The 10 domestic companies can be shown in 2 or 3 groups, but the 4 Chinese companies can be shown only as a group.

Frozen eggs: Range of domestic cost, weighted by total production and by shipments, and foreign costs weighted by shipments, delivered at New York, 1926

Cost in cents per pound	United States						China		
	Delivered cost weighted by total production			Delivered cost weighted by shipments			Delivered cost weighted by shipments		
	Group production	Percent of production		Group production	Percent of production		Group production	Percent of production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Less than 22 cents							15,815,060	100.0	100.0
22 to 24 cents				(1)	(1)				
24 to 25 cents	(1)	(1)		3,874,852	7.9	7.9			
25 to 26 cents	22,507,643	46.1	46.1	22,418,447	46.0	53.9			
26 to 27 cents	26,271,047	53.9	100.0	22,485,391	46.1	100.0			
27 cents or more	(2)	(2)		(2)	(2)				
Total	48,778,690	100.0		48,778,690	100.0		15,815,060	100.0	

[1] Consolidated with higher cost group to avoid disclosure.
[2] Consolidated with lower cost group to avoid disclosure.

In the above table the cost of transportation on the foreign product averages 3.091 cents per pound, and includes transportation cost from Shanghai, China, to the port of New York, and storage at New York City for 1 month. The domestic cost of transportation which averages 1.511 cents per pound, weighted by production, and 1.384 cents per pound weighted by shipments, includes freight, refrigeration in transit, and storage in New York City for 1 month. Weighted by production, the domestic transportation cost shows a range from nothing for plants located at New York City to 2.16 cents per pound. Weighted by shipments, the domestic transportation cost shows a range from nothing for plants located at New York to 1.97 cents per pound.

CRAB MEAT (PAR. 721)

Crab meat, fresh or frozen, whether or not packed in ice or prepared or preserved in any manner, is dutiable under paragraph 721 (a) of the act of 1930 at 15 percent ad valorem. No change resulted from the investigation.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation, instituted pursuant to Senate Resolution No. 122 (72d Cong.), was conducted under section 336 of the Tariff Act of 1930 for the year 1931 as the cost period. Invoices were used as evidence of the cost of crab meat imported from Japan, the principal competing country. Costs were obtained from 37 domestic producers, 18 located on the upper Chesapeake, 13 on the lower Chesapeake, and 6 on the Pacific coast in Oregon, Washington, and Alaska. The Chesapeake Bay plants covered accounted for approximately 56 percent of the Atlantic coast production and 51 percent of the total domestic production in 1931. The Pacific coast plants covered by the investigation accounted for approximately 45 percent of the Pacific coast production and 3 percent of the total domestic production. The Commission's findings are published in Report No. 57, second series, dated November 30, 1932.

COST COMPARISON AND RANGE OF COSTS

The Commission found that the costs of producing domestic and imported crab meat did not furnish a proper basis for change of duty for the reason that the domestic and imported crab meats are produced from widely different species of crabs, each yielding meat distinguishable in taste, color, and texture, and, further, that domestic and foreign products are packed and marketed in an entirely different manner.

The following tables show range of costs for three standard grades of domestic product produced on Chesapeake Bay. Costs on the lower Chesapeake, because of high cost of operation in winter months, substantially exceed those on the upper Chesapeake, where winter operation is restricted under jurisdiction of Maryland. Costs are shown separately below by districts for white and claw meat but in combination for lump meat, to avoid disclosure of confidential information concerning production of this grade on the lower Chesapeake. The average cost of transportation per pound of crab meat from the upper bay to New York is 1.9 cents and from the lower bay 3.4 cents.

Crab meat (white): Range of domestic costs for upper and lower Chesapeake Bay in corresponding intervals, with production covered by costs, 1931

Delivered cost per pound	Cost at New York of product from—					
	Upper Chesapeake Bay			Lower Chesapeake Bay		
	Group average cost	Percent of total production		Group average cost	Percent of total production	
		Group	Cumulation		Group	Cumulation
	Cents			*Cents*		
Less than 20 cents	18.9	67.9	67.9			
20 to 22½ cents	20.9	23.4	91.3	20.9	1.4	1.4
22½ to 25 cents	23.2	5.2	96.5	24.4	27.5	28.9
25 to 27½ cents	25.6	2.9	99.4	27.2	37.5	66.4
27½ to 30 cents	28.8	.6	100.0	28.0	15.5	81.9
30 cents or more				30.4	18.1	100.0
Average	19.9			27.0		
Total production covered by costs (pounds)			767,069			471,700

Crab meat (claw): Range of domestic costs for upper and lower Chesapeake Bay in corresponding intervals, with production covered by costs, 1931

Delivered cost per pound	Cost at New York of product from—					
	Upper Chesapeake Bay			Lower Chesapeake Bay		
	Group average cost	Percent of total production		Group average cost	Percent of total production	
		Group	Cumulation		Group	Cumulation
	Cents			*Cents*		
Less than 10 cents	9.8	18.9	18.9			
10 to 12½ cents	11.6	35.5	54.4			
12½ to 15 cents	13.5	34.6	89.0	14.2	1.2	1.2
15 to 17½ cents	16.7	11.0	100.0	16.9	49.1	50.3
17½ to 20 cents				18.0	39.4	89.7
20 cents or more				26.0	10.3	100.0
Average	12.5			18.3		
Total production covered by cost (pounds)			376,203			125,450

Crab meat (lump): Range of domestic costs for Chesapeake Bay, with production covered by costs, 1931

[Cost at New York]

Delivered cost per pound	Group average cost	Percent of total production	
		Group	Cumulation
	Cents		
Less than 25 cents	22.9	5.6	5.6
25 to 27½ cents	26.1	18.6	24.2
27½ to 30 cents	29.6	2.5	26.7
30 to 32½ cents	30.7	8.4	35.1
32½ to 35 cents	33.1	19.9	55.0
35 to 37½ cents	35.8	3.5	58.5
37½ to 40 cents	37.8	22.7	81.2
40 to 42½ cents			81.2
42½ to 45 cents	43.8	6.3	87.5
45 to 47½ cents			87.5
47½ to 50 cents	48.5	2.6	90.1
50 cents or more	66.2	9.9	100.0
Average	34.3		
Total production covered by cost (pounds)			447,996

CORN OR MAIZE (PAR. 724)

Corn was dutiable under paragraph 724 of the act of 1922 at 15 cents per bushel of 56 pounds. No change in the duty resulted from the investigation. Under paragraph 724 of the act of 1930 the corresponding duty is 25 cents per bushel of 56 pounds.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation, instituted at the request of the President dated June 20, 1927, was conducted under section 315 of the act of 1922 and pertained to the years 1926 and 1927 as the cost period. The principal competing country was Argentina. Domestic costs were obtained from 386 farms and 26 elevators. As evidence of costs in Argentina, data were compiled from consular invoices of imports of corn at New York, San Francisco, and Seattle. The Commission also gathered from published reports of the Argentine Minister of Agriculture information as to market prices (see section on prices, p. 11 of published report), yields per acre, wages paid, and value of land

in the corn-growing sections of Argentina. The findings of the Commission are published in its report entitled "Corn or Maize," dated October 22, 1928.

COST COMPARISONS

Two cost comparisons are brought out in the report and are as follows:

1. The weighted average cost of production of corn in the United States for the 2 years 1926 and 1927, including transportation to San Francisco, as shown in table 43, page 44, is $1.284 per bushel of 56 pounds, and the average cost of production of Argentine corn for the 2 years, 1926 and 1927, including transportation to San Francisco, is $0.936 per bushel of 56 pounds. Said cost of production for the United States exceeds said cost of production for Argentina by $0.348 per bushel of 56 pounds.
2. The weighted average cost of production of corn in the United States, for the 2 years 1926 and 1927, including transportation to New York, as shown in table 41, page 43, is $1.048 per bushel of 56 pounds, and the average cost of production of Argentine corn, including transportation to New York, is $0.927 per bushel of 56 pounds. Said cost of production in the United States exceeds said cost of production for Argentine corn by $0.121.

Statement of the range of foreign costs is not practicable as invoice data were the basis of the computation. The range of domestic costs is shown separately for farm cost, marketing cost, and transportation cost.

DOMESTIC FARM COST

Costs of producing corn were obtained from 386 farms located in 8 States having important production of corn. The range of these 386 costs is taken from table 54 of the report, the figures of which have been condensed. The costs in this table are those obtained on the original schedules and are prior to adjustment of certain minor items for handling, shelling, etc., not uniformly treated on all farms, but subsequent to allowance for shrinkage in weight. The costs, furthermore, are on the basis of net cash rental on land. This tabulation does give consideration to the geographical location of the farms, segregation of costs by geographical location being impracticable.

Corn: Array showing number of farms, acres, and bushels of corn produced at varying costs per bushel, and the cumulative number and percent of each, 1926

Cost per bushel	Farms			Acres			Bushels [1]		
	Number	Cumulative number	Cumulative percent	Number	Cumulative number	Cumulative percent	Number	Cumulative number	Cumulative percent
Less than 40 cents	7	7	1.81	387	387	1.30	22,344	22,344	2.13
40 and less than 45 cents	20	27	6.99	1,871	2,258	7.60	93,387	115,731	11.05
45 and less than 50 cents	29	56	14.51	2,491	4,749	15.99	109,074	224,805	21.47
50 and less than 55 cents	48	104	29.64	4,433	9,182	30.92	186,121	410,926	39.24
55 and less than 60 cents	36	140	36.27	3,293	12,475	42.01	120,454	531,380	50.75
60 and less than 65 cents	51	191	49.48	4,593	17,068	57.48	172,118	703,498	67.18
65 and less than 70 cents	39	230	59.59	2,818	19,886	66.97	100,413	803,911	76.77
70 and less than 75 cents	34	264	68.39	2,405	22,291	75.07	84,313	888,224	84.82
75 and less than 80 cents	22	286	74.09	1,339	23,630	79.58	38,809	927,033	88.53
80 and less than 85 cents	21	307	79.53	1,472	25,102	84.54	40,012	967,045	92.35
85 and less than 90 cents	9	316	81.87	473	25,575	86.13	13,529	980,574	93.64
90 and less than 95 cents	9	325	84.20	408	25,983	87.51	11,567	992,141	94.75
95 cents and less than $1	9	334	86.53	475	26,458	89.11	10,186	1,002,327	95.72
$1 and less than $1.10	12	346	89.64	609	27,067	91.16	11,983	1,014,310	96.86
$1.10 and less than $1.20	9	355	91.97	780	27,847	93.78	12,657	1,026,967	98.07
$1.20 and less than $1.30	9	364	94.30	715	28,562	96.19	8,837	1,035,804	98.92
$1.30 and less than $1.50	8	372	96.37	428	28,990	97.63	5,019	1,040,823	99.40
$1.50 and less than $2	6	378	97.93	318	29,308	98.70	4,020	1,044,843	99.78
$2 and less than $3	5	383	99.22	280	29,588	99.65	1,983	1,046,826	99.97
$3 or over	3	386	100.00	105	29,693	100.00	317	1,047,143	100.00

[1] After allowance for shrinkage in weight. (See p. 15 of report for discussion.)

There are variations in costs from farm to farm and also variations connected with (1) different bases of calculating land charges, (2) choice of typical areas and cost periods, and (3) method of weighting and averaging costs, shown as alternatives in the published report.

The table which follows shows (by rearrangement of data from tables 14 and 15 of the report) the average farm costs of corn with allowance for shrinkage in weight occurring after harvesting for the eight States covered in the investigation. It is a summary of costs for corn shrunk to weight as of June 1 (except corn sold after that time, in which case the sales weight was used) for 1926 (from tables 16 and 17 of the report) and also for 1927 (from tables 18 and 19 of the report). It shows the land charge computed (1) on the basis of interest on investment and (2) on the basis of net cash rental. Weighting of data is by districts and by States, developed (a) in ratio to number of bushels shipped and (b) in ratio to number of bushels produced. The eight States are listed in order of ascending costs in the first column.

Corn: Costs of production by areas, per bushel shrunk, years 1926 and 1927

Area	Costs, including land charges on interest basis				Costs, including land charges on net cash rental basis			
	Weighted by shipments		Weighted by production		Weighted by shipments		Weighted by production	
	1926	1927	1926	1927	1926	1927	1926	1927
Illinois	$0.673	$0.747	$0.673	$0.747	$0.551	$0.607	$0.551	$0.607
Indiana	.688	.947	.688	.921	.614	.836	.619	.818
Iowa	.714	.748	.714	.748	.652	.682	.652	.682
Minnesota	.748	.751	.748	.751	.687	.690	.687	.690
Ohio	.782	.849	.787	.847	.759	.816	.768	.821
Nebraska	.831	.728	.834	.720	.755	.672	.756	.665
South Dakota	.908	.740	.908	.740	.804	.661	.804	.661
Kansas	1.330	1.063	1.330	1.063	1.202	.962	1.202	.962
Weighted average	.752	.779	[1].778	[1].781	.666	.687	.699	.701

[1] Carried to table 43 of the report, cited in cost comparison no. 1, above, and averaged as $0.780 for the 2 years; to this is added $0.072 for marketing, and $0.432 for transportation to San Francisco.

MARKETING COST

Marketing cost was computed at about 7 cents per bushel, the largest single element in it being the country-elevator cost, detailed on pages 31 and 32 of the report. The country-elevator costs from 26 elevators from which costs were obtained were computed at $0.030 or $0.034, depending upon the method of averaging. Those costs ranged from an average of $0.019 for Iowa to $0.070 for South Dakota.

PRINCIPAL MARKETS AND BASIS OF WEIGHING

Chicago is the leading market for domestic corn, little if any foreign corn, however, going into competition with domestic corn in this market. For each of the 4 years October 1, 1923 to September 30, 1927, New York and San Francisco were the principal ports of entry.

Farm costs were weighted by shipments or by production. These costs and the transportation charges were further weighted in proportion to the shipments moving eastward to the Atlantic coast with New York as the principal market and westward to the Pacific coast with San Francisco as the principal market.

Transportation rates to the two markets, New York and San Francisco, on the two different bases of weighting are shown in the following table.

Corn: Transportation rates to New York and San Francisco

From—	To New York, weighted by—		To San Francisco, weighted by—	
	Shipments	Production	Shipments	Production
	Per bushel	*Per bushel*	*Per bushel*	*Per bushel*
Illinois	$0.235	$0.235	----------	$0.468
Indiana	.202	.201	----------	.483
Iowa	.275	.275	$0.425	.425
Minnesota	.290	.290	.447	.447
Ohio	.172	.172	----------	.498
Nebraska	----------	.309	.341	.342
South Dakota	----------	.334	.438	.438
Kansas	----------	.309	.342	.342
Weighted average	.241	.261	.382	.432

Variations of farm costs weighted on the basis of shipments to the Atlantic coast with New York as the principal market and to the Pacific coast with San Francisco as the principal market are shown in the following table. It will be noted that two States, Iowa and Minnesota, are in both the Atlantic and Pacific coast areas.

Corn: Costs of production by regions shipping to the Atlantic and Pacific coasts, per bushel shrunk, years 1926 and 1927

Area	Costs, including land charge on interest basis, weighted by shipments to—				Costs, including land charge on net cash rental basis, weighted by shipments to—			
	Atlantic coast		Pacific coast		Atlantic coast		Pacific coast	
	1926	1927	1926	1927	1926	1927	1926	1927
Illinois	$0.673	$0.747	----------	----------	$0.551	$0.607	----------	----------
Indiana	.688	.947	----------	----------	.614	.836	----------	----------
Iowa	.714	.748	$0.714	$0.748	.652	.682	$0.652	$0.682
Minnesota	.748	.751	.748	.751	.687	.690	.687	.690
Ohio	.782	.849	----------	----------	.759	.816	----------	----------
Nebraska	----------	----------	.831	.728	----------	----------	.755	.672
South Dakota	----------	----------	.908	.740	----------	----------	.804	.661
Kansas	----------	----------	1.330	1.063	----------	----------	1.202	.962
Weighted average	[1] .701	[1] .781	.808	.761	.615	.681	.735	.696

[1] Carried to table 41 of the report, cited in cost comparison no. 2 above, and averaged as $0.741 for the two years; to this is added $0.066 for marketing, and $0.241 for transportation to New York.

WHEAT, WHEAT FLOUR, AND WHEAT MILL FEED (PARS. 729 AND 730)

Rates of duty on wheat, wheat flour, and wheat mill feed:

	Tariff Act 1922	By proclamation, effective Apr. 6, 1924	Tariff Act 1930
Wheat per bushel of 60 pounds	30 cents	42 cents	42 cents.
Wheat flour, semolina, and similar wheat products per 100 pounds	78 cents	$1.04	$1.04.
Wheat mill feed	15 percent ad valorem.	7½ percent ad valorem.	10 percent ad valorem.

COST PERIOD AND SCOPE OF INVESTIGATION

In the investigation under section 315 of the act of 1922 costs were obtained for 1921, 1922, and 1923 for wheat and for the year 1922–1923 for wheat flour and wheat mill feed. Canada was the principal competing country.

The investigation covered farm costs of 881 domestic and 951 Canadian farms producing hard spring wheat, which was the principal competing variety. The wheat-producing areas in which costs were taken comprised the States of Montana, North and South Dakota, and Minnesota in the United States and the Provinces of Alberta, Saskatchewan, and Manitoba in Canada.

Milling costs for hard spring wheat flour and mill feed were obtained from 21 domestic and 6 Canadian mills. Cost comparisons of milling costs of flour and mill feed, respectively, are shown in table XI, page 21, and table XV, page 23, of the published report. Unit costs by mills shown under symbol numbers appear for flour on page 22 of the published report and for mill feed on page 24. An informative cost range can not be presented for flour and mill feed because of insufficient production data. Such data are available for wheat. The findings of the Commission are published in a report entitled "Wheat and Wheat Products", dated March 4, 1924.

COST COMPARISON—WHEAT

The cost comparison (p. 43 of the report) upon which the change in duty on wheat was based is as follows:

Summary of costs per bushel of producing hard spring wheat, including costs of marketing in the United States and in Canada, for crops of 3-year period, 1921–1923

	Cost per bushel		
	United States	Canada	Difference
Farm labor, etc	$1.0400	$0.7100	$0.3300
Cash rental	.2000	.2000	.0000
Marketing—transportation	.3507	.2623	.0884
Total difference in costs			.4184

The comparison of farm costs including the cost of hauling to original marketing point (the country elevator or railway platform) was as follows (table I, p. 4 of published report):

Comparison of the weighted average farm costs of production of hard spring wheat per bushel in the United States and in Canada

Period and cost basis	Costs in United States	Costs in Canada	Excess United States over Canada
1. Crop of 1923:			
Without land charge	$1.11	$0.64	$0.47
With land charge on cash rental basis	1.34	.82	.52
With land charge at interest on stated values	1.47	.82	.65
2. 3-year average cost, 1921–23:			
Without land charge	1.04	.71	.33
With land charge on cash rental basis	1.24	.91	.33
With land charge at interest on stated values	1.40	.92	.48

The total average marketing cost including transportation charges from the four States in the domestic area studied to Buffalo, N. Y., the principal point of competition, was 35.07 cents per bushel; for the Canadian area to the same point it was 26.23 cents. (See pp. 10 to 15 of the published report for discussion of marketing and transportation.) The analysis of the above average transportation costs is as follows (table IV, p. 13 of published report):

Comparative marketing charges on domestic and Canadian hard spring wheat from the farmer's wagon to Buffalo (domestic grain loaded at Duluth for lake shipment; Canadian grain loaded at Fort William or Port Arthur)

[Costs in cents per bushel]

Item	United States	Canada	Excess, United States over Canada
Country elevator: Gross charges [1]	7.75	5.25	2.50
Average weighted rail rate from country points to lake loading point:			
On wheat	18.90	14.13	----------
On dockage [2]	.79	.23	----------
Total	19.69	14.36	5.33
Terminal market charges:			
Elevation (includes 15 days' free storage)	1.50	1.25	----------
Storage	1.83	1.53	----------
Incidental	.25	.25	----------
Total	3.58	3.03	.55
Shipping via lake from loading point to Buffalo:			
Brokerage—selling	.25	.20	----------
Fobbing (inspection fees, etc.)	.20	.25	----------
Lake freight to Buffalo	3.60	3.60	----------
Total	4.05	[3] 4.05	----------
Grand total	35.07	26.69	8.38
Converting Canadian charges to American currency (98 percent)	----------	26.23	8.84

[1] Includes gross earnings for storage and handling, and a commission for selling, or an equivalent service, (See explanation, p. 14 of the report.)
[2] 4.2 percent on domestic wheat; 1.7 percent on Canadian wheat.
[3] Quoted in United States currency.

Studies of range of farm costs f. o. b. original marketing point appear in tabular form in tables II, IIa, III, IIIa, XXVI, and XXVII on pages 4, 5, 65, and 66 of the published report. Charts A and B on pages 8 and 9 of the report present these data graphically. All of these tables are calculated on the inclusion of the land charge on a cash rental basis with the exception of tables XXVI and XXVII which show the farm cost both with and without this land charge.

The range of costs shown below adapted from tables XXVI and XXVII digests the information conveyed by the several tables cited.

Range of domestic and Canadian farm costs for hard spring wheat in corresponding intervals without land charge and with land charge on rental basis for 1923 and for 3-year average 1921–1923

Farm cost per bushel	Domestic						Canadian					
	Production—		Percent of total production—				Production—		Percent of total production—			
	Without land charge	With land charge	Without land charge		With land charge		Without land charge	With land charge	Without land charge		With land charge	
			Group	Cumulation	Group	Cumulation			Group	Cumulation	Group	Cumulation
1923	*Bushels*	*Bushels*					*Bushels*	*Bushels*				
Under 50 cents	4,336,000	473,000	5.5	5.5	0.6	0.6	103,587,000	11,216,000	23.2	23.2	2.5	2.5
50 to 70 cents	15,215,000	9,933,000	19.3	24.8	12.6	13.2	222,150,000	154,028,000	49.7	72.9	34.5	37.0
70 to 90 cents	16,476,000	15,136,000	20.9	45.7	19.2	32.4	86,997,000	171,773,000	19.5	92.4	38.5	75.5
90 cents to $1.10	15,214,000	15,845,000	19.3	65.0	20.1	52.5	22,712,000	66,878,000	5.1	97.5	15.0	90.5
$1.10 to $1.30	9,618,000	10,564,000	12.2	77.2	13.4	65.9	6,224,000	18,541,000	1.4	98.9	4.1	94.6
$1.30 to $1.50	7,174,000	7,410,000	9.1	86.3	9.4	75.3	1,778,000	14,390,000	.4	99.3	3.2	97.8
$1.50 to $1.70	4,730,000	6,938,000	6.0	92.3	8.8	84.1	461,000	4,849,000	.1	99.4	1.1	98.9
$1.70 to $1.90	1,655,000	4,808,000	2.1	94.4	6.1	90.2	1,321,000	1,357,000	.3	99.7	.3	99.2
$1.90 to $2.10	1,892,000	2,444,000	2.4	96.8	3.1	93.3		895,000		99.7	.2	99.4
$2.10 to $2.30	868,000	1,183,000	1.1	97.9	1.5	94.8	670,000	1,329,000	.2	99.9	.3	99.7
$2.30 to $2.50	394,000	1,576,000	.5	98.4	2.0	96.8				99.9		99.7
$2.50 and over	1,261,000	2,523,000	1.6	100.0	3.2	100.0	670,000	1,314,000	.1	100.0	.3	100.0
Total production	78,833,000	78,833,000	100.0		100.0		446,570,000	446,570,000	100.0		100.0	
Weighted average farm cost per bushel	$1.11	$1.34					$0.64	$0.82				
Transportation cost to Buffalo	.35	.35					.26	.26				
Average cost delivered at Buffalo	1.46	1.69					.90	1.08				
3-year average, 1921–1923	*Bushels*	*Bushels*					*Bushels*	*Bushels*				
Under 50 cents	2,225,000	1,156,000	2.5	2.5	1.3	1.3	53,560,000	5,686,000	12.7	12.7	1.3	1.3
50 to 70 cents	15,485,000	4,184,000	17.4	19.9	4.7	6.0	199,307,000	72,541,000	47.1	59.8	17.2	18.5
70 to 90 cents	24,473,000	21,002,000	27.5	47.4	23.6	29.6	121,356,000	177,260,000	28.7	88.5	41.9	60.4
90 cents to $1.10	19,044,000	21,269,000	21.4	68.8	23.9	53.5	35,942,000	106,684,000	8.5	97.0	25.2	85.6
$1.10 to $1.30	13,082,000	15,396,000	14.7	83.5	17.3	70.8	6,936,000	39,284,000	1.6	98.6	9.3	94.9
$1.30 to $1.50	6,230,000	10,056,000	7.0	90.5	11.3	82.1	3,258,000	12,942,000	.8	99.4	3.1	98.0
$1.50 to $1.70	2,758,000	6,141,000	3.1	93.6	6.9	89.0	971,000	4,463,000	.2	99.6	1.1	99.1
$1.70 to $1.90	1,958,000	3,381,000	2.2	95.8	3.8	92.8	592,000	867,000	.1	99.7	.2	99.3

$1.90 to $2.10	1,424,000	1,869,000	1.6	97.4	2.1	94.9	508,000	1,857,000	.2	99.9	.4	99.7
$2.10 to $2.30	1,157,000	2,047,000	1.3	98.7	2.3	97.2		470,000		99.9	.1	99.8
$2.30 to $2.50	445,000	356,000	.5	99.2	.4	97.6				99.9		99.8
$2.50 and over	712,000	2,136,000	.8	100.0	2.4	100.0	423,000	799,000	.1	100.0	.2	100.0
Total annual production	88,993,000	88,993,000	100.0		100.0		422,853,000	422,853,000	100.0		100.0	
Weighted annual average farm cost per bushel	$1.04	$1.24					$0.71	$0.91				
Transportation to Buffalo	.35	.35					.26	.26				
Average cost delivered to Buffalo	1.39	1.59					.97	1.17				

PEANUTS (PAR. 759)

This investigation, instituted pursuant to Senate Resolution No. 230 (69th Cong.), was made under section 315 of the act of 1922 and covered the years 1924 and 1925. The principal competing country was China. Domestic costs were obtained from 232 farms and 14 mills. Invoice data were accepted as evidence of foreign costs. The results of the investigation are set forth in a report entitled "Peanuts," dated 1929.

TYPES AND GRADES

The investigation was concerned with two main types of peanuts: Virginia and Spanish. Cost comparisons were made on the former only. Virginia peanuts were treated in two main categories (1) cleaned and graded, not shelled, and (2) shelled.

PEANUTS, NOT SHELLED

These were dutiable under paragraph 757 of the act of 1922 at 3 cents per pound; by presidential proclamation, effective February 18, 1929, at 4¼ cents per pound; and under paragraph 759 of the act of 1930, at 4¼ cents per pound.

COST COMPARISON

Comparison of costs of peanuts not shelled is found in the report in table 47 on page 51, reproduced below.

Peanuts, not shelled: Comparison of costs of production in the United States and in China, delivered at the principal United States markets, 1924–25 and 1925–26

[Cents per pound]

	Domestic Jumbo grade	Chinese average of 11/12, 12/13, 13/14 grades
Total cost, f.o.b. domestic milling point and Chinese port	8.761	4.400
Transportation costs to:		
San Francisco	1.242	.517
New York	.404	1.008
Total cost, including transportation:		
(1) For domestic delivered at New York and Chinese at San Francisco	9.165	4.917
(2) For both domestic and Chinese delivered at San Francisco	10.003	4.917
(3) For both domestic and Chinese delivered at New York	9.165	5.408
Amount by which average domestic delivered cost exceeds Chinese:		
(1) For domestic delivered at New York and Chinese at San Francisco	4.248	
(2) For both domestic and Chinese delivered at San Francisco	5.086	
(3) For both domestic and Chinese delivered at New York	3.757	

The average cost of three grades of Chinese peanuts in the above table is supported in table 42 on page 47 of report. The costs of the three grades are as follows:

	Cents per pound
Grade 11/12	4.682
Grade 12/13	4.261
Grade 13/14	3.972

The cost of 8.761 cents per pound for domestic peanuts of Jumbo grade f.o.b. milling point is derived by allocation from a figure of 5.524 cents per pound of farm stock as indicated below. The main

factor in these costs is the cost of farm stock delivered at mill which amounts to approximately 90 percent of the total cost of peanuts not shelled. Following the summary below, there is presented a table showing the range of domestic costs of farm stock plus an average figure of 0.28 cent per pound for transportation to the mill, storage, and buying expense.

Derivation of cost of Virginia peanuts, Jumbo grade, 1924–1925

[Cents per pound]

Item	1924 crop	1925 crop	2-year average
Cost of farm stock delivered at mill (table 33, p. 39 of report)	5.250	[1] 4.550	4.900
Average net milling cost (table 34, p. 41 of report)	.624	.624	.624
Total cost after milling for average grade (table 35, p. 41 of report)	5.874	5.174	5.524
Corresponding cost for Jumbo grade (among four) (table 37, p. 44 of report, by methods described, pp. 42 and 43)			8.761

[1] Item for which cost ranges are shown below.

Virginia peanuts: Range of domestic costs of farm stock delivered at mill, by States, in corresponding intervals, with production, 1925

Cost per pound of farm stock delivered at mill [1]	North Carolina			Virginia			Total domestic		
	Production (pounds)	Percent of production		Production (pounds)	Percent of production		Production (pounds)	Percent of production	
	Group	Group	Cumulation	Group	Group	Cumulation	Group	Group	Cumulation
Less than 2½ cents				51,745	1.59	1.59	51,745	0.65	0.65
2½ to 3 cents	393,299	8.44	8.44	200,322	6.17	7.76	593,621	7.51	8.16
3 to 3½ cents	523,226	11.23	19.67	538,300	16.57	24.33	1,061,526	13.42	21.58
3½ to 4 cents	1,137,157	24.41	44.08	576,573	17.74	42.07	1,713,730	21.67	43.25
4 to 4½ cents [2]	665,344	14.28	58.36	451,570	13.90	55.97	1,116,914	14.12	57.37
4½ to 5 cents [3 4]	323,565	6.95	65.31	714,061	21.98	77.95	1,037,626	13.12	70.49
5 to 5½ cents	516,198	11.08	76.39	121,684	3.75	81.70	637,882	8.07	78.56
5½ to 6 cents	387,842	8.32	84.71	279,370	8.60	90.30	667,212	8.44	87.00
6 to 6½ cents	189,474	4.07	88.78	129,386	3.98	94.28	318,860	4.03	91.03
6½ to 7 cents	65,109	1.40	90.18	83,220	2.56	96.84	148,329	1.89	92.92
7 to 7½ cents	24,750	.53	90.71	6,375	.20	97.04	31,125	.39	93.31
7½ to 8 cents	387,460	8.32	99.03	9,000	.27	97.31	396,460	5.01	98.32
8 cents or more	45,358	.97	100.00	87,540	2.69	100.00	132,898	1.68	100.00
Total	4,658,782	100.00		3,249,146	100.00		7,907,928	100.00	

[1] Including average transportation, storage, and buying expense of 0.28 cent per pound.
[2] Typical Virginia group as indicated by weighted average of 4.43 cents per pound.
[3] Typical North Carolina group as indicated by weighted average of 4.63 cents per pound.
[4] Typical domestic group as indicated by weighted average of 4.55 cents per pound (table 33, p. 39 of the report).

PEANUTS, SHELLED

Peanuts, shelled, were dutiable at 4 cents per pound under paragraph 757 of the act of 1922; at 6 cents per pound by presidential proclamation, effective February 18, 1929; and at 7 cents per pound under paragraph 759 of the act of 1930.

COST COMPARISON

The comparison of costs of peanuts, shelled, will be found in the report in table 56 on page 66, abstracted below.

Peanuts, shelled: Comparison of costs of production in the United States and in China, delivered at the principal United States markets, 1924–25 and 1925–26

[Cents per pound]

	Domestic	Chinese
	Average extra large and no. 1	Average 30/32 and 38/40
Total cost f.o.b. domestic milling point and Chinese port	[1] 10.648	[2] 5.035
Transportation costs to:		
San Francisco	.993	.271
Chicago	.636	1.281
Total cost, including transportation:		
(1) For domestic delivered at Chicago and Chinese at San Francisco	11.284	5.306
(2) For both domestic and Chinese delivered at San Francisco	11.641	5.306
(3) For both domestic and Chinese delivered at Chicago	11.284	6.316
Amount by which domestic delivered costs exceed the Chinese:		
(1) For domestic delivered at Chicago, and Chinese at San Francisco	5.978	
(2) For both domestic and Chinese delivered at San Francisco	6.335	
(3) For both domestic and Chinese delivered at Chicago	4.968	

[1] Average of 11.683 for "extra large" and 9.189 for "no. 1."
[2] Average of 5.294 for 30/32 and 4.679 for 38/40.

The figure of 10.648 cents per pound for domestic peanuts f.o.b. milling point contains 1.155 cents for milling. The remainder, amounting to 9.493 cents per pound, is the average cost of "extra large" and "no. 1" grades before milling (table 48, p. 53 of report). This was derived by methods described on pages 42 and 43 of report from the figure of 5.524 cents per pound for farm stock accounted for under the heading "Peanuts, Not Shelled," above.

Since the item of "cost of milling" is the only new factor in it, the average cost of the two grades f.o.b. milling point is largely (about 80 percent) dependent upon the range of cost of farm stock presented above. It is not practicable to make a statement of individual costs corresponding to this final figure for cost f.o.b. milling point.

DRIED BEANS (PAR. 765)

Dried beans were dutiable at 25 cents per bushel of 60 pounds in the act of 1913, 1¾ cents per pound in the act of 1922, and 3 cents per pound in the act of 1930.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was instituted under section 336 of the Tariff Act of 1930, pursuant to Senate Resolution 411 (71st Cong.); dismissed under section 336 by Senate Resolution (72d Cong.); and completed under the general powers of the Commission as a section 332 study. Dried beans are of three kinds—white, colored, and miscellaneous, the last group consisting chiefly of Limas.

The principal sources of imported beans were Japan, the Danubian States of Europe, and Chile. In 1930, about 47 percent of the total quantity, in 1931 about 70 percent, and in the first 10 months of 1932, about 16 percent came from Japan.

Costs were obtained for pea beans and great northern beans, the white types most nearly comparable with the bulk of imports. White beans are grown chiefly in Michigan, New York, and Idaho; the two Eastern States producing mainly pea beans and Idaho mainly great northerns. The years 1929 and 1930 were taken as the cost period.

The results of the investigation are published in a report entitled "Dried Beans and Black-Eye Cowpeas," Report No. 61, second series, published in February, 1933.

COST COMPARISON AND RANGE OF COSTS

The report does not make a formal comparison of foreign and domestic costs. Invoices were studied as evidence of Japanese costs. The average invoice price of the imported white beans was $4.96 per 100 pounds in the 1929–30 season and $2.79 per 100 pounds in the 1930–31 season, c. i. f. New York and Philadelphia (p. 32 of the report).

Table 18, page 37 of the report, shows average costs for pea beans from Michigan and New York and great northern beans from Idaho, delivered at Philadelphia. This table may be summarized as follows:

Dried beans: Costs delivered at Philadelphia for three principal States producing white beans [1]

[Cents per pound]

	Based on average yields for 2-year period, 1929–30	Based on average yields for 8-year period, 1924–31
Pea beans:		
Michigan	7.2	5.9
New York	6.4	5.6
Great northern beans: Idaho	4.8	4.8
Weighted average	6.5	5.6

[1] Transportation included: From Michigan, 1.3; New York, 1.3; Idaho, 1.6; weighted average, 1.4 cents per pound.

Variations during the period of years in domestic costs of beans are discussed on page 3 of the report. The following tables show range of delivered costs for 1929 and 1930 for the three principal States producing white beans.

Dried beans: Range of delivered costs at Philadelphia, of pea beans from Michigan and New York, and great northern beans from Idaho, 1929

Cost per pound at Philadelphia	Percentage of total production					
	Michigan		New York		Idaho	
	Group	Cumulation	Group	Cumulation	Group	Cumulation
Less than 4 cents	3.7	3.7	9.1	9.1	7.4	7.4
4 to 4½ cents	15.3	19.0	13.0	22.1	50.2	57.6
4½ to 5 cents [1]	12.7	31.7	27.6	49.7	18.1	75.7
5 to 5½ cents	13.5	45.2	9.1	58.8	16.3	92.0
5½ to 6 cents [2]	18.3	63.5	16.6	75.4	1.0	93.0
6 to 6½ cents [3]	4.2	67.7	15.9	91.3	6.0	99.0
6½ to 7 cents	8.5	76.2	4.5	95.8		
7 to 7½ cents	1.6	77.8	.7	96.5		
7½ to 8 cents	7.9	85.7				
8 to 8½ cents	3.3	89.0				
8½ to 9 cents	3.0	92.0	.9	97.4		
9 to 9½ cents	2.9	94.9	2.0	99.4		
9½ to 10 cents						
10 to 10½ cents	2.8	97.7				
10½ to 11 cents	.3	98.0				
11 to 11½ cents						
11½ to 12 cents			.6	100.0		

[1] Typical Idaho group as indicated by average delivered cost (4.70 cents).
[2] Typical New York group as indicated by average delivered cost (5.54 cents).
[3] Typical Michigan group as indicated by average delivered cost (6.47 cents).

Dried beans: Range of delivered costs at Philadelphia, of pea beans from Michigan and New York, and great northern beans from Idaho, 1929—Continued

Cost per pound at Philadelphia	Percentage of total production					
	Michigan		New York		Idaho	
	Group	Cumulation	Group	Cumulation	Group	Cumulation
12½ to 13 cents	0.2	98.2				
13 cents or more	1.8	100.0			1.0	100.0
Total	100.0		100.0		100.0	
Relative production (percent)	68.5		7.5		24.0	
Average cost per acre	$38.42		$44.79		$49.75	
Average yield per acre (pounds)	751		1,074		1,607	
Farm costs per pound on basis of average yield	*Cents* 5.12		*Cents* 4.17		*Cents* 3.10	
Transportation and marketing costs per pound	1.35		1.37		1.60	
Total average cost per pound delivered at Philadelphia	6.47		5.54		4.70	

The unit value of Japanese imports of white beans in 1929 at Philadelphia and New York City was 4.96 cents per pound (table 14, p. 32 of report).

Dried beans: Range of delivered costs at Philadelphia, of pea beans from Michigan and New York, and great northern beans from Idaho, 1930

Cost per pound at Philadelphia	Percentage of total production					
	Michigan		New York		Idaho	
	Group	Cumulation	Group	Cumulation	Group	Cumulation
Less than 4 cents	11.7	11.7			10.2	10.2
4 to 4½ cents					30.0	40.2
4½ to 5 cents [1]	4.6	16.3			26.3	66.5
5 to 5½ cents	3.9	20.2	2.5	2.5	13.1	79.6
5½ to 6 cents	8.4	28.6			11.8	91.4
6 to 6½ cents	17.8	46.4	2.5	5.0	5.8	97.2
6½ to 7 cents	15.0	61.4	10.2	15.2	1.0	98.2
7 to 7½ cents	4.7	66.1	13.0	28.2		
7½ to 8 cents [2]	4.5	70.6	27.7	55.9		
8 to 8½ cents [3]	1.9	72.5	30.5	86.4	.8	99.0
8½ to 9 cents	10.9	83.4	5.3	91.7		
9 to 9½ cents	1.5	84.9	1.9	93.6		
9½ to 10 cents	1.9	86.8	3.0	96.6		
10 to 10½ cents	2.6	89.4				
10½ to 11 cents	3.2	92.6				
11 to 11½ cents			3.4	100.0		
11½ to 12 cents	2.0	94.6				
12 to 13 cents	.9	95.5				
13 cents or more	4.5	100.0			1.0	100.0
Total	100.0		100.0		100.0	
Relative production (percent)	68.5		7.5		24.0	
Average cost per acre	$36.71		$42.53		$48.82	
Average yield per acre (pounds)	530		658		1,490	
Farm cost per pound on basis of average yield	*Cents* 6.93		*Cents* 6.46		*Cents* 3.28	
Transportation and marketing costs per pound	1.26		1.30		1.62	
Total average cost per pound delivered at Philadelphia	8.19		7.77		4.90	

[1] Typical Idaho group as indicated by average delivered cost (4.90 cents).
[2] Typical New York group as indicated by average delivered cost (7.77 cents).
[3] Typical Michigan group as indicated by average delivered cost (8.19 cents).

The unit value of Japanese imports of white beans in 1930 at Philadelphia and New York City was 2.79 cents per pound (table 14, p. 32 of report).

ONIONS (PAR. 770)

Onions were dutiable under paragraph 768 of the act of 1922 at 1 cent per pound. By proclamation, effective January 21, 1929, the duty was raised to 1½ cents per pound. Under paragraph 770 of the act of 1930 the duty became 2½ cents per pound.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was conducted under section 315 of the act of 1922 and included a survey of the production of strong and mild onions. Cost comparisons were limited to the mild type as principally involved in international competition.

Complete domestic farm costs were obtained for the year 1926, and certain factors affecting the year 1925. The principal competing country was Spain, and data on foreign costs were obtained both by analysis of invoices and by information from abroad. Domestic costs for 1926 were obtained from 71 farms which harvested 341 acres in the principal areas producing Spanish onions, and 81 farms which harvested 3,999 acres in the principal areas producing Bermuda onions.

The findings of the Commission are published in a report entitled "Onions" dated December 4, 1928.

COST COMPARISON AND RANGE OF COSTS

Four cost comparisons will be found on pages 57 to 60 of the report.

There are two elements in the domestic costs delivered at New York City, the principal market: The cost f. o. b. local shipping point and the transportation cost. Each of these is computed in three ways.

Average costs f. o. b. local shipping point are shown as follows:

Commodity specification	Table in report	Average cost
Spanish and Bermuda onions, both in crates	44	$2.196
Spanish onions in sacks and Bermuda onions in crates	45–46	2.044
Bermuda onions in crates	47	2.253

Average costs of transportation to New York are shown as follows:

Specification	Table in report	Average cost
For Spanish and Bermuda onions, both in crates, charges weighted by production	44	$1.487
Spanish onions, in sacks; Bermuda onions, in crates; charges weighted by production	45	1.423
Onions in sacks or crates, charges weighted by unloads at New York [1]	46–47	1.353

[1] Unloads at New York consisted mostly of Bermuda onions from Texas.

The costs of onions from Spain delivered at New York include three elements—the cost f. o. b. the Spanish port, cost of transportation to New York, and cost of reconditioning and landing. An average transportation cost of $0.528 per hundredweight is shown in all four com-

parisons, as is likewise an average cost of $0.204 for reconditioning and landing.

Average costs of onions in crates f. o. b. Spanish port are shown as follows:

Specification	Table in report	Average cost
Cost derived by analysis of invoices without deduction of assumed profit	44-47	$1.446
Cost by adding cost elements ascertained separately, as described on pp. 58 and 59 of report	45	1.112
Cost as ascertained from invoices less packing costs and less 8 percent assumed profit	46	1.113

The four methods employed in the report give the following for excess of domestic cost over foreign cost per hundredweight: $1.428, $1.505, $1.552, and $1.623.

The table below summarizes tables 45 and 47 of the report, which show, respectively, the highest and lowest cost differences. The costs shown were obtained separately for the years 1925 and 1926 by types and areas and weighted by production. Simple averages were used to combine the results for the 2 years.

Comparison of costs of production of specified domestic and foreign onions delivered in New York City, per hundred pounds, 1926–27

Item	Basis for calculating— Highest cost difference, from table 45 of report	Basis for calculating— Lowest cost difference, from table 47 of report
DOMESTIC		
Cost f. o. b. local shipping point:		
Spanish onions in sacks and Bermuda onions in crates	$2.044	
Bermuda onions in crates		$2.253
Transportation to New York weighted by:		
Production	1.423	
Shipments		1.353
Total domestic cost delivered New York	3.467	3.606
FOREIGN		
Cost f. o. b. Spanish port:		
By addition of separately ascertained items of cost	1.112	
As evidenced by invoices		1.446
Transportation to New York	.528	.528
Reconditioning and landing charges	.204	.204
Total foreign cost delivered New York	1.844	2.178
Excess of domestic over foreign costs	1.623	1.428

The following tables are illustrative of the range of domestic costs delivered in New York. These show costs for Spanish onions in sacks and Bermuda onions in crates for the year 1926. The costs shown by States include the following items for transportation to New York:

	Cents per pound
Idaho	1.36
Utah	1.33
Washington	1.51
California	1.78
Texas	1.42

Spanish onions: Range of delivered cost in sacks at New York City for three States of principal production, 1926

Cost per pound	Percentage of total production					
	Idaho		Utah		Washington	
	Group	Cumulation	Group	Cumulation	Group	Cumulation
Less than 2½ cents			19.5	19.5		
2½ to 3 cents [1] [2]	63.3	63.3	66.0	85.5	67.2	67.2
3 to 3½ cents [3]	27.1	90.4	13.8	99.3	23.2	90.4
3½ to 4 cents	1.6	92.0		99.3	6.8	97.2
4 to 4½ cents	5.7	97.7		99.3		97.2
4½ cents or more	2.3	100.0	.7	100.0	2.8	100.0
Total	100.0		100.0		100.0	
Percentage of production	12.6		28.6		58.8	
	Cents		*Cents*		*Cents*	
Weighted average farm cost per pound	1.65		1.18		1.26	
Transportation and marketing cost	1.54		1.51		1.69	
Weighted average cost per pound delivered at New York	3.19		2.69		2.95	

[1] Typical Utah group as indicated by weighted average cost per pound at New York, 2.69 cents.
[2] Typical Washington group as indicated by weighted average cost per pound at New York, 2.95 cents.
[3] Typical Idaho group as indicated by weighted average cost per pound at New York, 3.19 cents.

Bermuda onions: Range of delivered cost in crates at New York City for two States of principal production, 1926

Cost per pound	Percentage of total production			
	California		Texas	
	Group	Cumulation	Group	Cumulation
Less than 3 cents			3.8	3.8
3 to 3½ cents	1.1	1.1	47.6	51.4
3½ to 4 cents [1]	55.5	56.6	18.1	69.5
4 to 4½ cents [2]	15.6	72.2	20.5	90.0
4½ to 5 cents	25.6	97.8	5.4	95.4
5 cents or more	2.2	100.0	4.6	100.0
Total	100.0		100.0	
Percentage of production	20.5		79.5	
	Cents		*Cents*	
Weighted average farm cost per pound	2.13		2.23	
Transportation and marketing cost	1.96		1.60	
Weighted average cost per pound delivered at New York	4.09		3.83	

[1] Typical Texas group indicated by weighted average cost per pound at New York, 3.83 cents.
[2] Typical California group indicated by weighted average cost per pound at New York, 4.09 cents.

CANNED TOMATOES (PAR. 772)

Canned tomatoes were dutiable at 15 percent ad valorem under paragraph 770 of the Tariff Act of 1922; tomato paste at 40 percent ad valorem. No change resulted from investigation under section 315. Under paragraph 772 of the Tariff Act of 1930, tomatoes prepared or preserved in any manner are dutiable at 50 percent ad valorem.

COST PERIOD AND SCOPE OF INVESTIGATION

The Commission's investigation was conducted under section 315 of the act of 1922 and related to both canned tomatoes and tomato paste. The range of costs of tomato paste can not be shown without disclosing confidential information. The cost period was the years 1926 and 1927. Italy was found to be the principal competing foreign country on canned tomatoes and evidence of foreign costs was obtained from invoices. Domestic costs were obtained from 214 farms

and from canners of tomatoes of the several grades put up in various size cans; 32 of these produced canned tomatoes of grades comparable with the Italian product; i.e., grades higher than standard. The findings of the Commission are published in a report entitled "Canned Tomatoes and Tomato Paste," dated February 28, 1929.

The Tariff Commission under section 336 of the Tariff Act of 1930 conducted a second investigation of canned tomatoes and tomato paste, the report on which was returned by the President under date of April 1, 1931, "to review the facts upon the basis of the forthcoming crops and make another report."

COST COMPARISON AND RANGE OF COSTS

The cost comparison concerned canned tomatoes of solid, fancy, or extra standard grades—higher than standard grade—packed in nos. 2, 2½, and 3 cans. These were found to be the sizes nearest in net content to the two sizes of the imported cans. The table which follows (based on table 30 on p. 39 of the published report) shows a comparison of the domestic costs of production of canned tomatoes, including transportation to New York, with the total cost of Italian canned tomatoes landed at New York, the cost of the Italian canned tomatoes being calculated by assuming a 10 percent profit in the invoice price of imports. Domestic costs of tomatoes for canning based on farm costs of production include land charges on the basis of net cash rental.

Canned tomatoes: Comparison of costs of production in the United States and Italy, including transportation to principal market

[Per dozen cans]

Cost item and difference	United States weighted average nos. 2, 2½, and 3 cans [1] graded as solid, fancy, or extra standard	Italy weighted average of no. 2 and no. 3 cans
Total costs at cannery on basis of:		
Price paid by canner for tomatoes, 1926	$1.2137	[2] $0.9967
Farm cost of production of tomatoes, 1926	1.2060	
Farm cost of production of tomatoes, 1927	1.2939	
Simple average of farm cost of production of tomatoes, 1926–27	1.2500	
Transportation to New York (includes marine insurance for Italian)	.1484	.0750
Total costs at New York on basis of:		
Price paid by canner for tomatoes, 1926	1.3621	1.0717
Farm cost of production of tomatoes, 1926	1.3544	
Farm cost of production of tomatoes, 1927	1.4423	
Simple average of farm cost of production of tomatoes, 1926–27	1.3984	
Amount by which domestic costs at New York exceed Italian:		
Costs at New York on basis of—		
Price paid by canner for tomatoes, 1926	.2904	
Farm cost of production of tomatoes, 1926	.2827	
Farm cost of production of tomatoes, 1927	.3706	
Simple average of farm cost of production of tomatoes, 1926–27	.3267	
Foreign value		1.0964
Amount of ad valorem duty necessary to equalize differences in costs of production on basis of:	*Percent*	
Price paid by canner for tomatoes, 1926	27.09	
Farm cost of production of tomatoes, 1926	26.38	
Farm cost of production of tomatoes, 1927	34.58	
Simple average of farm cost of production of tomatoes, 1926–27	30.48	

[1] Plus 8.02 percent in cost to adjust net content to Italian basis.
[2] Calculated by assuming a 10 percent profit in the invoice price of imports. (See transcript of minutes of Tariff Commission's public hearings, p. 456.)

The table which follows shows costs of production on the three bases of calculation, by areas covered in the investigation.

Canned tomatoes: Domestic costs of production of one dozen cans of grades higher than standards (solid pack, extra standard, or fancy) by areas

Area	No. 2 cans				No. 2½ cans				No. 3 cans			
	Production	Costs including raw tomatoes at—			Production	Costs including raw tomatoes at—			Production	Costs including raw tomatoes at—		
		Price paid by canner, 1926	Cost of growing, 1926	Cost of growing, 1927		Price paid by canner, 1926	Cost of growing, 1926	Cost of growing, 1927		Price paid by canner, 1926	Cost of growing, 1926	Cost of growing, 1927
	Dozens				*Dozens*				*Dozens*			
New York	21,159	$1.0339	$1.0237	$0.9795	(1)	(1)	(1)	(1)				
Indiana	59,142	.7976	.8027	.7643					(1)	$1.3398	$1.3599	$1.2992
Utah	60,554	.8998	.9944	1.0176	(1)	$1.2465	$1.3781	$1.4119	(1)	(1)	(1)	(1)
Los Angeles, Calif	66,344	.9140	.9162	.9284	(1)	1.2430	1.2347	1.2527				
Santa Clara-Alameda, Calif	226,880	.9340	.9074	1.0094	(1)	1.2190	1.1828	1.3315				
Sacramento, Calif	81,064	.8674	.8598	.9364	(1)	1.3347	1.3116	1.4554				
Northern Indiana					(1)	1.1563	1.1824	1.0697				
New York-New Jersey									(1)	1.4317	1.4472	1.3866
Total weighted on basis of production	515,143	.9053	.9040	.9591	790,716	1.2410	1.2276	1.3399	78,290	1.3736	1.3928	1.3329

[1] Confidential.

DOMESTIC TRANSPORTATION

The weighted average transportation cost to New York per dozen cans for the domestic product was $0.1484 (p. 38 of published report). Since canned tomatoes are produced at widely distributed points there is a decided variation in the cost of transportation to New York City, the most important single market. The extremes in transportation rates were represented by shipments from Hancock Bridge, N. J., with a rate of 21½ cents per hundred pounds in carload lots, and from Wasatch, Utah, with rates of from $1.05 to $1.39, depending upon the route.

RANGE OF COSTS OF NO. 2 CANS

The no. 2 can was the most popular in the domestic trade and was packed in most districts. The range of no. 2 costs can be shown by plants and by districts. The first table following shows range of costs by plants and the second by districts. In the second table attention is directed to variation in cost elements. In order of magnitude the cost elements are (1) cans, cases, and labels, approximately 39 per cent; (2) raw tomatoes, approximately 30 per cent; (3) labor, approximately 17 per cent; and (4) indirect costs, approximately 14 per cent.

Canned tomatoes: Range of costs of one dozen no. 2 cans of grades higher than standard, delivered at New York City, on two bases of costs of raw tomatoes, 1926 and 1927

Delivered cost per dozen cans	Costs including price paid by canners, 1926			Costs, including growing costs, 1926			Costs, including growing costs, 1927		
	Production in dozens	Percent of production		Production in dozens	Percent of production		Production in dozens	Percent of production	
		Group	Cumulation		Group	Cumulation		Group	Cumulation
Less than 95 cents	134,874	26.2	26.2	134,874	26.2	26.2	41,454	8.1	8.1
95 cents to $1	79,676	15.5	41.7	163,030	31.7	57.9	121,166	23.5	31.6
$1 to $1.05 [1]	138,496	26.9	68.6	58,422	11.3	69.2	16,584	3.2	34.8
$1.05 to $1.10 [2]	70,172	13.6	82.2	35,188	6.8	76.0	152,972	29.7	64.5
$1.10 to $1.15	48,746	9.5	91.7	52,098	10.1	86.1	45,309	8.8	73.3
$1.15 to $1.30	32,603	6.3	98.0	63,249	12.3	98.4	117,414	22.8	96.1
$1.30 or more	10,576	2.0	100.0	8,282	1.6	100.0	20,244	3.9	100.0
Total	515,143	100.0		515,143	100.0		515,143	100.0	

[1] Typical group as indicated by weighted average cost of $1.02 on either basis for 1926.
[2] Typical group as indicated by weighted average cost of $1.07 on basis of growing cost, 1927.

Canned tomatoes: Variation of cost elements and total costs by districts per dozen no. 2 cans of grades higher than standards (solid pack, extra standard, or fancy)

	High		Low	
	Area	Amount	Area	Amount
Cost elements:				
Raw tomatoes on basis of—				
Price paid by canner, 1926	New York	$0.3168	Utah	$0.2088
Cost of growing, 1926	do	.3066	Sacramento, Calif.	.2118
Cost of growing, 1927	Santa Clara-Alameda, Calif.	.3291	Indiana	.1961
Cans, cases, and labels, 1926	do	.3940	New York	.3464
Labor, 1926	do	.1931	Indiana	.0992
Indirect costs, 1926	New York	.2421	Los Angeles, Calif.	.0865
Total costs, including raw tomatoes, on basis of—				
Price paid by canner, 1926	New York	1.0339	Indiana	.7976
Cost of growing, 1926	do	1.0237	do	.8027
Cost of growing, 1927	Utah	1.0176	do	.7643

RANGE OF FARM COSTS OF TOMATOES

The foregoing table shows that the cost of raw tomatoes, which is the second element in magnitude, is more variable than the larger element of cans, cases, and labels. The following table shows the range of farm costs of raw tomatoes for all districts in 1927:

Tomatoes for canning: Array showing number of tons and cost of production for all districts with group percentage and cumulative percentage of tomatoes produced at varying costs per ton, 1927

Cost f. o. b. farm per ton	Production			Cost of production		
	Tons produced	Percent of total	Cumulation	Group cost	Percent of total	Cumulation
			Percent			*Percent*
Less than $8	370.70	2.77	2.77	$2,562.25	1.15	1.15
$8 to $9	1,007.68	7.54	10.31	8,299.56	3.71	4.86
$9 to $10	503.49	3.77	14.08	4,775.96	2.13	6.99
$10 to $11	702.57	5.26	19.34	7,473.45	3.34	10.33
$11 to $12	2,046.11	15.31	34.65	23,361.63	10.44	20.77
$12 to $13	915.43	6.85	41.50	11,518.83	5.15	25.92
$13 to $14	783.94	5.86	47.36	10,639.99	4.75	30.67
$14 to $15	1,027.90	7.69	55.05	14,973.81	6.69	37.36
$15 to $16	571.00	4.27	59.32	8,753.04	3.91	41.27
$16 to $17 [1]	288.75	2.16	61.48	4,795.92	2.14	43.41
$17 to $18	425.63	3.18	64.66	7,418.78	3.32	46.73
$18 to $19	1,265.00	9.46	74.12	23,142.63	10.34	57.07
$19 to $20	467.30	3.50	77.62	9,044.87	4.04	61.11
$20 to $21	234.10	1.75	79.37	4,832.79	2.16	63.27
$21 to $22	402.37	3.01	82.38	8,686.40	3.88	67.15
$22 to $23	268.00	2.00	84.38	6,095.29	2.72	69.87
$23 to $24	94.70	.71	85.09	2,232.21	1.00	70.87
$24 to $25	46.07	.34	85.43	1,119.05	.50	71.37
$25 to $26	204.01	1.53	86.96	5,179.98	2.31	73.68
$26 to $27	522.70	3.91	90.87	13,790.59	6.16	79.84
$27 to $28	42.00	.31	91.18	1,147.86	.51	80.35
$28 to $29	47.00	.35	91.53	1,337.88	.60	80.95
$29 to $30	235.20	1.76	93.29	6,945.69	3.10	84.05
$30 to $31	96.00	.72	94.01	2,919.12	1.30	85.35
$31 to $32	65.35	.49	94.50	2,063.79	.92	86.27
$32 to $33	36.55	.27	94.77	1,183.05	.53	86.80
$33 to $34	96.10	.72	95.49	3,213.95	1.44	88.24
$34 to $35	185.95	1.39	96.88	6,395.85	2.86	91.10
$35 to $36	52.00	.39	97.27	1,842.10	.82	91.92
$36 to $37	6.00	.05	97.32	220.98	.10	92.02
$37 to $38	126.50	.95	98.27	4,777.90	2.14	94.16
$38 or more	231.15	1.73	100.00	13,072.06	5.84	100.00
Total	13,367.25	100.00		223,817.26	100.00	

[1] Typical cost group as indicated by weighted average of $16.74 per ton.

FRESH VEGETABLES

LIMA BEANS IN THEIR NATURAL STATE (PAR. 765)

Lima beans in their natural state are dutiable under paragraph 765 of the general Tariff Act of 1930 at 3½ cents per pound; from Cuba at 2.8 cents per pound. No change resulted from the investigation because it was found that the domestic and imported articles are produced and marketed at different seasons of the year.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was conducted under section 336 of the Tariff Act of 1930. Cuba was found to be the principal competing country. Domestic costs were obtained from 22 farms for the crop year 1929–30 and from 32 farms for the crop year 1930–31. Of the 22 farms investigated for 1929–30, 11 were in the Delray area and 11 in the Canal Point area of Florida. In the crop year of 1930–31, 13 farms were located in the former area and 19 in the latter. Foreign costs were obtained for both crop years from 21 farms, located in the vicinity of Habana, Cuba.

The findings of the Commission are published in a report entitled, "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Lima beans: Comparison of costs of domestic and Cuban Lima beans delivered at New York City

[Cents per pound]

Cost item	United States			Cuba		
	1929–30	1930–31	2-year average	1929–30	1930–31	2-year average
Production cost, including packing	6.6	7.2	6.9	4.0	4.2	4.1
Marketing cost	.3	.3	.3	1.3	1.4	1.3
Transportation to New York City	3.6	3.6	3.6	2.2	2.2	2.2
Total cost	10.5	11.1	10.8	7.5	7.8	7.6

The following tables show range of costs of domestic and foreign Lima beans in corresponding cost intervals for each of the crop years investigated.

Transportation charges from both areas in Florida are at a rate of 3.6 cents per pound, representing an average of freight and express charges weighted on the basis of actual receipts at New York City. Production in Cuba is in a narrow area with consequent slight variation in transportation.

Lima beans: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929–30

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Less than 7 cents			17.4	22.3
7 to 8 cents [3]			45.0	48.1
8 to 9 cents	23.9	42.5	35.2	26.8
9 to 10 cents	14.1	21.3	2.4	2.8
10 to 11 cents [4]	7.2	3.4		
11 to 12 cents	6.9	6.5		
12 to 14 cents	27.3	22.7		
14 cents or more	20.6	3.6		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	209		66½	
Production covered by costs (pounds)	467,740		373,218	
Average cost per acre	$147.71		$224.48	
Average yield per acre (pounds)	2,238		5,612	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	6.6		4.0	
Transportation and marketing expense	3.9		3.5	
Total average cost delivered at New York	10.5		7.5	

[1] Lake and east coast regions in Florida.
[2] Area 12 to 20 miles southwest of Habana, Cuba.
[3] Typical foreign group as indicated by average cost of 7.5 cents.
[4] Typical domestic group as indicated by average cost of 10.5 cents.

Lima beans: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1930–31

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Less than 7 cents			16.6	23.5
7 to 8 cents [3]	3.4	5.6	31.1	30.4
8 to 9 cents	11.1	19.5	33.0	30.8
9 to 10 cents	4.2	4.0	9.0	6.2
10 to 11 cents	2.9	2.9	2.3	.8
11 to 12 cents [4]	14.4	19.6	8.0	8.3
12 to 14 cents	33.5	31.5		
14 to 16 cents	7.7	4.2		
16 to 18 cents	9.2	7.0		
18 to 20 cents	6.3	3.0		
20 cents or more	7.3	2.7		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	478		71	
Production covered by costs (pounds)	836,255		300,832	
Average cost per acre	$125.93		$177.87	
Average yield per acre (pounds)	1,749		4,235	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	7.2		4.2	
Transportation and marketing expense	3.9		3.6	
Total average cost delivered at New York	11.1		7.8	

[1] Lake and east coast regions in Florida.
[2] Area 12 to 20 miles southwest of Habana, Cuba.
[3] Typical foreign group as indicated by average cost of 7.8 cents.
[4] Typical domestic group as indicated by average cost of 11.1 cents.

BEANS, SNAP OR STRING, GREEN OR UNRIPE (PAR. 765)

Green or unripe, snap or string beans are dutiable under paragraph 765 of the Tariff Act of 1930 at 3½ cents per pound. No change resulted from the investigation.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was conducted under section 336. Mexico, which supplies 95 per cent of the snap-bean imports into the United States, was found to be the principal competing country. Of the four areas where snap beans are grown in Mexico, the most important is Manuel, which is about 50 miles north of Tampico; the costs presented were obtained in this area.

Florida is the only State which ships snap beans without interruption through the import season (roughly, December to March, inclusive). Costs were therefore obtained in Florida, in the vicinities of Pompano, Broward County, and of Canal Point on Lake Okeechobee, designated in the report as the east coast and lake regions, respectively. Details of farms covered are shown on page 107 of the report; in 1930–31, the year selected for showing range of costs, costs were obtained from 18 farms on the east coast and from the same number of farms in the lake region. Details of farms for which costs were obtained in Mexico will be found on page 109 of the report; information was obtained for 10 farms in 1930–31. The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Beans, snap or string: Comparison of costs of domestic and Mexican beans delivered at principal markets

[Cents per pound]

Season	Domestic costs	Foreign costs	Amount by which domestic costs exceed foreign costs
1929–30	9.7	7.8	1.9
1930–31	11.0	8.5	2.5
Average	10.3	8.1	2.2

The figures shown above include the east coast and lake regions of Florida combined, and also transportation and marketing costs delivered at New York and Chicago for the domestic production and at Laredo, Tex. for the foreign production.

The following table shows a range of domestic and foreign costs for the crop of 1930–31 in the east coast and lake regions of Florida, compared with the crop raised in Mexico during the same season. On account of the wide variation in cost of production between the east coast and lake regions, the two areas are shown separately. The year 1930–31 is selected for purposes of illustration because its yields were fairly normal (p. 9 of the report). In the determination of the transportation costs to New York and Chicago, the weighted rate for the two areas was used for the domestic product and the weighted freight and express cost from Manuel, Mexico, to Laredo, Tex., for the foreign product. The domestic transportation rates from the two areas of production to the two markets vary but slightly (p. 108 of report).

Beans, snap or string, green or unripe: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season of 1930–31

[Cost at principal markets [1]]

	Lake district, Florida		East coast, Florida		Competitive foreign crop [2]	
	Acreage	Production	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*	*Per cent*
Less than 7 cents	21.7	53.9			6.4	12.8
7 to 8 cents	4.6	8.8			5.6	6.1
8 to 9 cents [3]	11.3	8.4			42.6	48.4
9 to 10 cents [4]	1.0	2.0	0.7	2.1		
10 to 11 cents	28.0	13.1	3.4	5.2	19.2	21.5
11 to 12 cents	13.8	6.6			11.6	6.1
12 to 13 cents			7.0	3.4		

[1] The chief markets for Florida snap beans are New York and Chicago and the principal market for snap beans imported from Mexico is Laredo, Tex.

[2] Mexico is the chief competing foreign country.

[3] Typical foreign cost interval as indicated by average cost of 8.5 cents.

[4] Typical lake district, Florida, cost interval as indicated by average cost of 9.1 cents.

Beans, snap or string, green or unripe: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season of 1930–31—Continued

[Cost at principal markets

	Lake district, Florida		East coast, Florida		Competitive foreign crop	
	Acreage	Production	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
13 to 14 cents	3.2	2.0	23.0	27.8		
14 to 15 cents			1.2	1.4		
15 to 20 cents [5]	7.4	2.9	47.6	52.2	14.6	5.1
20 cents or more	9.0	2.3	17.1	7.9		
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of acres covered by costs	1,555		2,228		858	
Production covered by costs (pounds)	3,314,880		7,168,200		474,610	
Average cost per acre	$112.68		$140.36		$33.37	
Average yield per acre (pounds)	1,209		2,100		540	
Farm cost per pound on basis of average yield	*Cents* 5.4		*Cents* 11.6		*Cents* 6.1	
Transportation and marketing expense	[6] 3.7		[6] 3.7		[7] 2.4	
Total average cost delivered at principal markets	9.1		15.3		8.5	

[5] Typical east coast, Florida, cost interval as indicated by average cost of 15.3 cents.
[6] Average marketing and transportation charges delivered at New York and Chicago.
[7] Average marketing and transportation charges delivered at Laredo, Tex.

PEAS, GREEN OR UNRIPE (PAR. 769)

Peas, green or unripe, were dutiable at 3 cents per pound, under paragraph 769 of the Tariff Act of 1930; by proclamation, effective January 1, 1932, the duty was changed to 3.9 cents per pound.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was instituted pursuant to Senate Resolution No. 414 (71st Cong.) and conducted under section 336 of the act of 1930. Mexico was the principal competing country. Costs were obtained for the 1929–30 and 1930–31 crop years and, in the case of California, the principal area of domestic production, for spring and fall crops. The Commission based its findings on the comparison of the costs of the spring crop in California and the winter crop in Mexico for the two years, both of which were found to be representative. Domestic costs were obtained from around Brawley and Calipatria in the Imperial Valley, Calif., for both of these crops, and at Ciudad Obregon (Cajeme) and Navojoa, Sonora, on the west coast of Mexico for the so-called winter crop. A total of 13 domestic farms were covered as indicated by the tabulation on page 84 of the report, and a total of 22 Mexican farms, as indicated by the tabulation on page 87 of the report. The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Peas: Comparison of costs of domestic and Mexican peas delivered at New York City

[Cents per pound]

Season	Domestic costs	Foreign costs	Amount by which domestic costs exceed foreign costs
1929–30	11.7	8.7	3.0
1930–31	13.7	8.9	4.8
Average	12.7	8.8	3.9

In the above costs are included transportation and other delivery costs to New York of 3.7 cents per pound for the domestic, and 3.5 cents per pound for the foreign product. The two areas of production in Mexico take the same transportation rate to New York. Production in the Imperial Valley is by relatively few large growers, the growers from whom costs were obtained averaging over 300 acres each, and representing about 28 per cent of the total acreage of the Valley. Since only seven of these grew a spring crop, domestic costs do not show much of a range although the acreage represented constituted a fair-sized sample. Since only five costs were obtained for the 1929 domestic spring crop, data are not available for a statement of cost range in that year.

In the following table there are shown the domestic costs for the 1930–31 crop in contrast to the foreign costs for the same year and also for the preceding year. A greater number of farms is covered by the foreign data than the domestic.

Peas, green or unripe: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs

[Cost at New York]

	Domestic spring crop 1930		Competitive foreign crop 1930–31		Previous foreign crop 1929–30	
	Acreage	Production	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Less than 8 cents			13.5	19.3	5.8	13.3
8 to 9 cents [1]			46.5	56.4	25.6	46.2
9 to 10 cents			4.0	4.5	16.8	15.9
10 to 11 cents					16.2	13.8
11 to 12 cents	15.1	26.7	16.9	11.4		
12 to 13 cents			3.5	2.2	9.7	4.0
13 to 14 cents [2]			6.0	2.9		
14 to 15 cents	36.9	41.2	7.7	3.0	17.4	5.5
15 to 20 cents	48.0	32.1			8.5	1.3
20 cents or more			1.9	.3		
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of acres covered by costs	2,355		3,251		4,395	
Production covered by costs (pounds)	2,875,600		5,901,885		7,247,745	
Average cost per acre	$131.92		$73.08		$88.04	
Average yield per acre (pounds)	1,576		2,321		2,281	
Farm cost per pound on basis of average yield	*Cents* 9.4		*Cents* 3.9		*Cents* 4.0	
Transporation and marketing expense	4.3		5.0		4.7	
Total average cost delivered at New York	13.7		8.9		8.7	

[1] Typical foreign cost interval as indicated by average costs of 8.9 and 8.7 cents.
[2] Typical domestic cost interval as indicated by average cost of 13.7 cents.

TOMATOES IN THEIR NATURAL STATE (PAR. 772)

Tomatoes in their natural state were dutiable under paragraph 772 of the Tariff Act of 1930 at 3 cents per pound. No change resulted from the investigation.

COST PERIOD AND SCOPE OF INVESTIGATION

The investigation was instituted pursuant to Senate Resolution No. 414 (71st Cong.) and conducted under section 336 of the act of 1930 with reference to the crop seasons of 1929–30 and 1930–31 as the cost periods, Mexico being the principal competing country. The Commission found that neither year alone nor the 2 years combined were representative for purposes of ascertaining differences in costs of production for the purposes of section 336. Because the period covered by the investigation was not representative and by reason of the exchange situation, the commission did not specify an increase or decrease in the rate of duty on tomatoes in their natural state. Domestic costs were obtained in areas on the east coast and west coast of Florida, but it was found that there was no significant competition between imports and the tomato crop produced on the west coast. Costs used in the comparison were obtained from 43 farms in Broward, Collier, and Dade Counties in what is referred to as the east coast south area. Foreign costs were obtained on 45 farms at Mochis, Sinaloa, and Culiacan on the west coast of Mexico. The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Tomatoes in their natural state: Comparison of costs of domestic and Mexican tomatoes delivered at New York and Chicago

[Cents per pound]

Season	Domestic costs	Foreign costs	Amount by which domestic costs exceed foreign costs
New York:			
1929–30	7.3	5.7	1.6
1930–31	9.8	6.0	3.8
Average	8.5	5.9	2.6
Chicago:			
1929–30	7.7	5.4	2.3
1930–31	10.2	5.7	4.5
Average	8.9	5.6	3.3

The four tables following show range of delivered costs for domestic and Mexican tomatoes at New York and at Chicago for the seasons 1929–30 and 1930–31. In Florida the 1930–31 season was wet and unusually cold. In Mexico the yield of tomatoes was normal in that season but unusually high in the preceding season. The season 1929–30 was therefore most normal for Florida and the season 1930–31 most normal for Mexico.

Transportation costs in the following tables are at average rates. Domestic shipments were from a single point and foreign shipments from a narrow area with only a 5 percent variation in transportation costs to the markets under consideration.

Tomatoes in their natural state: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929–30

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 4 cents			9.9	12.5
4 to 5 cents			15.7	16.9
5 to 6 cents [3]	1.5	3.0	47.4	52.5
6 to 7 cents	52.5	62.9	19.5	16.1
7 to 8 cents [4]	18.8	20.4	1.4	.5
8 to 9 cents	6.1	3.7	4.8	1.2
9 to 10 cents	4.4	3.4	.5	.2
10 to 11 cents	5.9	2.9	.8	.1
11 to 12 cents	3.9	1.9		
12 to 13 cents				
13 to 14 cents	2.6	.8		
14 to 15 cents	1.9	.7		
15 to 20 cents				
20 to 50 cents	1.6	.2		
50 cents or more	.8	.1		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	3,101		9,479	
Production covered by costs (pounds)	13,676,040		40,834,463	
Average cost per acre	$238.10		$131.04	
Average yield per acre (pounds)	4,614		4,368	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	5.2		3.0	
Transportation and marketing expense	2.1		2.7	
Total average cost delivered at New York	7.3		5.7	

[1] Florida east coast south area, 42 farms.
[2] Summary of 3 areas in Mexico, 41 farms.
[3] Typical foreign group as indicated by average cost of 5.7 cents.
[4] Typical domestic group as indicated by average cost of 7.3 cents.

Tomatoes in their natural state: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929–30

[Cost at Chicago]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 4 cents			20.0	24.4
4 to 5 cents			20.7	22.0
5 to 6 cents [3]	0.4	0.9	35.2	42.3
6 to 7 cents	44.6	52.8	16.7	9.5
7 to 8 cents [4]	27.6	32.2	1.3	.4
8 to 9 cents	3.5	2.2	5.3	1.3
9 to 10 cents	7.3	5.2	.8	.1
10 to 11 cents	.1	.1		
11 to 12 cents	7.7	4.1		
12 to 13 cents	1.9	.7		
13 to 14 cents				
14 to 15 cents	4.5	1.4		
15 to 20 cents				
20 to 50 cents	1.6	.3		
50 cents or more	.8	.1		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	3,101		9,479	
Production covered by costs (pounds)	13,676,040		40,834,463	
Average cost per acre	$238.10		$131.04	
Average yield per acre (pounds)	4,614		4,368	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	5.2		3.0	
Transportation and marketing expense	2.5		2.4	
Total average cost delivered at Chicago	7.7		5.4	

[1] Florida east coast south area, 42 farms.
[2] Summary for 3 areas in Mexico, 41 farms.
[3] Typical foreign group as indicated by average cost of 5.4 cents.
[4] Typical domestic group as indicated by average cost of 7.7 cents.

Tomatoes in their natural state: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1930–31

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 4 cents			1.1	3.0
4 to 5 cents	1.1	1.7	17.6	23.3
5 to 6 cents	30.8	72.0	12.1	16.7
6 to 7 cents [3]			48.0	50.1
7 to 8 cents	10.4	7.4	7.7	3.1
8 to 9 cents	4.3	2.5	10.3	2.7
9 to 10 cents [4]	16.0	7.9	2.8	1.0
10 to 11 cents	4.8	1.6		
11 to 12 cents	4.1	1.4		
12 to 13 cents	13.0	3.7		
13 to 14 cents	1.9	.3		
14 to 15 cents	1.0	.2		
15 to 20 cents	3.4	.7	.4	.1
20 to 50 cents	9.2	.6		
50 cents or more				
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	3,567		10,824	
Production covered by costs (pounds)	18,314,280		30,312,750	
Average cost per acre	$181.31		$100.91	
Average yield per acre (pounds)	2,360		3,058	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	7.7		3.3	
Transportation and marketing expense	2.1		2.7	
Total average cost delivered at New York	9.8		6.0	

[1] Florida east coast south area, 43 farms.
[2] Summary for 3 areas in Mexico, 45 farms.
[3] Typical foreign group as indicated by average cost of 6 cents.
[4] Typical domestic group as indicated by average cost of 9.8 cents.

Tomatoes in their natural state: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1930–31

[Cost at Chicago]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 4 cents	1.1	1.7	5.3	7.9
4 to 5 cents			15.3	19.5
5 to 6 cents [3]			23.6	26.1
6 to 7 cents	30.8	72.0	35.4	40.0
7 to 8 cents	7.1	5.1	7.1	2.7
8 to 9 cents	7.3	4.2	9.7	3.0
9 to 10 cents	16.7	8.6	3.2	.7
10 to 11 cents [4]	1.1	.5		
11 to 12 cents	6.7	2.2		
12 to 13 cents	4.3	1.6		
13 to 14 cents	10.0	2.5		
14 to 15 cents	1.5	.2		
15 to 20 cents	4.0	.8	.4	.1
20 to 50 cents	5.2	.4		
50 cents or more	4.2	.2		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	3,567		10,824	
Production covered by costs (pounds)	18,314,280		30,312,750	
Average cost per acre	$181.31		$100.91	
Average yield per acre (pounds)	2,360		3,058	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	7.7		3.3	
Transportation and marketing expense	2.5		2.4	
Total average cost delivered at Chicago	10.2		5.7	

[1] Florida east coast south area, 43 farms.
[2] Summary for 3 areas in Mexico, 45 farms.
[3] Typical foreign group as indicated by average cost of 5.7 cents.
[4] Typical domestic group as indicated by average cost of 10.2 cents.

CUCUMBERS IN THEIR NATURAL STATE (PAR. 774)

Cucumbers are dutiable, under paragraph 774 of the general Tariff Act of 1930, at 3 cents per pound; from Cuba at 3 cents per pound less 20 percent. No change resulted from the investigation.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was conducted under section 336. Cuba was found to be the principal competing country and the Isle of Pines the principal producing area. Costs were obtained for the 1929–30 and the 1930–31 crop years; these were found to be normal and representative only for Cuba. In Florida, costs of spring cucumbers were obtained in Sumter County and Hardee County, and of fall cucumbers in Hardee County and Lee County; details of the domestic farms and acreages covered are shown on page 155 of the published report, a total of 49 farms being covered. On the Isle of Pines, costs were obtained from a total of 21 farms; details of acreage are shown on page 157 of the report. The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Cucumbers: Comparison of costs of domestic and Cuban cucumbers delivered at New York City

[Cents per pound]

Season	Domestic costs	Foreign costs	Amount by which domestic costs exceed foreign costs
1929–30	7.3	6.4	0.9
1930–31	5.0	5.5	−.5
Average	6.1	6.0	.1

The figures shown above include transportation and other delivery costs to New York, amounting to 1.4 cents per pound for the domestic and 1.6 cents per pound for the foreign.

In the determination of the average domestic costs, the costs for two spring and two fall crops, obtained for each year of the investigation, were weighted by the shipments of cucumbers as reported by the United States Department of Agriculture. The following table shows range of domestic costs for spring and fall crops raised in Hardee County, Fla., compared with foreign costs of the crop raised on the Isle of Pines, in the season 1930–31. The year 1930–31 is selected for purposes of illustration because its yields were most nearly normal (p. 155 of the report), although not entirely so for the domestic crop. The two crops raised in Hardee County illustrate the data obtained with respect to other crops in Sumter and Lee Counties, except that they are somewhat lower in cost.

Cucumbers: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1930–31

[Cost at New York]

	Domestic (spring crop, Hardee County)		Domestic (fall crop, Hardee County)		Foreign (Isle of Pines, Cuba)	
	Acreage	Production	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Less than 3 cents			3.3	8.2		
3 to 4 cents	29.0	51.8	49.2	63.2		
4 to 5 cents [1] [2]	19.4	28.0	20.3	16.5	27.6	45.0
5 to 6 cents [3]	6.4	4.2	6.8	4.5	11.3	10.7
6 to 7 cents			6.8	2.9	48.8	40.0
7 to 8 cents	25.8	8.4	10.2	3.5	3.1	1.8
8 to 9 cents	19.4	7.6	3.4	1.2	4.1	1.8
9 cents or more					5.1	.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of acres covered by costs	15½		29½		97¾	
Production covered by costs (pounds)	89,250		201,250		657,792	
Average cost per acre	$180.17		$150.47		$199.47	
Average yield per acre (pounds)	6,215		6,245		6,603	
Farm cost per pound on basis of average yield	*Cents* 2.9		*Cents* 2.4		*Cents* 3.0	
Transportation and marketing expense	1.6		1.6		2.5	
Total average cost delivered at New York	4.5		4.0		5.5	

[1] Typical domestic group as indicated by average cost of 4.5 cents for spring crop.
[2] Typical domestic group as indicated by average cost of 4 cents for fall crop.
[3] Typical foreign group as indicated by average cost of 5.5 cents.

EGGPLANT IN ITS NATURAL STATE (PAR. 774)

Eggplant was dutiable under paragraph 774 of the general Tariff Act at 3 cents per pound; from Cuba at 3 cents per pound less 20 percent. The duty was reduced by proclamation, effective January 1, 1932, to 1½ cents per pound on full-duty imports and to 1⅕ cents on imports from Cuba.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was conducted under section 336 of the act of 1930. Cuba was found to be the principal competing country. Costs were obtained for the crop years 1929–30 and 1930–31, of which only the former was found to be representative. For that year costs were obtained from 23 domestic farms and 41 farms in Cuba. Domestic costs were obtained for Lee County and Manatee County, Fla., but it was found that there was no significant competition between imports and eggplant produced in Manatee County. The Commission, therefore, based its findings on the facts obtained in the investigation with respect to Lee County. Foreign costs were obtained on the Isle of Pines and in the vicinity of Herradura and Guira on the mainland of Cuba. The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Eggplant: Comparison of costs of domestic and Cuban eggplant delivered at New York City

[Cents per pound]

Season	Domestic costs	Foreign costs	Amount by which domestic costs exceed foreign costs
1929–30	4.5	3.8	0.7
1930–31	6.9	3.7	3.2
Average	5.7	3.7	2.0

The costs shown above include transportation and other delivery costs of 1.6 cents per pound for the domestic and of 1.5 cents per pound for the Cuban. Domestic transportation is at the rate applicable from Lee County, Fla., to New York City. Transportation on the foreign product amounts to 1.4 cents per pound from the mainland and 1.8 cents per pound from the Isle of Pines.

The following table shows cost ranges for the domestic and foreign crops in the 1929–30 period:

Eggplant: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929-30

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 3½ cents	4.6	11.3	24.3	44.6
3½ to 4 cents [3]	20.0	30.6	15.3	16.3
4 to 4½ cents	41.6	42.0	21.5	24.5
4½ to 5 cents [4]			24.3	11.2
5 to 5½ cents	3.1	3.1	2.8	1.4
5½ to 6 cents			1.4	.5
6 to 6½ cents			2.8	.9
6½ to 7 cents	12.3	6.8		
7½ to 8 cents	7.7	3.4	.7	.1
8 to 10 cents	9.2	2.7	6.9	.5
10 cents or more	1.5	.1		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	65		144	
Production covered by costs (pounds)	766,948		1,872,480	
Average cost per acre	$318.57		$221.05	
Average yield per acre (pounds)	11,799		13,003	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	2.7		1.7	
Transportation and marketing expense	1.8		2.1	
Total average cost delivered at New York	4.5		3.8	

[1] Lee County area in Florida.
[2] Summary for Isle of Pines, Guira, and Herradura areas.
[3] Typical foreign cost interval as indicated by average cost of 3.8 cents.
[4] Typical domestic cost interval as indicated by average cost of 4.5 cents.

OKRA IN ITS NATURAL STATE (PAR. 774)

Okra is dutiable under paragraph 774 of the general Tariff Act of 1930 at 50 percent ad valorem; from Cuba at 40 percent ad valorem. No change resulted from the Commission's investigation, because the domestic and imported articles are produced and marketed at different seasons of the year.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was conducted under section 336 of the act of 1930. Cuba was found to be the principal competing country. Costs were obtained for the crop years 1929–30 and 1930–31, both of which were found to be representative. Domestic costs were obtained from 17 farms in the first season and 20 in the second, in Marion County, Fla. The okra in Florida was largely of the long-podded type. Costs were obtained in Cuba for long-podded okra, principally marketed in New York, and short-podded okra, principally marketed in New Orleans, when imported. New York was found to be the chief competing market because of its larger supply of domestic long-podded okra in the importing season. Foreign costs for the long-podded type were obtained from 16 farms in the first season and 18 farms in the second, in the Artemisa area of Cuba. The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Okra, long-podded: Comparison of costs of domestic and Cuban okra delivered at New York City

[Cents per pound]

Cost item	United States			Cuba		
	1929–30	1930–31	2-year average	1929–30	1930–31	2-year average
Production and packing	3.7	3.4	3.6	5.4	5.6	5.5
Marketing	.3	.3	.3	1.3	1.1	1.2
Transportation to New York	3.8	3.8	3.8	2.6	2.6	2.6
Total	7.8	7.5	7.7	9.3	9.3	9.3

Importance of transportation is indicated by the above table. Both domestic and foreign production are in concentrated areas, with consequent slight variation in transportation from such areas to the principal market, New York.

The following tables show range of domestic and foreign delivered costs for the two crop years:

Okra, long-podded: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929–30

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 7 cents	9.8	23.4		
7 to 7½ cents	6.8	8.7	3.3	4.6
7½ to 8 cents [3]	15.7	15.9	14.6	16.7
8 to 8½ cents	36.3	34.9	4.9	3.0
8½ to 9 cents	11.8	6.8	2.4	2.5
9 to 10 cents [4]	19.6	10.3	44.7	46.9
10 cents or more			30.1	26.3
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	102		123	
Production covered by costs (pounds)	199,706		268,299	
Average cost per acre	$72.45		$117.77	
Average yield per acre (pounds)	1,958		2,181	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	3.7		5.4	
Transportation and marketing expense	4.1		3.9	
Total average cost delivered at New York	7.8		9.3	

[1] Marion County, Fla.
[2] Artemisa area in Cuba.
[3] Typical domestic group as indicated by average cost of 7.8 cents per pound.
[4] Typical foreign group as indicated by average cost of 9.3 cents per pound.

Okra, long-podded: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1930–31

[Cost at New York]

	Domestic [1]		Foreign [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 6½ cents	5.8	8.9		
6½ to 7 cents	8.3	15.9	7.5	3.7
7 to 7½ cents	14.6	24.0	2.9	3.7
7½ to 8 cents [3]	29.2	21.5	1.7	2.0
8 to 8½ cents	17.5	12.7	5.2	5.5
8½ to 9 cents	7.9	10.2	30.1	44.7
9 to 9½ cents [4]	2.5	1.8	15.0	18.9
9½ to 10 cents			9.8	11.2
10 to 10½ cents			6.4	3.9
10½ to 11 cents	1.7	.5		
11 to 12 cents	12.5	4.5		
12 to 13 cents			1.7	2.7
13 cents or more			19.7	3.7
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	120		173	
Production covered by costs (pounds)	201,465		293,490	
Average cost per acre	$57.09		$94.98	
Average yield per acre (pounds)	1,679		1,696	
	Cents		*Cents*	
Farm cost per pound on basis of average yield	3.4		5.6	
Transportation and marketing expense	4.1		3.7	
Total average cost delivered at New York	7.5		9.3	

[1] Marion County, Fla.
[2] Artemisa area in Cuba.
[3] Typical domestic group as indicated by average cost of 7.5 cents per pound.
[4] Typical foreign group as indicated by average cost of 9.3 cents per pound.

PEPPERS IN THEIR NATURAL STATE (PAR. 774)

Peppers are dutiable under paragraph 774 of the general Tariff Act of 1930 at 3 cents per pound; from Cuba at 2.4 cents per pound. By proclamation, effective January 1, 1932, the rate of duty was reduced to 2.5 cents per pound on full-duty imports and to 2 cents per pound on imports from Cuba.

COST PERIOD AND SCOPE OF INVESTIGATION

This investigation was instituted pursuant to Senate Resolution No. 414 (71st Cong.) and conducted under section 336 of the act of 1930, with costs obtained in the United States, Cuba, and Mexico for the crop years 1929–30 and 1930–31, of which only the former was found to be normal in respect to yield. Domestic costs were obtained from a total of 33 farms for 1929–30, 21 of which were in the Pompano and 12 in the Fort Myers area in Florida. For the same year costs were obtained in Cuba for a total of 43 farms, of which 12 were located on the Isle of Pines, 18 in the Herradura, and 13 in the Guira area, and in Mexico from 14 farms in the Mochis and Culiacan areas. Imports from Cuba were found to be ordinarily shipped to New York City and imports from Mexico ordinarily to both New York and Chicago; New York City was held to be the principal market.

The findings of the Commission are published in a report entitled "Fresh Vegetables," Report No. 39, second series, dated November 23, 1931.

COST COMPARISON AND RANGE OF COSTS

The costs found by the Commission in the investigation were as follows:

Peppers: Comparison of costs of domestic and foreign peppers delivered at chief competing markets

[Cents per pound]

Market and cost item	Domestic cost			Foreign cost		
	1929–30	1930–31	Average	1929–30	1930–31	Average
COMPARISON OF DOMESTIC AND CUBAN COSTS						
New York:						
Farm cost	4.8	5.3	5.1	2.5	2.1	2.3
Transportation and marketing expense	2.1	2.1	2.1	2.4	2.3	2.4
Total	6.9	7.4	7.2	4.9	4.4	4.7
COMPARISON OF DOMESTIC AND MEXICAN COSTS						
New York:						
Farm cost	4.8	5.3	5.1	3.4	2.7	3.0
Transportation and marketing expense	2.1	2.1	2.1	3.9	3.6	3.8
Total	6.9	7.4	7.2	7.3	6.3	6.8
Chicago:						
Farm cost	4.8	5.3	5.1	3.4	2.7	3.0
Transportation and marketing expense	2.8	2.8	2.8	3.4	3.1	3.3
Total	7.6	8.1	7.9	6.8	5.8	6.3

Range of delivered costs on shipments to New York City from Florida, Cuba, and Mexico is shown in the first table below, and range of delivered costs on shipments to Chicago from Florida and Mexico in the second table below. Transportation from Cuba to New York is at the rate of 1.9 cents per pound for the Isle of Pines and 1.5 cents for Herradura and Guira, average 1.7 cents per pound. Transportation in the case of Mexico is from the Mochis area only. Transportation in cents per pound on the domestic product is as follows:

Transportation to indicated market from—	To New York	To Chicago
Pompano	1.8	2.6
Fort Myers	2.2	2.4
Weighted average	1.9	2.6

Peppers: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929–30

[Cost at New York]

	Domestic [1]		Foreign (Cuba) [2]		Foreign (Mexico) [3]	
	Acreage	Production	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*
Less than 4 cents			9.8	26.6		
4 to 5 cents [4]	2.7	9.6	13.7	19.7		
5 to 6 cents	19.2	28.9	51.2	43.6		
6 to 7 cents [5]	15.4	16.0	12.7	6.9	17.2	24.8
7 to 8 cents [6]	27.5	23.0	3.9	1.9	29.8	34.3
8 to 9 cents	3.6	2.9	7.3	1.2	28.4	27.4
9 to 10 cents	13.9	10.7				
10 to 12 cents	3.3	1.6			24.6	13.5
12 to 14 cents	9.0	4.6				
14 cents or more	5.4	2.7	1.4	.1		
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of acres covered by costs	553		205		447	
Production covered by costs (pounds)	4,395,520		1,505,000		1,101,150	
Average cost per acre	$381.50		$183.52		$83.74	
Average yield per acre (pounds)	7,948		7,341		2,463	
Farm cost per pound on basis of average yield	*Cents* 4.8		*Cents* 2.5		*Cents* 3.4	
Transportation and marketing expense	2.1		2.4		3.9	
Total average cost delivered at New York	6.9		4.9		7.3	

[1] Pompano and Fort Myers areas in Florida.
[2] Isle of Pines, Herradura, and Guira areas in Cuba.
[3] Mochis and Culiacan areas in Mexico.
[4] Typical Cuban group as indicated by average cost of 4.9 cents.
[5] Typical domestic group as indicated by average cost of 6.9 cents.
[6] Typical Mexican group as indicated by average cost of 7.3 cents.

Peppers: Range of domestic and foreign costs in corresponding intervals, with percentages of acreage and production covered by costs for the season 1929–30

[Cost at Chicago]

	Domestic [1]		Foreign (Mexico) [2]	
	Acreage	Production	Acreage	Production
Delivered cost per pound:	*Percent*	*Percent*	*Percent*	*Percent*
Less than 6 cents	10.3	21.4	3.8	8.5
6 to 6½ cents	5.2	9.1	13.4	16.4
6½ to 7 cents [3]	11.8	14.6	21.5	26.9
7 to 7½ cents	5.2	5.7	8.3	7.4
7½ to 8 cents [4]	6.9	5.3	26.8	25.3
8 to 8½ cents	5.4	5.4	1.6	2.0
8½ to 9 cents	20.6	16.3		
9 to 9½ cents	2.0	1.8		
9½ to 10 cents	1.5	1.0		
10 to 11 cents	13.4	10.5	24.6	13.5
11 to 12 cents	3.3	1.6		
12 to 13 cents	9.0	4.6		
13 cents or more	5.4	2.7		
Total	100.0	100.0	100.0	100.0
Number of acres covered by costs	553		447	
Production covered by costs (pounds)	4,395,520		1,101,150	
Average cost per acre	$381.50		$83.74	
Average yield per acre (pounds)	7,948		2,463	
Farm cost per pound on basis of average yield	*Cents* 4.8		*Cents* 3.4	
Transportation and marketing expense	2.8		3.4	
Total average cost delivered at Chicago	7.6		6.8	

[1] Pompano and Fort Myers areas in Florida.
[2] Mochis and Culiacan areas in Mexico.
[3] Typical foreign group as indicated by average cost of 6.8 cents.
[4] Typical domestic group as indicated by average cost of 7.6 cents.

SCHEDULES 9 TO 13. TEXTILES

Dutiable items:
Cotton hosiery (par. 916).
Infants' wool knit outerwear, embroidered (par. 1529).

Free list items:
None.

COTTON HOSIERY (PAR. 916)

Under paragraph 916 of the act of 1922 the rate of duty on cut cotton hosiery was 30 percent ad valorem and on other cotton hosiery, 50 per cent. No change resulted from the Tariff Commission investigation conducted in 1923 under section 315 of the tariff act. Under paragraph 916 of the act of 1930, the same rates prevail.

In the Commission's investigation, which, as extended upon request of the President June 21, 1923, covered all cotton hosiery, Germany was found to be the principal competing country. Costs were obtained for the year 1922. Domestic costs used were from 32 companies operating 92 plants, of which 15 produced infants' mercerized striped-top socks and 16 produced men's mercerized half-hose, later to be referred to. Costs were obtained in Germany from 7 companies operating 7 plants of which only 2 produced samples of the above types selected for the final cost comparison.

The findings of the Commission are published in a report entitled "Cotton Hosiery," dated 1926.

COST COMPARISON AND RANGE OF COSTS

The following tables summarize the principal cost comparisons. Details will be found in Appendix A, and comment on the statistical methods, on pages 26 to 29 of the published report.

In the first of the following tables (table 10 of the report) are shown the results of a comparison of the unadjusted cost figures for the following classes of hosiery:

A—Infants' mercerized Jacquard-top socks; 2 domestic fashioned or partly fashioned samples and 2 foreign fashioned samples.

B—Infants' mercerized striped top socks; 25 domestic seamless samples and 2 foreign fashioned samples.

For convenience, a simple unweighted average of A and B is also stated in a final column.

In the second of the following tables (table 11 of the report) are shown the results of a comparison of the unadjusted cost figures for the following classes of hosiery:

A—Men's mercerized half-hose; 17 domestic seamless samples and 2 foreign fashioned samples.

B—Women's combed hose; 1 domestic fashioned sample and 1 foreign fashioned sample.

C—Women's mercerized hose; 1 domestic fashioned sample and 1 foreign fashioned sample.

D—Women's mercerized hose; 6 domestic seamless samples and 1 foreign fashioned sample.

For convenience, simple unweighted averages of various combinations of these data are shown in the remaining columns.

Cotton hosiery, full-fashioned and seamless, "having ribbed tops of two or more colors": Costs of production and rates of duty necessary to equalize differences in cost of production[1] in the United States and principal competing country (Germany)

[Per dozen pairs]

	A Infants' mercerized Jacquard-top socks		B Infants' mercerized striped-top socks		Simple average of A and B	
	Domestic (2 fashioned)[2]	Foreign (2 fashioned)	Domestic (25 seamless)	Foreign (2 fashioned)	Domestic	Foreign
I. Cost, transportation not included:						
Material	$0.601	$0.737	$0.646	$0.606	$0.624	$0.671
Labor	.991	.595	.620	.433	.805	.514
Manufacturing expenses	.735	.202	.385	.120	.560	.161
Total mill cost	2.327	1.534	1.651	1.159	1.989	1.346
Difference	$0.793		$0.492		$0.643	
Foreign valuation	$1.975		$1.400		$1.688	
Duty required to equalize (per cent)	40.15		35.14		38.09	
II. Cost, transportation included:						
Total mill cost	$2.327	$1.534	$1.651	$1.159	$1.989	$1.346
Transportation to New York[3]	.010	.052	.010	.052	.010	.052
Total cost (including transportation)[3]	2.337	1.586	1.661	1.211	1.999	1.398
Difference	$0.751		$0.450		$0.601	
Foreign valuation	$1.975		$1.400		$1.688	
Duty required to equalize (percent)	38.03		32.14		35.60	

[1] These costs do not include any interest, either actual or imputed.
[2] Full-fashioned tops and seamless feet.
[3] Transportation charges on the foreign hosiery include consular fees, freight, marine insurance, and customs brokers' charges. These charges are nondutiable. Transportation charges on the domestic hosiery are the freight charges.

Cotton hosiery, full-fashioned and seamless, "not having ribbed tops of two or more colors": Costs of production and rates of duty necessary to equalize differences in costs of production[1] in the United States and principal competing country (Germany)

[Per dozen pairs]

	A Men's mercerized half-hose		B Women's combed hose		C Women's mercerized hose		D Women's mercerized hose	
	Domestic (17 seamless)	Foreign (2 fashioned)	Domestic (1 fashioned)	Foreign (1 fashioned)	Domestic (1 fashioned)	Foreign (1 fashioned)	Domestic (6 seamless)	Foreign (1 fashioned)
I. Cost, transportation not included:								
Material	$1.156	$1.080	$1.720	$1.300	$2.143	$1.900	$1.641	$1.900
Labor	.780	.710	1.338	1.060	1.673	1.150	.604	1.150
Manufacturing expense	.470	.475	1.013	.650	.875	.750	.457	.750
Total mill cost	2.406	2.265	4.071	3.010	4.691	3.800	2.702	3.800
Difference	$0.141		$1.061		$0.891		[2] $1.098	
Foreign valuation	$3.75		$4.10		$5.50		$5.50	
Duty required to equalize (percent)	3.76		25.88		16.20		[2] 19.96	
II. Cost, transportation included:								
Total mill cost	$2.406	$2.265	$4.071	$3.010	$4.691	$3.800	$2.702	$3.800
Transportation to New York[3]	.020	.090	.030	.122	.030	.122	.030	.122
Total cost (including transportation)[3]	2.426	2.355	4.101	3.132	4.721	3.922	2.732	3.922
Difference	$0.071		$0.969		$0.799		[2] $1.190	
Foreign valuation	$3.75		$4.10		$5.50		$5.50	
Duty required to equalize (percent)	1.89		23.63		14.53		[2] 21.64	

See footnotes at end of table.

Cotton hosiery, full-fashioned and seamless, "not having ribbed tops of two or more colors": Costs of production and rates of duty necessary to equalize differences in costs of production [1] in the United States and principal competing country (Germany)—Continued

	Simple averages					
	A, B, C, and D		A, B, and C		B and C	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
I. Cost, transportation not included:						
Material	$1.665	$1.545	$1.673	$1.427	$1.932	$1.600
Labor	1.099	1.018	1.264	.973	1.505	1.105
Manufacturing expense	.704	.656	.786	.625	.944	.700
Total mill cost	3.468	3.219	3.723	3.025	4.381	3.405
Difference	$0.249		$0.698		$0.976	
Foreign valuation	$4.71		$4.45		$4.80	
Duty required to equalize (percent)	5.28		15.69		20.33	
II. Cost, transportation included:						
Total mill cost	$3.468	$3.219	$3.723	$3.025	$4.381	$3.405
Transportation to New York [3]	.027	.114	.026	.111	.030	.122
Total cost (including transportation) [3]	3.495	3.333	3.749	3.136	4.411	3.527
Difference	$0.162		$0.613		$0.884	
Foreign valuation	$4.71		$4.45		$4.80	
Duty required to equalize (percent)	3.44		13.78		18.42	

[1] These costs do not include any interest, either actual or imputed.
[2] Foreign cost being higher than the domestic cost, the difference stated in a percentage of the foreign valuation, as in the other columns, becomes negative.
[3] Transportation charges on the foreign hosiery include consular fees, freight, marine insurance, and customs brokers' charges. These charges are nondutiable. Transportation charges on the domestic hosiery are the freight charges.

Production data were obtained by types of product but were not available by specific styles for which costs were obtained. In the following table the range of production costs of two types is therefore shown in terms of number of samples rather than of quantity produced. It is not practicable to give the domestic costs of any other kinds of hosiery than "Infants' mercerized striped top socks" and "Men's mercerized half-hose" shown in the table without disclosing confidential information.

Cotton hosiery, seamless: Range of domestic costs in corresponding intervals, 1923

[Cost at New York]

Delivered cost per dozen pairs	Domestic			
	Infants' mercerized striped-top socks		Men's mercerized half-hose	
	Average cost	Number of samples	Average cost	Number of samples
Less than $1.20	$1.19	1		
$1.20 to $1.30	1.29	2		
$1.30 to $1.40				
$1.40 to $1.50				
$1.50 to $1.60	1.55	6		
$1.60 to $1.70	1.64	6		
$1.70 to $1.80	1.75	4		
$1.80 to $1.90	1.85	3	$1.83	1
$1.90 to $2.00	1.91	1		
$2.00 to $2.10	2.05	2	2.03	3
$2.10 to $2.20			2.13	1
$2.20 to $2.30			2.25	2
$2.30 to $2.40			2.38	2
$2.40 to $2.50			2.40	1
$2.50 to $2.60			2.55	2
$2.60 or more			2.89	5
Average	1.66		2.43	

INFANTS' WOOL KNIT OUTERWEAR, EMBROIDERED (PARS. 1114, 1529)

The Commission's investigation under section 336 covered infants' wool knit outerwear, whether embroidered or not embroidered, dutiable under paragraphs 1529 and 1114, respectively. Senate Resolution No. 325 (71st Cong.) directed an investigation of infants' wear classified under 1114 (d), and the inquiry was extended by the Commission to cover that classified under paragraph 1529.

Under paragraph 1529 (a) of the Tariff Act of 1930, infants' wool knit outerwear, embroidered or otherwise ornamented, was dutiable at 90 percent ad valorem. No change resulted from the investigation.

Under paragraph 1114 infants' wool knit outerwear, not embroidered, valued at more than $2 per pound, was dutiable at 50 cents per pound and 50 percent ad valorem. By proclamation, effective July 11, 1932, the duties were changed as follows: A decrease in the rates of duty expressly fixed in paragraph 1114 (d) of title I of said act on infants' outerwear, finished or unfinished, wholly or in chief value of wool, made or cut from Jersey fabric knit in plain stitch on a circular machine, not specially provided for, valued at more than $2 per pound, from 50 cents per pound and 50 percent ad valorem to 50 cents per pound and 25 percent ad valorem; and an increase in the rates of duty expressly fixed in paragraph 1114 (d) of title I of said act on infants' outerwear, knit or crocheted, finished or unfinished, wholly or in chief value of wool, and not specially provided for, valued at more than $2 per pound, from 50 cents per pound and 50 percent ad valorem to 50 cents per pound and 75 percent ad valorem.

This investigation was made under section 336 of the Tariff Act of 1930; the year 1930 being taken as the cost period. On outerwear, not embroidered, costs were obtained from nine domestic and five British producers but an array of these costs can not be made on account of their confidential character. On infants' wool knit outerwear, embroidered, for which Austria was found to be the principal competing country, costs were obtained from six domestic plants producing embroidered outerwear, and from two plants in Austria. The findings of the Commission are published in Report No. 48, second series.

COST COMPARISON AND RANGE OF COSTS

The cost comparison on infants' embroidered outerwear is detailed in Table 3 on page 23 of the published report, of which the following is an abstract.

Infants' embroidered wool knit outerwear: Comparison of costs of production and delivery to principal market, 1930

[Per dozen garments]

	Group 1		Group 2	
	Domestic	Austrian	Domestic	Austrian
Cost:				
Cost f. o. b. plant	$15.19	$6.59	$18.54	$8.89
Transportation to New York	.02	.29	.04	.33
Total	15.21	6.88	18.58	9.22
Cost differences in relation to dutiable values:				
Amount by which domestic costs exceed foreign costs	$8.33		$9.36	
Dutiable value of foreign samples	8.11		11.56	
Excess of domestic over foreign costs as a percentage of the dutiable value [1]	103.00		81.00	

[1] Average of percentages for individual groups, 92 per cent ad valorem. Present duty (in par. 1529 (a) of act of 1930), 90 percent ad valorem.

Production data were not available by specific styles costed. Costs within each group were weighted by the production of each company. The table following shows the cost range in terms of number of samples. The costs shown are delivered costs, including transportation and delivery as noted in the table above.

Eleven of the fifteen domestic samples in group 1 had a cost below the average, and 12 of the 14 domestic samples in group 2 had a cost below the average. Of the foreign samples, 5 of the 7 in group 1 had a cost above the average and 8 of the 14 in group 2 had a cost above the average.

Infants' embroidered wool knit outerwear: Range of domestic and foreign costs in corresponding intervals, 1930

[Cost at New York]

Delivered cost per dozen garments	Group 1 [1]				Group 2 [2]			
	Domestic		Foreign		Domestic		Foreign	
	Average cost	Number of samples	Average cost	Number of samples	Average cost	Number of samples	Average cost	Number of samples
Less than $7			$6.18	2				
$7 to $8			7.67	5				
$8 to $9							$8.06	6
$9 to $10							9.51	4
$10 to $11								
$11 to $12	$11.76	2					11.30	4
$12 to $13	12.62	1						
$13 to $14	13.25	3						
$14 to $15	14.32	3						
$15 to $16	15.24	3			$15.40	3		
$16 to $17	16.42	2			16.43	6		
$17 or more	17.03	1			19.67	5		
Average	15.21		6.88		18.58		9.22	

[1] Includes garments of sizes 1 to 3.
[2] Includes garments of sizes 2 to 6.

SCHEDULE 15. SUNDRIES

Dutiable items:
Sewed straw hats (par. 1504).
Boots and shoes (par. 1530).

SEWED STRAW HATS (PAR. 1504)

Under paragraph 1406 of the act of 1922 the rate of duty on sewed hats of straw and other materials was 60 percent, but by presidential proclamation, effective March 14, 1926, on the basis of the findings of the Tariff Commission, the rate on men's sewed straw hats, if valued at $9.50 or less per dozen, was increased to 88 per cent.

Under paragraph 1504 (b) (4) of the Tariff Act of 1930 sewed hats, bonnets, and hoods of straw and other materials were dutiable at $4 per dozen plus 60 per cent ad valorem. The rate was reduced by proclamation, effective March 7, 1931, to $3 per dozen and 50 percent ad valorem.

COST PERIOD AND SCOPE OF INVESTIGATION

The investigation under section 336 of the act of 1930, instituted pursuant to Senate Resolution No. 31 (71st Cong.), covered by Report No. 8, second series, included a cost study confined to the

sewed hats under paragraph 1504 (b) (4) and to the sennit types because these were found to be most important both in domestic production and in imports. The investigation was further confined to sennit hats of staple grades, that is, the medium or low-priced, because these constituted the bulk of consumption while those in the higher-priced range were largely sold on the basis of the reputation of the individual manufacturer. Costs were obtained for three major varieties of sennit hats, namely, split, improved, and flatfoot. Italy was found to be the principal competing country.

Domestic costs were obtained from 7 manufacturers; data for imported hats, from 5 importers. The cost comparison was based on 20 samples of domestic sennit hats and 10 samples of imported hats. The fiscal year ended June 30, 1930, was the cost period.

COST COMPARISON AND RANGE OF COSTS

Table 3 of the published report gives a summary of the comparison of costs of domestic and foreign sennit hats, reproduced below. For convenience the ratio of the differences in cost to the dutiable value of the several classes of hats is computed. There is also shown the ad valorem equivalent of the compound duty of $3 per dozen and 50 percent found by the Commission to be necessary to equalize the difference in costs for hats falling under paragraph 1504 (b) (4) considered as a whole.

Summary cost comparison of domestic and foreign sennit straw hats, 1929–30

	Split	Improved	Flatfoot
Domestic product:	*Per dozen*	*Per dozen*	*Per dozen*
Weighted average cost of production	$9.05	$11.41	$11.07
Transportation to New York City	.17	.16	.13
Total	9.22	11.57	11.20
Foreign product:			
Weighted average adjusted invoice price in foreign country	3.15	3.73	4.17
Transportation and delivery to New York City	1.07	1.12	1.10
Total	4.22	4.85	5.27
Excess of domestic over foreign costs	5.00	6.72	5.93
Dutiable value	4.06	5.31	5.95
Excess of domestic over foreign costs, ratio to dutiable value-percent	123	126½	100
Ad valorem equivalent of a compound duty of $3 per dozen plus 50 percent ad valorem	124	106	100

Transportation is shown by this table to be a minor element in the delivered costs.

Invoice data were used as evidence of foreign costs; these do not afford a statement of foreign cost range. To array the domestic costs of the improved variety would disclose confidential data.

The average domestic cost of $9.22 per dozen for the split variety was based on the costs of 9 samples from 5 companies and a total production of 44,300 dozen. Fifty-six percent of this production was above the average cost; the highest cost was 149 percent of the lowest.

The average domestic cost of $11.20 per dozen for the flatfoot variety was based on costs of 9 samples from 6 companies and a total production of 58,300 dozen. Forty-eight percent of this production was above the average cost; the highest cost was 148 percent of the lowest.

BOOTS AND SHOES (PAR. 1530)

Boots and shoes of leather are dutiable under the act of 1930 at 20 percent. The Commission in its investigation, instituted pursuant to Senate Resolution No. 313 (71st Cong.), distinguished three classes: Welt, turned, and McKay sewed. The findings of the Commission indicated an increase in the McKay sewed to 30 percent; a decrease in the turned to 10 percent; and no change in the duty on welt. Changes were effective January 1, 1932. The results of the investigation are set forth in Report No. 31, second series. The range of costs can be shown only for welt; the data obtained with respect to the other types being considered confidential.

BOOTS AND SHOES, WELT

The United Kingdom was the principal competing country with respect to welt shoes. The cost data obtained related to the year 1930 and were obtained from 15 domestic and 3 foreign producers.

Studies were made of the costs of two grades: (1) Medium, sold at from $6 to $8 per pair retail and (2) high grade, sold at $10 or more per pair. The medium grade was represented by sample specifications nos. 16 and 17, but comment can be made on only the latter on account of the confidential character of the foreign data. The high grade was represented by sample specifications nos. 25 and 11

COST COMPARISON

Following is the cost comparison shown on page 5 of the report:

Welt boots and shoes: Relation between domestic costs and costs in the United Kingdom, including delivery to New York and to Chicago, 1930

Sample number	Relative importance of the shoes of which sample is representative as compared with total for the group		Ratio of excess of domestic over foreign costs (+) or excess of foreign over domestic costs (−) to dutiable value	
	Domestic	United Kingdom	New York	Chicago
	Percent	*Percent*	*Percent*	*Percent*
11	15.5	21.2	+6.5	+4.9
16	2.2	30.0	−.4	−1.4
17	53.7	12.2	−5.9	−8.5
25	28.6	36.6	+5.7	+4.5
	100.0	100.0	----------	----------

RANGE OF COSTS DELIVERED AT NEW YORK AND CHICAGO

The two tables following show the range of costs obtained for samples 17, 25, and 11 delivered at New York and Chicago. The cost averages for the domestic groups are shown in percentages of the foreign costs in order not to disclose confidential information.

Welt shoes: Range of domestic costs delivered at New York City, 1930

Domestic delivered cost in relation to foreign delivered cost	Domestic				Foreign
	Group average cost percent of foreign average	Production covered by costs	Percent of production		Production covered by costs
			Group	Cumulation	
Sample No. 17:		*Pairs*			*Pairs*
Less than foreign average	87.13	4,229,119	69.10	69.10	
Over foreign average	105.83	1,409,365	23.03	92.13	
Do	123.65	482,122	7.87	100.00	
Total		6,120,606	100.00		19,966
Sample No. 25:					
Less than foreign average	85.22	535,885	16.44	16.44	
Over foreign average	103.19	885,323	27.16	43.60	
Do	113.29	1,838,721	56.40	100.00	
Total		3,259,929	100.00		59,618
Sample No. 11:					
Less than foreign average	90.26	571,200	32.36	32.36	
Over foreign average	105.51	191,700	10.86	43.22	
Do	116.60	1,002,020	56.78	100.00	
Total		1,764,920	100.00		34,637

Welt shoes: Range of domestic costs delivered at Chicago, 1930

Domestic delivered cost in relation to foreign delivered cost	Domestic				Foreign
	Group average cost percent of foreign average	Production covered by costs	Percent of production		Production covered by costs
			Group	Cumulation	
Sample No. 17:		*Pairs*			*Pairs*
Less than foreign average	84.22	4,229,119	69.10	69.10	
Over foreign average	103.21	1,409,365	23.03	92.13	
Do	120.20	482,122	7.87	100.00	
Total		6,120,606	100.00		19,966
Sample No. 25:					
Less than foreign average	84.40	535,885	16.44	16.44	
Over foreign average	101.43	885,323	27.16	43.60	
Do	110.67	1,838,721	56.40	100.00	
Total		3,259,929	100.00		59,618
Sample No. 11:					
Less than foreign average	88.41	571,200	32.36	32.36	
Over foreign average	104.50	191,700	10.86	43.22	
Do	113.82	1,002,020	56.78	100.00	
Total		1,764,920	100.00		34,637

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