

**UNITED STATES TARIFF COMMISSION**

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The Foreign Trade  
*of*  
Latin America

A Report on the Trade of Latin America  
With Special Reference to Trade  
With the United States

UNDER THE PROVISIONS OF TITLE III, PART II, SECTION 332 OF THE TARIFF ACT OF 1930

(In three parts)

PART III.—Selected Latin American Export Commodities

*(Revised)*

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UNITED STATES TARIFF COMMISSION

OSCAR B. RYDER, *Chairman*

LYNN R. EDMINSTER, *Vice Chairman*

EDGAR B. BROSSARD

E. DANA DURAND

E. M. WHITCOMB, *Acting Secretary*

---

Address all communications

UNITED STATES TARIFF COMMISSION

WASHINGTON 25, D. C.

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## FOREWORD

This report examines, for the decade 1929-38, the trade of the 20 Latin-American countries with the world and with the United States. It is divided into three parts; part I deals with the trade of Latin America as a whole, part II with the trade of individual Latin American countries, and part III with Latin American export commodities. Part I contains a short description of the Latin American area, a consideration of the commercial policies of the Latin American countries, an examination of the total trade of Latin America with the world and with the United States, and an analysis of special problems in the foreign trade of Latin America, including those arising out of the present war. Part II is a survey of the commercial policy and the foreign trade of each of the 20 Latin American republics, with special emphasis on the trend, composition, and destination of exports, and the trend, composition, and sources of imports. In addition, there is an analysis of the trade of the United States with the particular country. Part III deals individually with approximately 30 selected Latin American export commodities, for each of which there is a discussion of production, exports, trade barriers, competitive conditions, and the effects of the war.

This report was originally prepared and issued in 1939-40. The supply of the report has been exhausted and this new edition is therefore issued. For the most part the factual material is unchanged. Part I of the original report, however, included discussions and forecasts as to the probable effect of the war on Latin American trade which are no longer pertinent. In place of them, brief statements, for the most part without specific statistical data, are presented with respect to the actual effect of the war, up to the present time, on the exports and imports of the Latin American countries. In parts II and III no substantial changes have been made.

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THE FOREIGN TRADE OF LATIN AMERICA  
PART III.—*Selected Latin American Export Commodities*

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## INTRODUCTION

The importance of exports and of export markets to the economic life of Latin America cannot be overemphasized. The United States, like many other countries, has laid great stress on the importance of sales to Latin American countries. The ability of these countries to purchase the commodities of other nations, however, is dependent upon their ability to export their products in adequate volume and at adequate prices.

The future status of the various Latin American export commodities rests upon a number of factors. Some of these are internal and relate, among other things, to the attempts of the Latin American Republics to diversify their economies and their export trade, to build up domestic manufacturing, and to achieve a measure of self-sufficiency. But at the moment the primary considerations involved are external, and include the state of the world market for the products of Latin America, the special effects of the war upon the demand for and the prices of Latin American export products, the trade policies of other countries, and the adequacy of shipping facilities.

The market for Latin American export products is found chiefly in the United States and Europe. Except for a few commodities, the Latin American countries do not constitute important markets for one another's products.

Substantial improvement in the position of Latin American export commodities took place between 1932 and 1937. The recession in 1938 resulted in a decline in the volume and value of these exports, but they increased appreciably in 1939. Aside from the effects of the war, which are discussed in part I of this report and also in each of the commodity sections in this part of the report, there are certain factors which have militated against the recovery of Latin America's export trade to the position which it occupied in 1929 prior to the beginning of the depression. Not only is there a limit to the quantity which the industrial nations of the world, as at present constituted, can absorb of the products of Latin America, but also in recent years certain countries have adopted policies which have operated seriously to dislocate the export trade of Latin America.

The self-sufficiency programs and trade-balancing policies of certain countries—notably Germany, Italy, and Japan—and the development of Imperial preference within the British Empire have restricted certain markets for Latin American products. Moreover, the emergence of substitute products and of new sources of supply for commodities upon which the Latin American export trade depends, and the decline in the rate of growth of population in the United States and Europe are important forces which operate to affect Latin

American trade. The extent, however, to which factors other than the war may be significant depends upon the length of the war, its ultimate outcome, and the direction which the world economy will take after the cessation of hostilities.

Major commodities which are produced in Latin America partly for domestic use and partly for export include barley, corn, cotton, henequen and sisal, iron ore, meats, oats, tobacco, wheat, and yerba maté. Principal commodities of which all or the greater part of the production is exported include bananas, cacao, chicle, coffee, copper, hides and skins, lead, manganese ore, nitrate, oil-bearing seeds and nuts, petroleum, quebracho wood and extract, rubber, sugar, timber and lumber, tin, wool, and zinc. Most of these commodities are definitely produced for export, and lacking an export market, could find little or no use within the countries which produce them as the economies of these countries are now constituted.

In addition to foodstuffs and raw materials, Latin America has long been an important exporter of gold and silver. Practically all of the exports of these precious metals have been sent to the United States and the United Kingdom. In recent years, most of the gold and silver from Latin America has been shipped to this country. United States imports of gold and silver from Latin America were valued at 152 million dollars in 1929, 156 million dollars in 1938, and 133 million dollars in 1939.<sup>1</sup> The relative importance of imports of gold and silver in United States trade with Latin America has varied with fluctuations in the value of imports of merchandise, being greatest when imports of merchandise were least. In 1929 imports of gold and silver amounted to about 15 percent of the total value of merchandise imports from Latin America, in 1938 to 34 percent, and in 1939 to 26 percent. Most of the precious metals imported from Latin America are newly mined and as such represent to the exporting country a commodity shipment similar to exports of other minerals.<sup>2</sup> In only a few cases (chiefly that of Argentina) are shipments of gold and silver made from reserves to settle international balances or to provide for the servicing of dollar obligations.

In 1939, eight Latin American countries supplied 95 percent of all the gold and silver imported into the United States from Latin America.<sup>3</sup> Mexico alone supplied nearly 50 percent of the total; other leading suppliers were Colombia, Peru, and Chile. From these four countries, United States imports of the precious metals were large in comparison with imports of merchandise. For Mexico imports of gold and silver were substantially in excess of merchandise imports in 1939 (65.6 compared with 56.3 million dollars);<sup>4</sup> for Peru they amounted to nearly 90 percent of the value of merchandise imports; for Colombia to nearly 50 percent; and for Chile to over 25 percent (see table A).

<sup>1</sup> The decline in the value of the imports of these precious metals in 1939 was caused chiefly by the decline in the price of silver and in the quantity imported in that year.

<sup>2</sup> Many of the Latin American countries record their exports of gold and silver together with their exports of merchandise; in United States statistics, imports of precious metals are recorded separately.

<sup>3</sup> The 8 countries were: Mexico, 65.6 million dollars; Colombia, 23.2 million; Peru, 11.8 million; Chile, 11.0 million; Argentina, 5.1 million; Venezuela, 4.4 million; Nicaragua, 3.5 million; and Honduras, 2.8 million; total, 127.4 million dollars.

<sup>4</sup> Imports of gold and silver also exceeded imports of merchandise from Nicaragua in 1939 (3.5 compared with 2.9 million dollars).



TABLE A.—United States general-merchandise imports and imports of gold and silver from the 20 Latin American countries, in 1929, 1938, and 1939<sup>1</sup>

[Value in thousands of U. S. dollars]

| Country   | 1929        |                 |           |   | 1938        |                 |         |   | 1939 <sup>1</sup> |                 |         |   |
|---|-------------|-----------------|-----------|---|-------------|-----------------|---------|---|-------------------|-----------------|---------|---|
|   | Merchandise | Gold and silver | Total     | Percent of total imports from Latin America | Merchandise | Gold and silver | Total   | Percent of total imports from Latin America | Merchandise       | Gold and silver | Total   | Percent of total imports from Latin America |
| Total United States imports from the 20 Latin American countries..... | 1,014,127   | 151,793         | 1,165,920 | 100.0                                       | 453,517     | 155,785         | 609,302 | 100.0                                       | 518,162           | 133,414         | 651,576 | 100.0                                       |
| South America.....  | 647,623     | 99,213          | 746,836   | 63.2  | 258,690     | 69,793          | 328,483 | 63.9  | 313,153           | 59,424          | 372,577 | 57.2  |
| Argentina <sup>2</sup> .....  | 117,581     | 72,483          | 190,064   | 16.3  | 40,709      | 32,439          | 73,148  | 12.0  | 51,920            | 5,133           | 57,053  | 10.3  |
| Bolivia.....  | 379         | 4,242           | 4,621     | .4  | 865         | 648             | 1,513   | .3  | 2,029             | 725             | 2,754   | .4  |
| Brazil.....   | 207,680     | .....           | 207,680   | 17.8  | 97,933      | 1,465           | 99,398  | 16.3  | 107,243           | 3               | 107,246 | 16.5  |
| Chile.....  | 102,025     | 2,817           | 104,842   | 9.0   | 28,268      | 9,111           | 37,379  | 6.1   | 40,726            | 10,995          | 51,721  | 7.9   |
| Colombia.....   | 103,525     | 5,264           | 108,789   | 9.3   | 49,398      | 10,559          | 59,957  | 9.8   | 48,983            | 23,246          | 72,229  | 11.1  |
| Ecuador.....  | 5,830       | 1,422           | 7,252     | .6  | 2,584       | 2,667           | 5,251   | .9  | 3,514             | 3,096           | 6,610   | 1.0   |
| Paraguay.....   | 529         | .....           | 529       | .1  | 1,336       | .....           | 1,336   | .2  | 1,803             | .....           | 1,803   | .3  |
| Peru.....   | 30,167      | 12,321          | 42,488    | 3.7   | 12,813      | 11,418          | 24,231  | 4.0   | 13,948            | 11,785          | 25,733  | 4.0   |
| Uruguay.....  | 18,677      | 251             | 18,928    | 1.6   | 4,752       | .....           | 4,752   | .8  | 9,375             | .....           | 9,375   | 1.4   |
| Venezuela.....  | 51,224      | 383             | 51,607    | 4.4   | 20,032      | 1,486           | 21,518  | 3.5   | 23,612            | 4,441           | 28,053  | 4.3   |
| Central America.....  | 41,435      | 2,638           | 44,073    | 3.8   | 31,394      | 5,714           | 37,108  | 6.1   | 34,905            | 7,857           | 42,762  | 6.6   |
| Costa Rica.....   | 5,293       | 105             | 5,398     | .5  | 4,102       | 819             | 4,921   | .8  | 8,230             | 557             | 8,787   | 1.3   |
| El Salvador.....  | 3,830       | .....           | 3,830     | .3  | 5,672       | 460             | 6,132   | 1.0   | 6,957             | 659             | 7,616   | 1.2   |
| Guatemala.....  | 8,470       | 210             | 8,680     | .8  | 9,529       | 206             | 9,735   | 1.6   | 10,725            | 171             | 10,896  | 1.7   |
| Honduras.....   | 12,833      | 1,653           | 14,486    | 1.2   | 5,692       | 2,596           | 8,288   | 1.3   | 7,031             | 2,817           | 9,848   | 1.5   |
| Nicaragua.....  | 5,748       | 873             | 6,621     | .5  | 2,478       | 1,691           | 4,069   | .7  | 2,902             | 3,521           | 6,423   | 1.0   |
| Panama (Including the Canal Zone).....                                | 5,351       | 297             | 5,648     | .5  | 3,921       | 242             | 4,163   | .7  | 4,060             | 132             | 4,192   | .6  |
| Mexico.....   | 117,738     | 49,085          | 166,823   | 14.3  | 49,030      | 79,543          | 128,573 | 21.1  | 56,319            | 65,569          | 121,888 | 18.7  |
| West Indies.....  | 217,331     | 257             | 217,588   | 18.7  | 114,403     | 735             | 115,138 | 18.9  | 113,785           | 544             | 114,329 | 17.5  |
| Cuba.....   | 207,421     | 133             | 207,554   | 17.8  | 105,601     | 222             | 105,823 | 17.4  | 104,930           | 215             | 105,145 | 16.1  |
| Dominican Republic.....   | 8,465       | 79              | 8,544     | .8  | 5,745       | 507             | 6,252   | 1.0   | 5,824             | 266             | 6,090   | .9  |
| Haiti.....  | 1,445       | 45              | 1,490     | .1  | 2,997       | 6               | 2,993   | .5  | 3,031             | 63              | 3,094   | .5  |

<sup>1</sup> Preliminary.

<sup>2</sup> Argentina produces little gold and silver; imports from that country constitute chiefly shipments of monetary reserves.

Source: Compiled from official statistics of the U. S. Department of Commerce.

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Minor agricultural commodities exported from the Latin American countries include beans, lentils, chickpeas, and split peas; fresh fruits and vegetables; wine and spirits; honey; rice; indigo; starch; bees wax; oil of petit grain; and other vegetable oils. Forest products, other than the major items, quebracho and lumber, include a variety of crude drug and tanning materials; vanilla; balsam; coconuts; tagua nuts; tonka beans; kapok; carnauba wax; babassu nuts; zacaton root; cinchona bark; cocoa leaves; ipecacuanha; and furs. Minor products of the pastoral industries include alpaca wool, angora wool, cashmere wool, tallow and beef fat, and sausage casings. Minor mineral products are platinum, antimony, wolfram, bismuth, vanadium, and borax. Products which do not fall under any of these classifications include guano, pearls, mother-of-pearl, sponges, and straw hats.

This volume, part III of the report on the Foreign Trade of Latin America, contains a series of digests of information on principal Latin American export commodities. These digests cover 26 commodities and groups of commodities which account for by far the major portion of the total value of all Latin American exports. For each commodity, there is a discussion of the relative position of Latin America in world production; exports from Latin America; trade barriers, competitive conditions, and prices; and the effects of the war. Statistics of total exports and of exports to principal markets, in specified years, 1929 to 1938, are shown for each important Latin American country, as well as statistics of production, when available. Agricultural products discussed are bananas, barley, coffee, corn, cotton, henequen and sisal, oats, oil seeds, sugar, tobacco, and wheat. Forest products are cacao, chicle, oil-bearing nuts, quebracho, rubber, timber and lumber, and yerba maté. Pastoral products include hides and skins, meats, and wool; and mineral products are copper, iron ore, manganese, nitrate, petroleum, and tin.

Certain other commodities produced or grown in and exported from Latin America are not included in this report; these, except for gold and silver, are not important in relation to the total value of Latin American exports, but may be significant to particular exporting countries. The tables in part II, which show the principal exports from each of the 20 Latin American countries, indicate the relative importance of many of the commodities not discussed in this part. Further information on some of these commodities will be found in the analysis of Latin American exports and of United States imports from the Latin American countries in part II.

## BANANAS

### **Latin American production.**

Bananas constitute an important item in the local food supply in tropical regions. Although introduced from the Old World, the culture of bananas has attained its greatest development in the Western Hemisphere, largely because of the rapid growth of the export market to the United States. The fruit is cultivated in all frostless regions provided with sufficient rainfall from central Mexico to Paraguay and southern Brazil. Total production is difficult to estimate, since banana plants are to be found in nearly every dooryard in this area. Only the larger cities of Latin America are provided with bananas from commercial plantations.

Commercial banana culture has attained its greatest development in the tropical regions most accessible to United States ports, namely, in Mexico, the Central American republics, Colombia, and Cuba. In most of these countries production for local use is insignificant compared with the output for export. Brazil, however, with its large cities, has long possessed important commercial plantings supplying the domestic market, and later that country developed an export trade with Argentina, Uruguay, and the United Kingdom. Production for domestic consumption in Brazil is much larger than that for export, the total for both purposes in 1937 being estimated at 50 million bunches, of which about 7 million bunches were exported.

### **Latin American exports.**

In 1938 approximately 60 percent of the bananas entering international trade was exported from Latin American countries and 15 percent from Jamaica. Other important exporting areas have been Taiwan, the Canary Islands, French West Africa, and the Cameroons.

Total exports of bananas from the Latin American countries since 1929 have remained fairly stable in terms of quantity, although some countries have shown gains and others, losses. The impact of banana diseases has to a large extent been responsible for the shift in sources of supply. The greatest declines in exports have taken place in Honduras and Nicaragua, and the largest increases in Mexico, Brazil, Guatemala, Panama, and Ecuador. Exports of bananas from the principal producing countries of Latin America and of the world, in specified years, 1929 to 1938, are shown in table 1. Exports from Latin American exporting countries to principal markets, in specified years, 1929 to 1938, are shown in tables 2 to 11.

TABLE 1.—Bananas: Exports from principal producing countries of Latin America and from other important producing countries, in specified years, 1929 to 1938

| Country  | 1929             | 1932   | 1936    | 1937    | 1938    |
|--|------------------|--------|---------|---------|---------|
| Quantity (1,000 bunches of 50 pounds)  |                  |        |         |         |         |
| Mexico.....  | 5,686            | 4,206  | 14,529  | 14,752  | 14,345  |
| Honduras.....  | 29,899           | 31,058 | 13,615  | 14,150  | 9,417   |
| Guatemala.....   | 6,460            | 5,248  | 7,648   | 8,727   | 9,377   |
| Colombia.....  | 10,135           | 5,889  | 8,309   | 6,585   | 8,608   |
| Brazil.....  | 3,585            | 4,243  | 6,992   | 6,982   | 6,847   |
| Panama.....  | 4,678            | 1,463  | 5,825   | 5,838   | 6,400   |
| Panama Canal Zone.....   | 2,951            | 1,309  | 1,551   | 1,768   | 1,530   |
| Costa Rica.....  | 6,723            | 3,969  | 4,039   | 6,028   | 5,509   |
| Cuba.....  | 3,491            | 3,776  | 5,902   | 7,512   | 3,530   |
| Nicaragua.....   | 3,609            | 2,979  | 1,704   | 2,180   | 1,720   |
| Ecuador.....   | 680              | 240    | 1,553   | 1,433   | 1,561   |
| Total exports of Latin American countries listed above, including Panama Canal Zone..... | 77,917           | 64,380 | 71,667  | 75,955  | 68,844  |
| Jamaica.....   | 19,442           | 15,189 | 13,997  | 20,109  | 17,763  |
| Taiwan.....  | 3,427            | 4,230  | 6,051   | 6,913   | 5,883   |
| Canary Islands.....  | 8,872            | 6,775  | 6,256   | 4,344   | 4,605   |
| French West Africa.....  | 269              | 740    | 2,278   | 2,442   | 2,872   |
| Cameroons, British Mandated Territory.....   | ( <sup>1</sup> ) | 685    | 2,243   | 2,525   | 2,502   |
| All other.....   |                  | 3,307  | 4,784   | 10,094  | 11,872  |
| Total world exports <sup>2</sup> .....   | 109,927          | 95,306 | 107,276 | 122,382 | 114,341 |
| Percent of total world exports   |                  |        |         |         |         |
| Latin American countries listed above, including Panama Canal Zone.....                  | 70.9             | 67.6   | 66.8    | 62.1    | 60.2    |

<sup>1</sup> Not available.<sup>2</sup> Total of above principal exporting countries only.Source: Compiled by the United States Tariff Commission from official trade statistics of the Latin American countries and from the *International Yearbook of Agricultural Statistics*.

TABLE 2.—Bananas: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938             |
|--|---------|---------|---------|---------|------------------|
| Quantity (1,000 bunches of 50 pounds)                    |         |         |         |         |                  |
| Total, all countries.....                                | 3,585   | 4,243   | 6,992   | 6,982   | 6,847            |
| Argentina.....   | 2,320   | 2,930   | 5,199   | 5,162   | ( <sup>1</sup> ) |
| United Kingdom.....                                      | 865     | 1,001   | 1,206   | 1,171   |                  |
| Uruguay.....   | 345     | 177     | 425     | 486     |                  |
| All other.....   | 55      | 135     | 162     | 163     |                  |
| Value (1,000 milreis)                                    |         |         |         |         |                  |
| Total, all countries.....                                | 18,361  | 19,827  | 27,744  | 27,791  | 26,557           |
| Value (1,000 U. S. dollars)                              |         |         |         |         |                  |
| Total, all countries.....                                | 2,168   | 1,412   | 1,814   | 1,897   | 1,540            |
| Argentina.....   | 1,408   | 855     | 1,350   | 1,405   | ( <sup>1</sup> ) |
| United Kingdom.....                                      | 530     | 442     | 313     | 317     |                  |
| Uruguay.....   | 196     | 52      | 109     | 131     |                  |
| All other.....   | 32      | 63      | 42      | 44      |                  |
| Unit value per bunch of total exports <sup>2</sup> ..... | \$0.605 | \$0.333 | \$0.259 | \$0.272 | \$0.225          |

<sup>1</sup> Not available.<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 Brazilian bunch=0.617298 of a 50-pound U. S. bunch; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0580.

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TABLE 3.—Bananas: Exports from COLOMBIA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 bunches of 50 pounds)                    |         |         |         |         |         |
| Total, all countries.....                                | 10, 155 | 5, 890  | 8, 309  | 6, 585  | 8, 008  |
| Germany.....   | 480     | 1, 009  | 2, 031  | 1, 609  | 2, 207  |
| UNITED STATES.....                                       | 2, 026  | 2, 678  | 3, 594  | 4, 710  | 4, 595  |
| United Kingdom.....                                      | 3, 744  | 325     | 1, 267  |         | 493     |
| Netherlands.....   | 3, 894  | 853     | 1, 040  | 70      | 896     |
| Panama.....  |         | 64      | 262     | 192     | 256     |
| All other.....   | 2       | 960     | 15      | 4       | 181     |
| Percentage to the United States.....                     | 19.9    | 45.5    | 43.3    | 71.8    | 58.4    |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 8, 850  | 6, 007  | 8, 207  | 6, 983  | 8, 884  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 8, 564  | 5, 725  | 4, 692  | 3, 850  | 4, 969  |
| Germany.....   | 432     | 1, 173  | 1, 212  | 1, 031  | 1, 436  |
| UNITED STATES.....                                       | 1, 402  | 2, 187  | 2, 020  | 3, 431  | 2, 451  |
| United Kingdom.....                                      | 3, 231  | 304     | 755     |         | 303     |
| Netherlands.....   | 3, 437  | 843     | 637     | 42      | 607     |
| Panama.....  |         | 15      | 67      | 45      | 65      |
| All other.....   | 2       | 1, 093  | 1       | 1       | 107     |
| Percentage to the United States.....                     | 17.1    | 38.2    | 43.1    | 71.7    | 49.3    |
| Unit value per bunch of total exports <sup>1</sup> ..... | \$0.843 | \$0.972 | \$0.565 | \$0.600 | \$0.577 |

<sup>1</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Colombia. Converted to U. S. weights and currency by applying the following factors: 1 kilo=0.044092 bunch; 1 peso=1929, \$0.9676; 1932, \$0.9530; 1936, \$0.5717; 1937, \$0.5656; 1938, \$0.5563.

TABLE 4.—Bananas: Exports from COSTA RICA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 bunches of 50 pounds)                    |         |         |         |         |         |
| Total, all countries.....                                | 5, 723  | 3, 969  | 4, 039  | 6, 028  | 5, 509  |
| UNITED STATES.....                                       | 4, 822  | 3, 719  | 3, 656  | 5, 571  | 4, 328  |
| United Kingdom.....                                      | 1, 901  | 145     | 78      | 169     | 577     |
| Germany.....   |         |         | 232     | 76      | 343     |
| All other.....   |         | 105     | 73      | 212     | 261     |
| Percentage to the United States.....                     | 71.7    | 93.7    | 90.5    | 92.4    | 80.3    |
| Value (1,000 colones) <sup>1</sup>                       |         |         |         |         |         |
| Total, all countries.....                                | 18, 337 | 10, 783 |         |         |         |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 4, 564  | 2, 451  | 2, 073  | 3, 050  | 3, 007  |
| UNITED STATES.....                                       | 3, 287  | 2, 302  | 1, 876  | 3, 617  | 3, 393  |
| United Kingdom.....                                      | 1, 267  | 81      | 40      | 67      | 296     |
| Germany.....   |         |         | 119     | 39      | 176     |
| All other.....   |         | 60      | 36      | 107     | 134     |
| Percentage to the United States.....                     | 71.7    | 93.9    | 90.6    | 92.4    | 79.5    |
| Unit value per bunch of total exports <sup>2</sup> ..... | \$0.683 | \$0.618 | \$0.513 | \$0.506 | \$0.509 |

<sup>1</sup> Beginning in 1926 the statistics are recorded in U. S. dollars.

<sup>2</sup> See footnote 2, table 2.

<sup>3</sup> C. I. F. value.

Source: Compiled by the United States Tariff Commission from official trade statistics of Costa Rica. Converted to U. S. weights and currency by applying the following factors: 1 kilo=0.044092 bunch (50 pounds); 1 Costa Rican bunch=1.1 50-pound U. S. bunching; 1 peso=1929, \$0.2500; 1932, \$0.2273.

TABLE 5.—Bananas: Exports from CUBA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932             | 1936    | 1937    | 1938             |
|--|---------|------------------|---------|---------|------------------|
| Quantity (1,000 bunches of 50 pounds)                    |         |                  |         |         |                  |
| Total, all countries.....                                | 3,491   | 3,776            | 5,902   | 7,512   | 3,530            |
| UNITED STATES.....                                       | 3,487   | 3,776            | 5,593   | 7,512   | 3,529            |
| All other.....   | 4       | ( <sup>1</sup> ) | 309     |         | 1                |
| Percentage to the United States.....                     | 99.9    | 100.0            | 94.8    | 100.0   | 100.0            |
| Value (1,000 U. S. dollars) <sup>2</sup>                 |         |                  |         |         |                  |
| Total, all countries.....                                | 1,515   | 1,393            | 2,159   | 3,352   | 1,389            |
| UNITED STATES.....                                       | 1,513   | 1,393            | 2,074   | 3,352   | 1,389            |
| All other.....   | 2       | ( <sup>1</sup> ) | 85      |         | ( <sup>1</sup> ) |
| Percentage to the United States.....                     | 99.9    | 100.0            | 96.1    | 100.0   | 100.0            |
| Unit value per bunch of total exports <sup>3</sup> ..... | \$0.434 | \$0.369          | \$0.366 | \$0.446 | \$0.393          |

<sup>1</sup> Not over 500.<sup>2</sup> One peso=1 U. S. dollar (all years).<sup>3</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to U. S. weights by applying the following factor: 1 kilo=0.044092 bunch.

TABLE 6.—Bananas: Exports from ECUADOR to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932             | 1936 <sup>1</sup> | 1937 <sup>1</sup> | 1938 <sup>1</sup> |
|--|---------|------------------|-------------------|-------------------|-------------------|
| Quantity (1,000 bunches of 50 pounds)                    |         |                  |                   |                   |                   |
| Total, all countries.....                                | 680     | 240              | 1,553             | 1,433             | 1,561             |
| UNITED STATES.....                                       |         | 18               | 1,119             | 911               | 964               |
| Peru.....  | 71      | 11               | 27                | 25                | 67                |
| Chile.....   | 609     | 211              | 407               | 497               | 510               |
| All other.....   |         | ( <sup>2</sup> ) |                   |                   |                   |
| Percentage to the United States.....                     |         | 7.4              | 72.0              | 63.5              | 63.0              |
| Value (1,000 sucres)                                     |         |                  |                   |                   |                   |
| Total, all countries.....                                | 671     | 224              | 5,689             | 6,151             | 7,400             |
| Value (1,000 U. S. dollars)                              |         |                  |                   |                   |                   |
| Total, all countries.....                                | 134     | 37               | 542               | 560               | 552               |
| UNITED STATES.....                                       |         | 3                | 383               | 353               | 348               |
| Peru.....  | 14      | 1                | 9                 | 10                | 24                |
| Chile.....   | 120     | 33               | 150               | 197               | 180               |
| All other.....   |         | ( <sup>2</sup> ) |                   |                   |                   |
| Percentage to the United States.....                     |         | 7.5              | 70.7              | 63.0              | 63.1              |
| Unit value per bunch of total exports <sup>3</sup> ..... | \$0.197 | \$0.156          | \$0.349           | \$0.391           | \$0.354           |

<sup>1</sup> From the port of Guayaquil only. The exports from this port represent the bulk of the trade. Statistics do not check with total trade, which does not show detail by markets.

<sup>2</sup> Not over 500.<sup>3</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Ecuador. Converted to U. S. weights and currency by applying the following factors: 1 Ecuadoran bunch=0.738541 of a 50-pound U. S. bunch; 1 sucre=1929, \$0.2600; 1932, \$0.1667; 1936, \$0.0952; 1937, \$0.9010; 1938, \$0.0746.

TABLE 7.—*Bananas: Exports from GUATEMALA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 bunches of 50 pounds)                    |         |         |         |         |         |
| Total, all countries.....                                | 6,460   | 5,248   | 7,648   | 8,727   | 9,377   |
| UNITED STATES.....                                       | 6,420   | 3,264   | 7,010   | 8,651   | 8,706   |
| All other.....   | 40      | 1,984   | 638     | 76      | 671     |
| Percentage to the United States.....                     | 99.4    | 62.2    | 91.7    | 99.1    | 92.8    |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 3,212   | 2,624   | 3,770   | 4,302   | 4,748   |
| UNITED STATES.....                                       | 3,192   | 1,632   | 3,456   | 4,265   | 4,413   |
| All other.....   | 20      | 992     | 314     | 37      | 335     |
| Percentage to the United States.....                     | 99.4    | 62.2    | 91.7    | 99.1    | 92.9    |
| Unit value per bunch of total exports <sup>2</sup> ..... | \$0.497 | \$0.500 | \$0.493 | \$0.493 | \$0.506 |

<sup>1</sup> One quetzal=1 U. S. dollar (all years).<sup>2</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from statistics of the Pan American Union for 1929 and 1932 and from official trade statistics of Guatemala for 1936, 1937, and 1938. Converted to U. S. weights by applying the following factor: 1 Spanish quintal (101.43 pounds)=2.0286 bunches.

TABLE 8.—*Bananas: Exports from HONDURAS to principal markets, in specified years, 1929 to 1938* <sup>1</sup>

| Country  | 1929             | 1932             | 1936    | 1937             | 1938    |
|--|------------------|------------------|---------|------------------|---------|
| Quantity (1,000 bunches of 50 pounds)                    |                  |                  |         |                  |         |
| Total, all countries.....                                | 29,899           | 31,058           | 13,615  | 14,160           | 9,417   |
| UNITED STATES.....                                       | 24,712           | 19,809           | 10,869  | 12,890           | 8,220   |
| Germany.....   | 3,057            | 3,598            | 256     | 111              | 270     |
| United Kingdom.....                                      | 1,820            | 4,016            | 1,141   | 114              | 240     |
| Netherlands.....   | 310              | 3,415            | 1,176   | 727              | 481     |
| All other.....   | ( <sup>2</sup> ) | 220              | 173     | 308              | 206     |
| Percentage to the United States.....                     | 82.7             | 63.8             | 79.8    | 91.1             | 87.3    |
| Value (1,000 lempiras)                                   |                  |                  |         |                  |         |
| Total, all countries.....                                | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 11,929  | ( <sup>2</sup> ) | 8,452   |
| Value (1,000 U. S. dollars)                              |                  |                  |         |                  |         |
| Total, all countries.....                                | 20,869           | 13,950           | 5,965   | 6,299            | 4,226   |
| UNITED STATES.....                                       | 16,210           | 8,896            | 4,754   | 5,739            | 3,668   |
| Germany.....   | 2,746            | 1,616            | 115     | 50               | 121     |
| United Kingdom.....                                      | 1,635            | 1,803            | 490     | 45               | 106     |
| Netherlands.....   | 278              | 1,534            | 528     | 326              | 216     |
| All other.....   | ( <sup>2</sup> ) | 99               | 78      | 139              | 93      |
| Percentage to the United States.....                     | 77.7             | 63.8             | 79.7    | 91.1             | 87.3    |
| Unit value per bunch of total exports <sup>4</sup> ..... | \$0.698          | \$0.449          | \$0.438 | \$0.445          | \$0.449 |

<sup>1</sup> Fiscal years ended July 31, except 1938, when the fiscal year was changed by law to end June 30.<sup>2</sup> Not over \$50.<sup>3</sup> In 1929, 1932, and 1937 reported in U. S. dollars.<sup>4</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from statistics of the Pan American Union for 1929, 1932, and 1936; 1937 from Great Britain, Department of Overseas Trade; 1938 from official trade statistics of Honduras. Converted to U. S. weights and currency by applying the following factors: 1 Honduran bunch=1.11322 50-pound U. S. bunches; 1 lempira=1936, \$0.50; 1938, \$0.50.

TABLE 9.—*Bananas: Exports from MEXICO to principal markets, in specified years, 1929 to 1938*

| Country  | 1929                                  | 1932    | 1936    | 1937    | 1938    |
|--|---------------------------------------|---------|---------|---------|---------|
|  | Quantity (1,000 bunches of 50 pounds) |         |         |         |         |
| Total, all countries <sup>1</sup> .....                  | 5,686                                 | 4,206   | 14,529  | 14,752  | 14,345  |
|  | (Value (1,000 pesos))                 |         |         |         |         |
| Total, all countries <sup>1</sup> .....                  | 8,096                                 | 4,154   | 16,086  | 17,187  | 16,913  |
|  | Value (1,000 U. S. dollars)           |         |         |         |         |
| Total, all countries.....                                | 3,901                                 | 1,323   | 4,465   | 4,769   | 3,741   |
| Unit value per bunch of total exports <sup>1</sup> ..... | \$0.686                               | \$0.315 | \$0.307 | \$0.323 | \$0.261 |

<sup>1</sup> Practically all the bananas exported from Mexico are shipped to the United States.

<sup>2</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico converted to U. S. currency by applying the following factors: 1 peso=1929, \$0.4818; 1932, \$0.3185; 1936 \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 10.—*Bananas: Exports from NICARAGUA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929                                     | 1932    | 1936    | 1937    | 1938    |
|--|--|---------|---------|---------|---------|
|  | Quantity (1,000 bunches of 50 pounds)    |         |         |         |         |
| Total, all countries.....                                | 3,609                                    | 2,979   | 1,704   | 2,180   | 1,720   |
| UNITED STATES.....                                       | 3,609                                    | 2,979   | 1,688   | 2,161   | 1,698   |
| All other.....   | (1)                                      |         | 16      | 19      | 22      |
| Percentage to the United States.....                     | 100.0                                    | 100.0   | 99.1    | 99.1    | 98.7    |
|  | Value (1,000 U. S. dollars) <sup>2</sup> |         |         |         |         |
| Total, all countries.....                                | 1,985                                    | 2,238   | 770     | 985     | 777     |
| UNITED STATES.....                                       | 1,985                                    | 2,238   | 766     | 980     | 770     |
| All other.....   | (1)                                      |         | 4       | 5       | 7       |
| Percentage to the United States.....                     | 100.0                                    | 100.0   | 99.4    | 99.5    | 99.2    |
| Unit value per bunch of total exports <sup>1</sup> ..... | \$0.550                                  | \$0.751 | \$0.452 | \$0.452 | \$0.452 |

<sup>1</sup> Not over \$500.

<sup>2</sup> One cordoba=1 U. S. dollar (all years).

<sup>3</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from Report of the Collector General of Customs and High Commission, Nicaragua. Converted to U. S. weights by applying the following factor: 1 Nicaraguan bunch=0.86184 of a 50-pound U. S. bunch.



TABLE 11.—*Bananas: Exports from PANAMA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929     | 1932     | 1936     | 1937     | 1938     |
|--|----------|----------|----------|----------|----------|
| Quantity (1,000 bunches of 50 pounds)                    |          |          |          |          |          |
| Total, all countries.....                                | 4, 678   | 1, 463   | 5, 825   | 5, 838   | 6, 400   |
| UNITED STATES.....                                       | 4, 678   | 1, 353   | 5, 556   | 5, 756   | 6, 400   |
| All other.....   |          | 110      | 269      | 82       |          |
| Percentage to the United States.....                     | 100. 0   | 92. 5    | 95. 4    | 98. 6    | 100. 0   |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |          |          |          |          |          |
| Total, all countries.....                                | 2, 941   | 1, 728   | 2, 537   | 2, 578   | 2, 755   |
| UNITED STATES.....                                       | 2, 941   | 1, 672   | 2, 421   | 2, 547   | 2, 755   |
| All other.....   |          | 56       | 116      | 31       |          |
| Percentage to the United States.....                     | 100. 0   | 96. 8    | 95. 4    | 98. 8    | 100. 0   |
| Unit value per bunch of total exports <sup>2</sup> ..... | \$0. 629 | \$1. 181 | \$0. 435 | \$0. 442 | \$0. 430 |

<sup>1</sup> One balboa=1 U. S. dollar (all years).

<sup>2</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Panama (1929, 1932, and 1936) and *Foodstuffs Round the World* (1937 and 1938).

The United States was the first extratropical banana market to be developed. It is still the largest import market for bananas in the world, taking 70 to 80 percent of the bananas exported from Latin American countries, and about 50 percent of all those entering international trade. The export trade in bananas had its practical beginning in 1885; by 1898 the United States was importing 12 million bunches. In 1929 the United States imported 65 million bunches; in 1937 nearly 67 million bunches; in 1938, 59 million bunches; and in 1939, 57 million bunches.

After the development of markets in the United States and Canada, markets were opened in Europe, the first shipments from Latin America to the United Kingdom being made in 1903. Exports to the United Kingdom, France, and Germany increased appreciably, but were interrupted by the World War. After that war, exports to European markets again increased. Europe took about 31 million bunches from all sources in 1929 as compared with 44 million in 1938; but that area has been a market of minor importance for bananas from the Latin American countries.<sup>1</sup> Germany, the United Kingdom, and the Netherlands, the principal European markets, combined have taken about 6.5 million bunches annually from Latin America, or from 8 to 10 percent of total Latin American exports. Brazil is the principal Latin American source of bananas purchased by the United Kingdom, but in 1937 only about 17 percent of its exports went to that country.<sup>2</sup> Colombia has recently been the principal Latin American supplier of bananas to Germany, as well as an important source for the Netherlands and the United Kingdom. In 1938, exports from Colombia to Germany represented about 25 percent of Colombia's total shipments of bananas, those to the Netherlands 10

<sup>1</sup> Exports from Jamaica, a British Colony, are very large, approximating 20 million bunches annually, they go principally to the United Kingdom, Canada, and Germany. Jamaica is the main source of imports into the United Kingdom. Germany in 1938 received about equal quantities from Africa, the Canary Islands, and Colombia, and substantial quantities from Jamaica. The principal sources for France are its African possessions and the French West Indies.

<sup>2</sup> Statistics showing exports of bananas from Brazil to principal markets in 1938 are not available.

percent, and to the United Kingdom 5 percent. No other Latin American country ships so large a proportion of its total exports to Europe, but European markets are of some importance to Costa Rica and Honduras. For most of the countries the United States takes practically all the exports which do not go to Europe.

#### Trade barriers, competitive conditions, and prices.

Bananas are not grown in the United States in commercial quantities and enter this market free of duty.<sup>3</sup> They are also free of duty in Germany. The United Kingdom assesses a duty of 2 shillings 6 pence per hundredweight (112 pounds) on bananas from non-Empire countries; those from Empire countries are admitted free of duty. This preference explains in large part the importance of Jamaica as a supplier of bananas in the United Kingdom. In the Netherlands, bananas have been subject to a duty of 12 percent ad valorem and to a fee of 0.02 florin per net kilogram; bananas from colonies of the Netherlands are accorded preferential rates.

Although the average wholesale price of bananas in New York declined during the period 1926-32, the price of bananas has not followed the general price trend since that time. After 1932 the price for Honduras 9's<sup>4</sup> ranged between \$2.51 per bunch (1937) to \$2.80 per bunch (1935); in 1939 it was \$2.72 per bunch. With the outbreak of war in Europe, the price declined from \$2.82 per bunch in August 1939 to \$2.30 in the following November. In December, however, it rose sharply to \$3.25 per bunch, and then declined to \$2 in February and March 1940. In May and June the price advanced to \$3 per bunch. (See table 13.)

TABLE 12.—Bananas: Average wholesale prices at New York, 1926-40

| Year      | Price <sup>1</sup> | Month          | Price <sup>1</sup> |
|-----------|--------------------|----------------|--------------------|
|           | <i>Per bunch</i>   |                | <i>Per bunch</i>   |
| 1926..... | \$2.45             | 1939:          |                    |
| 1927..... | 2.20               | August.....    | \$2.82             |
| 1928..... | 2.10               | September..... | 2.50               |
| 1929..... | 1.77               | October.....   | 2.38               |
| 1930..... | 1.90               | November.....  | 2.30               |
| 1931..... | 1.63               | December.....  | 3.25               |
| 1932..... | 1.73               | 1940:          |                    |
| 1933..... | 2.64               | January.....   | 2.53               |
| 1934..... | 2.76               | February.....  | 2.00               |
| 1935..... | 2.80               | March.....     | 2.00               |
| 1936..... | 2.65               | April.....     | 2.88               |
| 1937..... | 2.51               | May.....       | 3.00               |
| 1938..... | 2.53               | June.....      | 3.00               |
| 1939..... | 2.72               |                |                    |

<sup>1</sup> The prices quoted are for Jamaica 9's through 1932, and for Honduras 9's thereafter.

Source: U. S. Bureau of Labor Statistics, *Wholesale Prices*.

#### Effects of the war.

Nearly all of the European supply of bananas has been imported from sources outside of the Continent, and about 70 percent of it has been furnished by the tropical countries of the Western Hemisphere. The combined imports of three countries—the United Kingdom,

<sup>3</sup> Tariff Act of 1930, par. 1618. Bananas were bound free of duty in trade agreements concluded between the United States and Haiti, Honduras, Colombia, Guatemala, Nicaragua, Costa Rica, and Ecuador. The agreement with Ecuador (the latest agreement affecting bananas) became effective October 23, 1933.

<sup>4</sup> The numerical designation indicates the number of hands of bananas on each stem. The average weight of a bunch of Honduras 9's probably exceeds 50 pounds.

France, and Germany—have accounted for more than 80 percent of the total imports into Europe; the United Kingdom alone has accounted for more than 40 percent.

More than 80 percent of the bananas entering international trade are exported from Latin America. The United States is the largest importer of bananas in the world, taking from 70 to 80 percent of all bananas exported from Latin America and over 50 percent of all those entering international trade.

Bananas entering international trade for consumption outside of the tropics may be classified as a semiluxury which, during wartime, would not be regarded as an essential foodstuff by belligerent countries. Their consumption in such countries, therefore, is likely to be greatly curtailed. But, inasmuch as the market in European countries for bananas produced in Latin America is relatively small, the Latin American banana trade in the aggregate may not be greatly affected. The trade of Colombia and Brazil is the most vulnerable, inasmuch as a substantial proportion of their trade has been with Europe. Should exports of bananas to Europe from Latin America and from European possessions in the Western Hemisphere be curtailed during the present war, a surplus would become available for sale in other markets, especially the United States. Shipments to the United States, however, may possibly be reduced by a shortage in shipping.

## BARLEY

Barley, one of the important cereals, is used for animal feed, malt, and human food. About 75 percent of the world crop is fed to livestock, from 20 to 25 percent is malted, and less than 1 percent is used for food. Barley is of two main types with respect to the arrangement of kernels in the head—6-rowed and 2-rowed. In North America and South America, the 6-rowed type is used for malting as well as for feed; in Europe, the 2-rowed variety is used principally for malting, and the 6-rowed for feeding. Barley is one of the hardiest and most widely distributed of the cereals; it is grown near the Arctic Circle and under semiarid conditions in the tropics. The bulk of the crop, however, is produced in temperate regions where the summers are too cool and too short for good corn crops.<sup>1</sup> The production of barley, like that of other agricultural crops fluctuates from year to year in accordance with weather conditions.

### Position of Latin America in world production.

Of the total world production of barley in 1938 (about 2.4 billion bushels), European countries produced about 50 percent, the United States 11 percent, and the Latin American countries 1.1 percent. (See table 1.) The Soviet Union is the world's largest producer of barley; other large producers, named in the order of their importance, are the United States, Germany,<sup>2</sup> Turkey, Canada, and British India. In 1938 the crop in the Soviet Union amounted to 340 million bushels and that of the United States to 253 million bushels. The average United States crop is about 250 million bushels. Of this total about 75 million bushels enter domestic trade, and from 10 to 15 million bushels are exported; the remainder is used as feed by the grower or is sold locally. Although the United States is customarily a net exporter of barley, imports, principally from Canada, are significant in years of short domestic crops.

Argentina and Chile are the principal barley-growing countries of Latin America. In 1938 they produced 22 million bushels and 3.4 million bushels, respectively, but crops were small in that year because of a drought. The annual average production in Argentina during the period 1932-38 was 28 million bushels, and in Chile, 5.3 million bushels.

<sup>1</sup> The feeding value of barley is about 95 percent of that of corn.

<sup>2</sup> Should production of barley in Czechoslovakia, Poland, and Denmark be added to production in Germany, that country would become the largest world producer, and the United States would rank third.

TABLE 1.—*Barley: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country  | 1929                                  | 1932      | 1936      | 1937      | 1938      |
|--|---------------------------------------|-----------|-----------|-----------|-----------|
|  | Quantity (1,000 bushels of 48 pounds) |           |           |           |           |
| Argentina.....                                   | 16,131                                | 32,150    | 29,854    | 23,585    | 22,046    |
| Chile.....                                       | 4,589                                 | 6,203     | 4,416     | 7,492     | 3,445     |
| Total Latin American countries listed above..... | 20,720                                | 38,353    | 34,270    | 31,077    | 25,491    |
| Soviet Union.....                                | 331,311                               | 231,024   | (1)       | (1)       | 340,769   |
| UNITED STATES.....                               | 279,924                               | 298,313   | 147,475   | 220,327   | 253,005   |
| Germany.....                                     | 146,089                               | 147,647   | 156,117   | 167,081   | 195,134   |
| Turkey.....                                      | 83,775                                | 53,221    | 98,913    | 104,719   | 110,277   |
| Canada.....                                      | 102,313                               | 80,773    | 71,922    | 83,124    | 102,242   |
| British India.....                               | 117,600                               | 111,440   | 108,733   | 107,704   | 97,487    |
| Japan.....                                       | 80,358                                | 77,711    | 68,944    | 72,347    | 64,186    |
| Poland.....                                      | 76,233                                | 64,339    | 64,365    | 62,620    | 62,981    |
| Denmark.....                                     | 51,093                                | 46,348    | 41,254    | 50,496    | 62,432    |
| Czechoslovakia.....                              | 64,072                                | 69,119    | 46,796    | 51,212    | 61,022    |
| Morocco.....                                     | 47,316                                | 47,146    | 70,106    | 37,942    | 49,867    |
| Algeria.....                                     | 40,445                                | 30,901    | 29,479    | 27,329    | 26,967    |
| Danube Basin <sup>1</sup> .....                  | 185,317                               | 131,968   | 138,498   | 100,454   | 107,117   |
| All other.....                                   | 791,234                               | 845,667   | (1)       | (1)       | 809,025   |
| Total world production.....                      | 2,418,000                             | 2,274,000 | 2,184,000 | 2,171,000 | 2,368,000 |
|  | Percent of world production           |           |           |           |           |
| Latin American countries listed above.....       | 0.9                                   | 1.7       | 1.6       | 1.4       | 1.1       |

<sup>1</sup> Not available.<sup>2</sup> Includes Hungary, Yugoslavia, Bulgaria, and Rumania.Source: Compiled from U. S. Department of Agriculture, *Agricultural Statistics*.**Latin American exports.**

The international trade in barley, excluding flour and malt, usually ranges between 100 and 180 million bushels annually. Of total world exports of barley in 1938 (approximately 120 million bushels), Canada supplied about 14 percent, the United States<sup>2</sup> about 13 percent, Poland 9 percent, Argentina 8.5 percent, and Chile about 2.5 percent. (See table 2.) Among the importing countries, the United Kingdom, Belgium, Germany, the Netherlands, and Denmark have been the most important.

The quantities of barley exported from Argentina and Chile to foreign markets have fluctuated widely. Argentina customarily exports from 11 to 13 million bushels, and ranks as one of five leading exporters. Most of the exports from Argentina are used for feed. Exports from Chile range from about 1 to 3.5 million bushels, and to a great extent consist of types that are suitable for malting. Argentina exports no barley malt, but exports of malt from Chile amounted to 15.2 million pounds valued at \$408,000 in 1937, and 16.7 million pounds valued at \$549,000 in 1938.<sup>4</sup>

The principal foreign markets for Argentine barley have been Germany, the Netherlands, Belgium, the United Kingdom, and Denmark; for Chile, they have been Germany, the United Kingdom, and Belgium. (See tables 3 and 4.) Although the quantities of barley exported to Germany have fluctuated widely in recent years, that country has been the best market for Argentine barley, except when Argentina exported unusually large quantities to the Netherlands in 1936 and to Belgium and the United Kingdom in 1937.

<sup>3</sup> United States barley is exported from the Pacific coast even when considerable quantities of imported grain enter the central and eastern markets of this country.<sup>4</sup> 100 pounds of malt are the equivalent of about 2.67 bushels (48 pounds) of barley.

The United Kingdom and Belgium have usually been the best markets for Chilean barley, although Germany was the principal purchaser in 1938.

TABLE 2.—Barley: Exports from principal exporting countries of Latin America and of the world, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 48 pounds)            |         |         |         |         |         |
| Argentina.....                                   | 11,483  | 12,909  | 11,344  | 11,689  | 9,708   |
| Chile.....                                       | 2,383   | 910     | 2,236   | 2,039   | 3,493   |
| Total Latin American countries listed above..... | 13,866  | 13,819  | 13,580  | 13,728  | 13,201  |
| Canada.....                                      | 16,987  | 9,992   | 18,935  | 10,680  | 17,445  |
| UNITED STATES.....                               | 29,523  | 7,043   | 7,377   | 11,473  | 16,129  |
| Poland and Danzig.....                           | 11,220  | 6,698   | 17,326  | 8,636   | 10,932  |
| Rumania.....                                     | 53,035  | 24,913  | 23,977  | 14,565  | 7,964   |
| Iraq.....  | 4,096   | 3,614   | 11,549  | 13,176  | 7,525   |
| Turkey.....                                      | 79      | 4,098   | 1,077   | 5,202   | 5,691   |
| Australia.....                                   | 1,359   | 3,044   | 3,245   | 2,685   | 5,026   |
| Denmark.....                                     | 3,270   | 849     | 3,100   | 6,480   | 4,917   |
| Czechoslovakia.....                              | 5,600   | 8,039   | 2,651   | 761     | 2,636   |
| French Morocco.....                              | 10,378  | 8,930   | 13,574  | 1,093   | 1,608   |
| All other.....                                   | 31,158  | 32,828  | 23,100  | 24,943  | 27,568  |
| Total world exports.....                         | 180,571 | 123,657 | 139,491 | 113,822 | 120,642 |
| Percent of total world exports                   |         |         |         |         |         |
| Latin American countries listed above.....       | 7.7     | 11.2    | 9.7     | 12.1    | 10.9    |

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Latin American countries and *International Yearbook of Agricultural Statistics*. Converted to U. S. measure by applying the following factor: 1 quintal=4.592917 bushels of 48 pounds.

TABLE 3.—Barley: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 48 pounds)                     |         |         |         |         |         |
| Total, all countries.....                                 | 11,483  | 12,909  | 11,344  | 11,689  | 9,708   |
| Germany.....  | 5,950   | 4,938   | 2,213   | 57      | 4,391   |
| Netherlands.....  | 3,801   | 4,347   | 6,015   | 3,227   | 2,257   |
| Belgium.....  | 819     | 1,444   | 1,066   | 3,996   | 1,366   |
| United Kingdom.....                                       | 360     | 745     | 592     | 2,343   | 745     |
| Denmark.....  | 120     | 871     | 98      | 667     | 575     |
| All other.....  | 433     | 564     | 1,360   | 1,399   | 374     |
| Value (1,000 paper pesos)                                 |         |         |         |         |         |
| Total, all countries.....                                 | 19,026  | 17,988  | 14,675  | 21,241  | 18,388  |
| Value (1,000 U. S. dollars) <sup>1</sup>                  |         |         |         |         |         |
| Total, all countries.....                                 | 7,965   | 4,625   | 4,282   | 6,555   | 5,467   |
| Germany.....  | 4,139   | 1,795   | 745     | 33      | 2,526   |
| Netherlands.....  | 2,613   | 1,535   | 2,358   | 1,795   | 1,287   |
| Belgium.....  | 599     | 510     | 442     | 2,243   | 705     |
| United Kingdom.....                                       | 293     | 264     | 229     | 1,330   | 435     |
| Denmark.....  | 84      | 323     | 46      | 372     | 341     |
| All other.....  | 297     | 198     | 462     | 782     | 173     |
| Unit value per bushel of total exports <sup>2</sup> ..... | \$0.694 | \$0.358 | \$0.377 | \$0.561 | \$0.563 |

<sup>1</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso=2.27271 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5944.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measure and currency by applying the following factors: 1 metric ton=45.9292 bushels of 48 pounds; 1 peso=1929, \$0.4183; 1932, \$0.2571; 1936, \$1.2618; 1937, \$1.3050; 1938, \$1.2674.

TABLE 4.—*Barley: Exports from CHILE to principal markets, in specified years, 1929 to 1938*

| Country   | 1929 <sup>1</sup> | 1932             | 1936             | 1937    | 1938    |
|---|-------------------|------------------|------------------|---------|---------|
| Quantity (1,000 bushels of 48 pounds)                     |                   |                  |                  |         |         |
| Total, all countries.....                                 | 2,383             | 910              | 2,236            | 2,039   | 3,493   |
| Germany.....  | (?)               | 14               | ( <sup>2</sup> ) | 2       | 1,727   |
| United Kingdom.....                                       |                   | 592              | 1,326            | 1,338   | 1,131   |
| Belgium.....  |                   | 279              | 568              | 506     | 475     |
| Japan.....  |                   |                  | 250              | 131     | 70      |
| Norway.....   |                   | 23               |                  | 28      | 24      |
| UNITED STATES.....  |                   | ( <sup>2</sup> ) | 18               | 29      | 19      |
| All other.....  |                   | 2                | 74               | 5       | 47      |
| Percentage to the United States.....                      | ( <sup>1</sup> )  |                  | 0.8              | 1.4     | 0.5     |
| Value (1,000 gold pesos)                                  |                   |                  |                  |         |         |
| Total, all countries.....                                 | 22,012            | 2,773            | 5,672            | 7,232   | 10,693  |
| Value (1,000 U. S. dollars)                               |                   |                  |                  |         |         |
| Total, all countries.....                                 | 2,679             | 337              | 1,168            | 1,490   | 2,203   |
| Germany.....  | (?)               | 5                | ( <sup>2</sup> ) | 2       | 1,135   |
| United Kingdom.....                                       |                   | 220              | 712              | 960     | 673     |
| Belgium.....  |                   | 103              | 264              | 364     | 279     |
| Japan.....  |                   |                  | 139              | 104     | 51      |
| Norway.....   |                   | 8                |                  | 25      | 16      |
| UNITED STATES.....  |                   | ( <sup>2</sup> ) | 10               | 29      | 13      |
| All other.....  |                   | 1                | 43               | 6       | 36      |
| Percentage to the United States.....                      | ( <sup>1</sup> )  |                  | 0.9              | 1.9     | 0.6     |
| Unit value per bushel of total exports <sup>3</sup> ..... | \$1.124           | \$0.371          | \$0.523          | \$0.731 | \$0.631 |

<sup>1</sup> Classified as "common barley."<sup>2</sup> Not available.<sup>3</sup> Not over 500.<sup>4</sup> Less than 1/10 of 1 percent.<sup>5</sup> See footnote 2, table 3.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Chile. Converted to U. S. measure and currency by applying the following factors: 1 kilo=0.045029 bushel; 1 peso=1929, \$0.1217; 132, \$0.1217; 1936-38, \$0.2060.

#### Trade barriers, competitive conditions, and prices.

In European markets, barley is subjected to a wide range of import duties and quota arrangements. The extent of these restrictions varies in accordance with the domestic and foreign trade policies of the various European governments. In many of the importing countries the trade barriers are also subject to frequent alterations because of fluctuations in the domestic supply of this cereal. The duty on barley entering the United Kingdom from foreign countries is 10 percent ad valorem; barley from Empire countries is admitted free of duty, even though the production of barley within the United Kingdom is subsidized. The United States import duty on barley is 15 cents per bushel.<sup>5</sup>

Barley-exporting countries, such as Canada, the United States, the Soviet Union, and the countries of the Danubian Basin, compete with the Latin American countries for the markets in the countries of northern and western Europe, which take practically all the barley entering international trade.

<sup>5</sup> Tariff Act of 1930, par. 722. The United States duty was reduced from 20 cents by the second trade agreement with Canada, effective January 1, 1933.

Weather conditions exercise great influence upon the size of the crop and hence upon the price of barley in producing countries. Customarily, the price of barley is higher in the United States than in Argentina; the price in Liverpool, in part because of freight charges and agricultural policies, is higher than in the United States. In 1938, however, the Argentine price, affected by a crop shortage, exceeded those in both the United States and Liverpool. And during recent years of drought in the United States, 1933-37, the price of barley in this country was higher than that in Liverpool; United States prices were especially high in 1934 and 1936. (See table 5.)

In general, the price of barley declined during the period 1929-32. After 1932 it rose and remained higher than at the low point of the depression; in some years it increased sharply and was very much higher than it had been in 1929. Prices in the United States and Liverpool declined in 1938 as compared with 1937. But after the European war began, United States prices advanced; barley was quoted at 48 cents per bushel in August 1939, at 58 cents in September, at 60 cents in January 1940, and at 56 cents in March. The price of Argentine barley also rose following the outbreak of war, but declined during the first quarter of 1940.

TABLE 5.—Barley: Prices at Minneapolis, Buenos Aires, and Liverpool, annually, 1929-38, and by months, August 1939 to March 1940

[Cents per bushel of 48 pounds]

| Year beginning August | No. 2<br>Malting<br>barley at<br>Minneapo-<br>lis <sup>1</sup> | No. 3<br>Feed<br>barley at<br>Minneapo-<br>lis <sup>1</sup> | Barley<br>at Buenos<br>Aires <sup>2</sup> | Imported<br>feed barley<br>mostly No. 3<br>Canadian<br>Western at<br>Liverpool <sup>3</sup> |
|-----------------------|--|---|---|---|
| 1929.....             | 59   | 56  | 47  | 75  |
| 1930.....             | 47   | 46  | 26  | 49  |
| 1931.....             | 48   | 46  | 33  | 57  |
| 1932.....             | 39   | 34  | 27  | 44  |
| 1933.....             | 70   | 65  | 30  | 47  |
| 1934.....             | 105  | 94  | 44  | 66  |
| 1935.....             | 69   | 59  | 36  | 56  |
| 1936.....             | 126  | 115   | 56  | 86  |
| 1937.....             | 78   | 69  | 57  | 38  |
| 1938.....             | 56   | 48  | 64  | 60  |
| 1939:                 |  |   |   |   |
| August.....           | 48   | 42  | 36  | 55  |
| September.....        | 58   | 50  | 41  | ( <sup>4</sup> )  |
| October.....          | 55   | 50  | 42  | -----   |
| November.....         | 54   | 49  | 41  | -----   |
| December.....         | 58   | 52  | 42  | -----   |
| 1940:                 |  |   |   |   |
| January.....          | 60   | 55  | 40  | -----   |
| February.....         | 57   | 54  | 35  | -----   |
| March.....            | 56   | 53  | 36  | -----   |

<sup>1</sup> Data from Agricultural Statistics and *Crops and Markets*.

<sup>2</sup> Data compiled by U. S. Bureau of Agricultural Economics.

<sup>3</sup> Compiled from data published in *Monthly Bulletin of Agricultural Statistics*, Canada.

<sup>4</sup> Liverpool market has been closed since midnight, Sept. 3, 1939, following the declaration of war.

#### Effects of the war.

The countries at war in Europe, as well as some of the neutral nations, are usually heavy importers of barley. A continuation of the war may restrict production in the belligerent countries and increase their need for foreign barley. But so long as the blockade of European ports remains effective, it is unlikely that European imports of Latin American barley will be increased or even main-



tained at their former level. During the World War of 1914-18, exports of barley from South America and North America averaged 40 million bushels annually, as compared with 15 million bushels during the period 1909-13. There is little reason to anticipate a similar increase in exports of barley during the present war.

## CACAO BEANS

The cacao bean is the nut of a tree grown in tropical countries. Pods containing the beans are broken open at harvest time; the beans are subjected to a sweating process and then dried in the sun and sacked for export. Very few of the beans are further manufactured in the country where they are grown. Quite definite types or varieties of cacao beans have been developed in different countries. The physical characteristics of the beans grown in different regions are sufficiently fixed so that the various types (designated in accordance with the country or port of origin) have distinctive flavors. The manufacturer blends the different types to obtain the desired finished product.

The principal products derived from the cacao bean are chocolate, cocoa, and cocoa butter. No other raw material can be substituted for cacao beans in the manufacture of these products.

### Position of Latin America in world production.

The cacao bean originated in South America, but now Africa accounts for two-thirds of total world production; the Gold Coast, Nigeria, and the Ivory Coast are the principal African producers. The Latin American countries produce about one-fourth of the world total. Cacao beans in all the producing areas are grown principally for export. World production amounted to 1,546 million pounds in 1938; of this amount Latin America accounted for approximately 419 million pounds and Africa for most of the remainder.

Brazil is an important producer of cacao beans, being second only to the Gold Coast. In recent years Brazilian production has been more than twice that of the other Latin American countries combined. The other important producing countries in Latin America are the Dominican Republic, Ecuador, and Venezuela. Cacao beans from Venezuela and Ecuador are highly flavored and of fine quality, and sell at premium prices. Production of cacao beans in the principal producing countries of Latin America and of the world, in specified years, 1929 to 1938, is shown in table 1.

TABLE 1.—Cacao beans: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1938

| Country  | 1929                              | 1932             | 1936             | 1937             | 1938             |
|--|-----------------------------------|------------------|------------------|------------------|------------------|
|  | Quantity (1,000 pounds)           |                  |                  |                  |                  |
| <b>Latin America:</b>                                    |                                   |                  |                  |                  |                  |
| Brazil.....  | 142,296                           | 230,243          | 279,323          | 280,425          | 262,189          |
| Dominican Republic.....                                  | 47,006                            | 38,275           | 46,517           | 46,938           | 51,367           |
| Ecuador.....   | 40,142                            | 34,016           | 43,431           | 47,179           | 40,564           |
| Venezuela.....   | 44,092                            | 35,110           | 36,376           | 35,935           | 145,000          |
| <b>Total, Latin American countries listed above.....</b> | <b>273,536</b>                    | <b>337,644</b>   | <b>405,647</b>   | <b>410,497</b>   | <b>419,120</b>   |
| <b>Other important producers:</b>                        |                                   |                  |                  |                  |                  |
| Gold Coast.....  | 519,939                           | 521,829          | 599,872          | 627,209          | 490,524          |
| Nigeria.....   | 115,742                           | 123,237          | 194,857          | 217,814          | 204,146          |
| French West Africa <sup>1</sup> .....                    | 70,155                            | 100,778          | 168,497          | 172,466          | 190,698          |
| Trinidad and Tobago.....                                 | 61,888                            | 41,821           | 28,439           | 26,235           | 42,328           |
| All other.....   | 177,884                           | 173,200          | 199,239          | 208,498          | 190,049          |
| <b>Total, world production.....</b>                      | <b>1,219,144</b>                  | <b>1,298,509</b> | <b>1,596,571</b> | <b>1,662,709</b> | <b>1,545,885</b> |
|  | Percent of total world production |                  |                  |                  |                  |
| Latin American countries listed above.....               | 22.4                              | 26.0             | 25.4             | 24.7             | 27.1             |

<sup>1</sup> Estimated.

<sup>2</sup> Includes estimated production for Venezuela.

<sup>3</sup> Includes the French Protectorates of the Ivory Coast, Dahomey, Cameroun, and Togo.

Source: *International Yearbook of Agricultural Statistics*.

**Latin American exports.**

Brazilian exports of cacao have increased materially in recent years; they totaled 282 million pounds in 1938 as compared with 145 million pounds in 1929. The principal markets have been the United States (which customarily takes about 60 percent of Brazilian exports), Germany, and Argentina. (See table 2.)

Exports from the Dominican Republic have ranged between 40 and 62 million pounds in the years 1936-38. These go almost entirely to the United States; small quantities are shipped to Germany. (See table 3.) Ecuador's exports of cacao beans have varied from 40 to 46 million pounds in the years 1936-38. Over 50 percent of these went to Germany; small quantities were shipped to the United States, to the Netherlands, and to other European countries. (See table 4.) Exports from Venezuela totaled 36 million pounds both in 1936 and 1937. In 1937, about one-third went to the United States, one-fourth to Trinidad, mainly for transshipment, and most of the remainder to European countries; but in 1938 Germany more than trebled its purchases, taking over one-half of the exports. (See table 5.)

**TABLE 2.—Cacao beans: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938**

| Country  | 1929    | 1932    | 1936    | 1937    | 1938 <sup>1</sup> |
|--|---------|---------|---------|---------|-------------------|
| Quantity (1,000 pounds)                                  |         |         |         |         |                   |
| Total, all countries.....                                | 144,528 | 214,976 | 288,345 | 231,732 | 281,942           |
| UNITED STATES.....                                       | 92,740  | 172,115 | 198,120 | 188,016 | 186,437           |
| Germany.....   | 9,746   | 9,523   | 10,254  | 5,604   | 49,531            |
| Argentina.....   | 7,812   | 9,090   | 11,861  | 9,053   | 10,950            |
| Italy.....   | 4,077   | 3,288   | 13,277  | 4,999   | 6,667             |
| Netherlands.....   | 6,436   | 5,764   | 13,011  | 7,754   | 6,029             |
| All other.....   | 23,717  | 15,196  | 21,822  | 16,306  | 22,942            |
| Percentage to the United States.....                     | 64.2    | 80.1    | 73.8    | 81.1    | 66.1              |
| Value (1,000 milreis)                                    |         |         |         |         |                   |
| Total, all countries.....                                | 104,944 | 113,851 | 258,015 | 229,209 | 212,996           |
| Value (1,000 U. S. dollars)                              |         |         |         |         |                   |
| Total, all countries.....                                | 12,394  | 8,106   | 16,866  | 15,046  | 12,354            |
| UNITED STATES.....                                       | 7,940   | 6,507   | 12,780  | 12,518  |                   |
| Germany.....   | 838     | 355     | 543     | 370     |                   |
| Argentina.....   | 678     | 338     | 692     | 587     | ( <sup>1</sup> )  |
| Italy.....   | 352     | 121     | 711     | 407     |                   |
| Netherlands.....   | 549     | 212     | 859     | 566     |                   |
| All other.....   | 2,037   | 573     | 1,281   | 1,202   |                   |
| Percentage to the United States.....                     | 64.1    | 80.3    | 75.8    | 80.0    | ( <sup>1</sup> )  |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.086 | \$0.038 | \$0.063 | \$0.068 | \$0.044           |

<sup>1</sup> Quantities for the countries listed are from the port of Bahia only; Brazil exports most of its cacao beans through this port. In 1938 approximately 274,000,000 pounds were exported from this port.

<sup>2</sup> Not available.

<sup>3</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Brazil (1929, 1932, 1936, and 1937), and *Foodstuffs Round the World*, Mar. 10, 1939. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 bag (1938)=60 kilos. 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0560.

European countries and the United States together customarily take more than 90 percent of total world exports of cacao; the United States accounts for about 37 percent. Although the United States usually takes approximately two-thirds of all Latin American exports of cacao, it receives more than one-half of its supplies from exporting countries in Africa.<sup>1</sup> Europe obtains much the greater part of its supplies from African sources.

Prior to the European war, Germany was becoming an increasingly important market for cacao from Brazil, Venezuela, and Ecuador, and on a small scale for that from the Dominican Republic. German purchases from Brazil in 1938 amounted to 49.6 million pounds as compared with purchases of 5.6 million pounds in 1937 and 10.2 million pounds in 1936. German purchases from Ecuador increased irregularly from 15.5 million pounds in 1936 to 23.2 million pounds in 1938. The Netherlands, the United Kingdom, and France take small quantities of cacao from the Latin American countries; other European countries are even less important purchasers.

TABLE 3.—Cacao beans: Exports from the DOMINICAN REPUBLIC to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 47,007  | 38,275  | 40,049  | 43,226  | 62,529  |
| UNITED STATES.....                                       | 45,734  | 36,700  | 39,559  | 36,408  | 56,964  |
| Germany.....   | 70      | 735     | 284     | 4,822   | 4,820   |
| All other.....   | 1,203   | 840     | 206     | 2,036   | 745     |
| Percentage to the United States.....                     | 97.3    | 95.9    | 98.8    | 84.1    | 91.1    |
| Value (1,000 U. S. dollars <sup>1</sup> )                |         |         |         |         |         |
| Total, all countries.....                                | 3,870   | 1,027   | 1,585   | 2,524   | 1,918   |
| UNITED STATES.....                                       | 3,752   | 974     | 1,559   | 2,077   | 1,735   |
| Germany.....   | 7       | 20      | 14      | 324     | 156     |
| All other.....   | 111     | 33      | 12      | 123     | 27      |
| Percentage to the United States.....                     | 97.0    | 94.9    | 98.4    | 82.3    | 90.5    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.082 | \$0.027 | \$0.040 | \$0.058 | \$0.031 |

<sup>1</sup> Original statistics reported in U. S. dollars (all years).

<sup>2</sup> See footnote 3, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of the Dominican Republic. Converted to United States weights by applying the following factor: 1 kilo=2.2046 pounds

<sup>1</sup> In 1939, total United States imports amounted to 664 million pounds; of this quantity Latin American countries supplied 303 million pounds (46 percent) and other countries, 361 million pounds (54 percent). The principal Latin American sources were Brazil (the largest supplier of United States imports), the Dominican Republic, Ecuador, and Venezuela; others were the Gold Coast, Nigeria, and French Africa.

## THE FOREIGN TRADE OF LATIN AMERICA

TABLE 4.—Cacao beans: Exports from ECUADOR<sup>1</sup> to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 40,142  | 34,015  | 42,729  | 46,323  | 39,896  |
| Germany.....   | 7,089   | 6,691   | 15,508  | 24,577  | 23,215  |
| UNITED STATES.....                                       | 17,467  | 11,457  | 11,877  | 12,262  | 8,568   |
| Netherlands.....   | 4,608   | 2,862   | 3,424   | 2,654   | 2,352   |
| Belgium.....   | 694     | 1,139   | 2,713   | 1,263   | 1,116   |
| Denmark.....   | 765     | 1,296   | 1,071   | 698     | 962     |
| United Kingdom.....                                      | 1,256   | 2,815   | 1,448   | 479     | 519     |
| France.....  | 3,489   | 2,942   | 3,184   | 1,286   | 566     |
| Italy.....   | 698     | 1,152   | 717     | 777     | 555     |
| All other.....   | 4,176   | 3,662   | 2,787   | 2,297   | 2,013   |
| Percentage to the United States.....                     | 43.5    | 33.7    | 27.8    | 26.5    | 21.5    |
| Value (1,000 sucres)                                     |         |         |         |         |         |
| Total, all countries.....                                | 21,256  | 11,267  | 31,475  | 48,256  | 37,119  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 4,251   | 1,878   | 2,996   | 4,391   | 2,769   |
| Germany.....   | 753     | 362     | 1,107   | 2,421   | 1,603   |
| UNITED STATES.....                                       | 1,856   | 609     | 823     | 1,023   | 574     |
| Netherlands.....   | 488     | 158     | 226     | 285     | 179     |
| Belgium.....   | 65      | 64      | 191     | 102     | 77      |
| Denmark.....   | 80      | 80      | 72      | 68      | 69      |
| United Kingdom.....                                      | 135     | 160     | 91      | 50      | 42      |
| France.....  | 372     | 175     | 234     | 129     | 41      |
| Italy.....   | 73      | 68      | 48      | 89      | 38      |
| All other.....   | 429     | 202     | 204     | 224     | 146     |
| Percentage to the United States.....                     | 43.7    | 32.4    | 27.5    | 23.3    | 20.7    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.106 | \$0.055 | \$0.070 | \$0.095 | \$0.069 |

<sup>1</sup> Exports for 1936-38 are from the port of Guayaquil only. About 95 percent of the exports of cacao beans are customarily shipped from this port.

<sup>2</sup> See footnote 3, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Ecuador. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 sucre=1929, \$0.2000; 1932, \$0.1667; 1936, \$0.0952; 1937, \$0.0910; 1938, \$0.0746.

TABLE 5.—Cacao beans: Exports from VENEZUELA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 46,560  | 35,110  | 36,260  | 35,909  | 45,418  |
| Germany.....   | 2,643   | 1,777   | 2,131   | 6,875   | 23,022  |
| UNITED STATES.....                                       | 20,069  | 16,441  | 13,890  | 11,574  | 6,014   |
| Trinidad.....  | 7,690   | 4,866   | 10,231  | 8,292   | 7,216   |
| Belgium.....   | 1,389   | 449     | 847     | 1,793   | 2,630   |
| France.....  | 6,537   | 5,938   | 4,329   | 3,218   | 2,398   |
| Netherlands.....   | 2,719   | 2,324   | 2,168   | 1,291   | 1,952   |
| United Kingdom.....                                      | 1,780   | 2,116   | 1,492   | 1,947   | 903     |
| All other.....   | 3,863   | 1,199   | 1,232   | 919     | 1,212   |
| Percentage to the United States.....                     | 43.1    | 46.8    | 38.2    | 32.2    | 13.2    |
| Value (1,000 bolivares)                                  |         |         |         |         |         |
| Total, all countries.....                                | 24,175  | 12,142  | 11,449  | 13,942  | 9,977   |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 4,066   | 1,832   | 2,921   | 3,937   | 2,128   |
| Germany.....   | 284     | 90      | 153     | 674     | 1,497   |
| UNITED STATES.....                                       | 2,067   | 861     | 1,230   | 1,432   | 468     |
| Trinidad.....  | 614     | 278     | 666     | 783     | 410     |
| Belgium.....   | 131     | 21      | 78      | 192     | 228     |
| France.....  | 628     | 285     | 367     | 368     | 196     |
| Netherlands.....   | 317     | 119     | 187     | 145     | 132     |
| United Kingdom.....                                      | 221     | 125     | 132     | 226     | 71      |
| All other.....   | 364     | 53      | 106     | 87      | 106     |
| Percentage to the United States.....                     | 44.7    | 47.0    | 42.1    | 36.4    | 15.6    |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.100 | \$0.632 | \$0.081 | \$0.110 | \$0.069 |

<sup>1</sup> See footnote 1, table 2.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Venezuela. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.0246 pounds; 1 bolivar=1929, \$0.1930; 1932, \$0.1509; 1936, \$0.2551; 1937, \$0.2824; 1938, \$0.3135

#### Trade barriers, competitive conditions, and prices.

The United States<sup>2</sup> and the Netherlands admit cacao beans free of duty. Entries into the United Kingdom, Germany, and France are subject to specific rates of duty, the ad valorem equivalents of which have ranged in recent years from 50 to 100 percent. Imports into the United Kingdom from Empire countries are accorded a preferential rate; cacao from French colonies enters France free of duty. Since the war began, the rigid control exercised over imports by belligerents has been more restrictive than the tariffs which were designed primarily to augment governmental revenues.

The United States is the principal market for cacao beans from Latin American countries. In 1936 and 1937 about 69 percent of the exports from these countries were shipped to this market. In these years, however, less than one-half of the total United States imports originated in the Latin American countries; thus the United States demand has exceeded the total exports from these countries. A substantial increase in Latin American shipments to the United States would present no serious problem to United States manufacturers in the adjustment of their blends.

<sup>2</sup> Tariff Act of 1930, par. 1652.

Following the trend of most commodity prices, those for cacao beans declined sharply during the period 1929-33; thereafter they increased until 1937, but declined in 1938-39. With the declaration of war in Europe and the assumption of control over the supply in British colonies by the United Kingdom, prices rose, and after September 1939, remained higher than in previous months of that year.

Prices of cacao beans in New York, London, and Brazil followed similar trends. Moreover, after allowances are made for temporary variations in demand and supply and for freight charges, the prices in these three centers closely approximate each other. (See table 6.)

TABLE 6.—Cacao beans: Average wholesale prices at New York and London, and invoice prices of United States imports from Brazil, annually, 1929-39, and by months, August 1939 to March 1940

[Cents per pound]

| Year      | New York<br>Superior<br>Bahia <sup>1</sup> | London<br>f. o. b.<br>Accra <sup>2</sup> | Brazil<br>invoice<br>prices <sup>3</sup> |
|-----------|--|--|--|
| 1929      | 10.5                                       | 10.4                                     | 8.8                                      |
| 1930      | (4)  | 8.3                                      | (4)                                      |
| 1931      | 5.2  | 5.0                                      | 4.7                                      |
| 1932      | 4.4  | 4.2                                      | 3.8                                      |
| 1933      | 4.2  | 4.4                                      | 3.6                                      |
| 1934      | 5.1  | 5.1                                      | 4.5                                      |
| 1935      | 5.0  | 5.1                                      | 4.2                                      |
| 1936      | 6.9  | 6.9                                      | 4.9                                      |
| 1937      | 8.5  | 8.6                                      | 7.5                                      |
| 1938      | 5.3  | 5.6                                      | 4.4                                      |
| 1939      | 4.8  | (4)                                      | 3.9                                      |
| August    | 4.1  | (4)                                      | 3.6                                      |
| September | 6.0  |  | 3.6                                      |
| October   | 5.3  |  | 4.2                                      |
| November  | 5.2  |  | 4.0                                      |
| December  | 6.0  |  | 4.6                                      |
| 1940:     |  |  |  |
| January   | 5.6  |  | 4.4                                      |
| February  | 5.4  |  | 4.4                                      |
| March     | 5.5  |  | 4.8                                      |

<sup>1</sup> Source: New York Journal of Commerce.

<sup>2</sup> Source: International Yearbook of Agricultural Statistics.

<sup>3</sup> Average invoice prices of importations of cacao beans into the United States from Brazil.

<sup>4</sup> Not readily available.

<sup>5</sup> Not available; quotations discontinued after August 1939. In September 1939, the British Government took control of the supply of cacao beans in the British colonies of the Gold Coast and Nigeria.

#### Effects of the war.

The Western Hemisphere produces about one-third and consumes about two-fifths of the world's production of cacao beans. The European imports from this Hemisphere consist of special varieties and grades obtainable only in certain Latin American countries, or of ordinary varieties which may be more readily available in these countries in certain seasons of the year. European imports from Latin America could be replaced by shipments from other areas, principally Africa. Early in November 1939, the United Kingdom announced, as a wartime measure, that the entire 1939-40 British West African (Gold Coast and Nigeria) cacao crop would be bought by the United Kingdom at a fixed price.

Latin America produces more of the highly flavored, "fine" varieties of cacao beans than any other region; such beans are in demand in all importing countries. This accounts in part for the wide distribution of the exports from Ecuador and Venezuela. European importers obtain a portion of their supply of the "fine" types of cacao from Latin

America, but only 10 percent of European imports originate in that area. Customarily, about 25 percent of Latin American exports of cacao moves to European markets.

As a result of the war, European consumption of cacao from Latin America has been reduced. Inasmuch, however, as United States requirements regularly exceed the total Latin American supply, the United States could increase its purchases from Latin America, and thus absorb that portion which in the past has been shipped to Germany and to other European countries. The extent to which this will actually occur will depend in part on whether United States imports from Africa are restricted by the war.



## CHICLE

Crude chicle is the partly dried juice of a tree (technically known as *Achras zapota L.*) native to Central America and adjacent regions. After refining, chicle is used in the manufacture of chewing-gum base, which also usually contains other materials such as jelutong, various guttas, and some rubber.

### Latin American production.

Virtually the entire world supply of chicle is produced in Mexico, Guatemala, and British Honduras. Small quantities are produced in Colombia, Venezuela, Brazil, and the Guianas. The principal sources of supply are the Mexican States of Campeche and Yucatán. In 1938, exports from Mexico amounted to 7.3 million pounds, or 74 percent of total world exports of chicle. In addition, Mexico probably consumed about 1 million pounds in the manufacture of chewing gum. In 1938 Guatemala exported 17 percent, and British Honduras 9 percent, of the world total. In addition to the exportation of its domestically produced chicle, British Honduras, because of its position as an entrepôt, reexports large quantities produced in Mexico and Guatemala. The production of chicle and the trade in that commodity are largely operated by United States interests, which have important holdings of chicle-producing lands in Mexico and British Honduras. The gathering of chicle in Guatemala is partly financed by United States companies. Exports are composed almost entirely of crude chicle; except in Mexico, there is little or no refining of chicle in the producing countries.

### Latin American exports.

In the absence of production statistics, world production of chicle may be gaged by exports. Such statistics, however, do not include the chicle consumed in Mexico, which approximated 1 million pounds in 1938. Exports of chicle from the principal producing countries of Latin America are shown in table 1. Mexico exports about 90 percent of its output, and Guatemala and British Honduras export their entire production.

The United States is the principal market for chicle, customarily taking nearly 90 percent of all exports; most of the remainder goes to Canada and the United Kingdom and is shipped from British Honduras. United States chewing-gum interests have subsidiaries in both Canada and the United Kingdom. The output of chewing gum in the United States in 1937 was valued at almost 55 million dollars. Exports of chicle from Mexico, Guatemala, and British Honduras to principal markets, in specified years, 1929 to 1938, are shown in tables 2 to 4, and reexports of chicle to principal markets from British Honduras are shown in table 5.

TABLE 1.—Chicle: Exports from principal producing countries of Latin America, in specified years, 1929 to 1938

[In thousands of pounds]

| Country                      | 1929   | 1932   | 1936  | 1937   | 1938  |
|------------------------------|--------|--------|-------|--------|-------|
| Mexico.....                  | 11,223 | 13,081 | 6,690 | 8,786  | 7,318 |
| Guatemala.....               | 1,016  | 651    | 607   | 1,311  | 1,713 |
| British Honduras:            |        |        |       |        |       |
| Domestic exports.....        | 598    | 280    | 767   | 660    | 880   |
| Reexports <sup>1</sup> ..... | 3,116  | 750    | 767   | 1,035  | 903   |
| Total <sup>2</sup> .....     | 12,837 | 4,012  | 8,064 | 10,757 | 9,011 |

<sup>1</sup> Data for 1933.<sup>2</sup> Reexports of chicle imported principally from Mexico.<sup>3</sup> Excluding reexports from British Honduras.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico, Guatemala, and British Honduras.

TABLE 2.—Chicle: Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country  | 1929                        | 1933    | 1936    | 1937    | 1938    |
|--|-----------------------------|---------|---------|---------|---------|
|  | Quantity (1,000 pounds)     |         |         |         |         |
| Total, all countries.....                                | 11,223                      | 3,081   | 6,690   | 8,786   | 7,318   |
| UNITED STATES.....                                       | 10,067                      | 2,947   | 5,983   | 7,129   | 6,278   |
| All other.....   | 1,156                       | 134     | 707     | 1,657   | 1,040   |
| Percentage to the United States.....                     | 89.7                        | 95.7    | 89.4    | 81.1    | 85.8    |
|  | Value (1,000 pesos)         |         |         |         |         |
| Total, all countries.....                                | 10,098                      | 1,842   | 4,713   | 7,901   | 9,773   |
|  | Value (1,000 U. S. dollars) |         |         |         |         |
| Total, all countries.....                                | 4,865                       | 518     | 1,308   | 2,193   | 2,162   |
| UNITED STATES.....                                       | 4,420                       | 501     | 1,207   | 1,810   | 1,944   |
| All other.....   | 445                         | 17      | 101     | 383     | 218     |
| Percentage to the United States.....                     | 90.8                        | 95.7    | 92.3    | 82.5    | 89.9    |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.434                     | \$0.168 | \$0.196 | \$0.250 | \$0.295 |

<sup>1</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 3.—Chicle: Exports from GUATEMALA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 1,016   | 651     | 607     | 1,311   | 1,713   |
| UNITED STATES.....                                       | 304     | 406     | 607     | 1,311   | 1,713   |
| All other.....   | 712     | 245     | —       | —       | —       |
| Percentage to the United States.....                     | 29.9    | 62.4    | 100.0   | 100.0   | 100.0   |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 321     | 141     | 138     | 306     | 514     |
| UNITED STATES.....                                       | 96      | 88      | 138     | 306     | 514     |
| All other.....   | 225     | 53      | —       | —       | —       |
| Percentage to the United States.....                     | 29.9    | 62.4    | 100.0   | 100.0   | 100.0   |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.316 | \$0.217 | \$0.227 | \$0.234 | \$0.300 |

<sup>1</sup> The Guatemalan quetzal is equal to the U. S. dollar (all years).

<sup>2</sup> See footnote 1, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Guatemala. Converted to U. S. weights by applying the following factor: 1 Spanish quintal=101.43 pounds.

TABLE 4.—Chicle: Exports from BRITISH HONDURAS to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 598     | 280     | 767     | 660     | 880     |
| UNITED STATES.....                                       | 546     | 189     | 535     | 455     | 473     |
| Canada.....  | 37      | 15      | 125     | 43      | 256     |
| United Kingdom.....                                      | 15      | 75      | 101     | 162     | 151     |
| All other.....   | —       | 1       | 6       | —       | —       |
| Percentage to the United States.....                     | 91.2    | 67.7    | 69.8    | 69.0    | 54.8    |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 275     | 98      | 191     | 189     | 290     |
| UNITED STATES.....                                       | 253     | 68      | 133     | 131     | 157     |
| Canada.....  | 16      | 6       | 30      | 12      | 83      |
| United Kingdom.....                                      | 6       | 24      | 26      | 46      | 50      |
| All other.....   | —       | (?)     | 2       | —       | —       |
| Percentage to the United States.....                     | 91.9    | 69.2    | 69.6    | 69.3    | 54.2    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.460 | \$0.351 | \$0.249 | \$0.287 | \$0.329 |

<sup>1</sup> The U. S. dollar is the standard of currency.

<sup>2</sup> Not over \$500.

<sup>3</sup> See footnote 1, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of British Honduras.

TABLE 5.—Chicle: Reexports from BRITISH HONDURAS to principal markets, in specified years, 1929 to 1938

| Country  | 1929                                     | 1932    | 1936    | 1937    | 1938    |
|--|--|---------|---------|---------|---------|
|  | Quantity (1,000 pounds)                  |         |         |         |         |
| Total, all countries.....                                | 3, 116                                   | 750     | 767     | 1, 035  | 903     |
| UNITED STATES.....                                       | 2, 554                                   | 677     | 767     | 1, 035  | 903     |
| All other.....   | 562                                      | 73      |         |         |         |
| Percentage to the United States.....                     | 82.0                                     | 90.2    | 100.0   | 100.0   | 100.0   |
|  | Value (1,000 U. S. dollars) <sup>1</sup> |         |         |         |         |
| Total, all countries.....                                | (?)                                      | 330     | 200     | 312     | 319     |
| UNITED STATES.....                                       | (?)                                      | 298     | 200     | 312     | 319     |
| All other.....   |  | 32      |         |         |         |
| Percentage to the United States.....                     | (?)                                      | 90.4    | 100.0   | 100.0   | 100.0   |
| Unit value per pound of total exports <sup>2</sup> ..... | (?)                                      | \$0.440 | \$0.260 | \$0.301 | \$0.353 |

<sup>1</sup> The U. S. dollar is the standard of currency.

<sup>2</sup> Not available.

<sup>3</sup> See footnote 1, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of British Honduras.

#### Trade barriers, competitive conditions, and prices.

Crude chicle enters the United States free of duty.<sup>1</sup> Imports of refined or advanced chicle are dutiable at the rate of 5 cents per pound,<sup>2</sup> but ordinarily none is imported. Chicle is free of duty in both the United Kingdom and Canada if produced in and entered from Empire countries, otherwise it is dutiable at 10 percent ad valorem.<sup>3</sup> This provision explains the importance of the United Kingdom and Canada in the export trade of British Honduras.

The producing countries obtain considerable revenue from taxes on chicle. Mexico, for example, has an internal tax on that product, as well as export taxes.

Some crude chicle is reexported from the United States to Canada and the United Kingdom; occasional small shipments go to other European countries. In 1936, total reexports from the United States amounted to 50,000 pounds, of which 40,000 pounds went to Canada and 10,000 pounds to the United Kingdom. In addition, quantities of crude chicle may pass through the United States in transit to Canada and perhaps to the United Kingdom, but these are not reported in import or reexport statistics. The United States also exports small quantities of chewing-gum base, which includes chicle, principally to countries in which there are chewing-gum factories operated by United States interests. There are no data showing reexports of refined chicle from the United States; such exports, if any, are believed to be small.

Although chicle is the primary material used in chewing-gum products, the proportion of chicle in chewing-gum base may range from 25 percent, or even less, to 100 percent. Jelutong and the various guttas are frequently used in the production of such bases

<sup>1</sup> Par. 1686, Tariff Act of 1930.

<sup>2</sup> Par. 25, Tariff Act of 1930.

<sup>3</sup> The Canadian general rate is 15 percent ad valorem, but imports from all nations accorded most-favored-nation treatment are assessed the intermediate rate of 10 percent ad valorem.

and, therefore, are both complementary to, and competitive with, chicle.

The average wholesale-price quotation for chicle <sup>4</sup> (prime, 33 percent moisture) remained constant at 58 cents per pound during the period 1929-31. In 1932 it declined sharply to 28 cents, and in 1934 to 20 cents; by 1938 it had risen to 44.5 cents. In 1939 the average quoted price was 37 cents per pound. The outbreak of war in Europe apparently operated to depress the price of chicle; it was quoted at 38 cents per pound on September 1, 1939, and at 34 cents per pound each month thereafter. (See table 6.)

TABLE 6.—Chicle (prime, 33 percent moisture): Average wholesale price quotations per pound at New York, annually, 1929-39, and by months, September 1939-April 1940

| Year      | Cents per pound  | Month <sup>1</sup> | Cents per pound |      |
|-----------|------------------|--------------------|-----------------|------|
|           |                  |                    | Low             | High |
| 1929..... | 58               | 1939:              |                 |      |
| 1930..... | 58               | September.....     | 38              | 39   |
| 1931..... | 58               | October.....       | 34              | 35   |
| 1932..... | 28               | November.....      | 34              | 35   |
| 1933..... | 21               | December.....      | 34              | 35   |
|           |                  |                    | 34              | 35   |
| 1934..... | 20               | 1940:              |                 |      |
| 1935..... | ( <sup>2</sup> ) | January.....       | 34              | 39   |
| 1936..... | ( <sup>2</sup> ) | February.....      | 34              | 35   |
| 1937..... | ( <sup>2</sup> ) | March.....         | 34              | 35   |
| 1938..... | 44.5             | April.....         | 34              | 35   |
| 1939..... | 37.0             |                    |                 |      |

<sup>1</sup> First quotation of month.

<sup>2</sup> Not available.

Source: Oil, Paint and Drug Reporter.

#### Effects of the war.

The United States is by far the principal market for chicle. Among European countries, the United Kingdom is the only important market for crude chicle, and virtually all of its imports come from British Honduras, as do imports into Canada. The quantities of crude chicle thus imported form but a small part of total Latin American exports. A factor of minor importance is the amount of chewing-gum base containing chicle exported by United States chewing-gum interests to their subsidiaries in the United Kingdom and Canada. No data concerning the chicle content of the exports of chewing-gum base are available, but the quantities are known to be small. The extent to which United Kingdom and Canadian imports of crude chicle from Latin America and chewing-gum base containing chicle from the United States will be sustained depends on whether these countries will grant import or exchange permits for such products, and whether the products will be considered sufficiently important to secure an adequate allocation of shipping space. Exports from Latin American countries to the United States may be curtailed should there be an acute shortage in shipping.

<sup>4</sup> As reported by the Oil, Paint and Drug Reporter.

## COFFEE

The beverage coffee is made from the coffee bean, the fruit of a small tree. Coffee is produced in most tropical and subtropical regions, but by far the greater portion of world production is supplied by Latin American countries located in central and northern South America and in Central America. In recent years Brazil alone has supplied over 50 percent of world exports and Colombia an additional 10 to 15 percent. Consumption, on the other hand, is concentrated in North America and Europe. In recent years the United States has taken nearly one-half of world imports, and France and Germany, together, nearly one-fourth.

There are as many varieties of coffee as there are districts in which it is grown. The trade roughly groups them all into "Brazils" and "Milds," the latter comprising all coffees grown outside of Brazil, or into "Strong's" and "Milds," the "Rios" and some of the "Santos" constituting the strong varieties. There are many substitutes for and adulterants of coffee, such as chicory, acorns, dried figs, and various grains, seeds, and roots. The use of substitutes or adulterants is almost universal among the poorer people in Europe and elsewhere.

### Position of Latin America in world production.

In the 1937-38 season, Latin America produced about 4.4 billion pounds of an estimated world production of about 5.5 billion pounds of coffee, and supplied 3.5 billion pounds, or 85 percent, of a total of about 4 billion pounds entering international trade. Another important producer and exporter of coffee is the Netherlands Indies, exports from which in 1938 amounted to 155 million pounds, or 4 percent of total world exports. Other producing countries are numerous, but no one of them shipped in 1938 as much as 100 million pounds of coffee.<sup>1</sup> Statistics recording the production of coffee are not available for all producing countries. A summary of the exports of coffee from the 13 most important producing and exporting countries of Latin America, and the Netherlands Indies, in specified years, 1929 to 1938, is shown in table 1.

Brazil leads the world in coffee production and exports. Coffee is grown in most of the Brazilian States, but two-thirds of the industry is located in the State of São Paulo. In the three seasons ending 1937-38, Brazil produced an average of 3.1 billion pounds annually, only two-thirds of which was exported; the remainder, aside from the

<sup>1</sup> Principal producing countries, other than Latin American countries and the Netherlands Indies, are listed below, together with the quantity of coffee exported in 1938:

| Country                 | Millions of pounds |
|-------------------------|--------------------|
| Madagascar.....         | 90.8               |
| Kenya and Uganda.....   | 69.7               |
| Belgian Congo.....      | 40.0               |
| French West Africa..... | 31.9               |
| Tanganyika.....         | 30.8               |

small local consumption, was either stored or destroyed in accordance with the program of the National Coffee Council. Brazil's proportion of world coffee exports declined from 70 percent in the 5 years 1910-14 to about 60 percent in the 5 years 1920-24. In 1929 it was 58 percent, and in 1937, 47 percent; the proportion, however, rose to 56 percent in 1938.<sup>2</sup>

TABLE 1.—Coffee: Exports from principal producing countries of Latin America, and other important producing countries, in specified years, 1929 to 1938

| Country   | 1929  | 1932  | 1936  | 1937  | 1938  |
|---|-------|-------|-------|-------|-------|
| Quantity (million pounds)                         |       |       |       |       |       |
| Brazil.....                                       | 1,889 | 1,579 | 1,876 | 1,604 | 2,273 |
| Colombia.....                                     | 375   | 421   | 521   | 553   | 565   |
| El Salvador.....                                  | 103   | 87    | 109   | 149   | 110   |
| Guatemala.....                                    | 97    | 101   | 112   | 104   | 108   |
| Venezuela.....                                    | 142   | 109   | 136   | 92    | 79    |
| Mexico.....                                       | 66    | 91    | 94    | 77    | 77    |
| Haiti.....  | 63    | 51    | 80    | 55    | 55    |
| Costa Rica.....                                   | 43    | 41    | 47    | 58    | 55    |
| Nicaragua.....                                    | 29    | 18    | 20    | 35    | 31    |
| Ecuador.....                                      | 16    | 18    | 30    | 31    | 30    |
| Dominican Republic.....                           | 12    | 14    | 32    | 24    | 19    |
| Cuba.....   | (1)   | 13    | 5     | 15    | 15    |
| Peru.....   | 2     | 5     | 7     | 6     | 5     |
| Total, Latin American countries listed above..... | 2,837 | 2,548 | 3,069 | 2,803 | 3,431 |
| Netherlands Indies.....                           | 184   | 255   | 213   | 222   | 155   |
| All other.....                                    | 246   | 320   | 446   | 386   | 501   |
| Total world exports.....                          | 3,267 | 3,123 | 3,728 | 3,411 | 4,087 |
| Percent of total world exports                    |       |       |       |       |       |
| Latin American countries listed above.....        | 86.9  | 81.6  | 82.3  | 82.2  | 83.9  |
| Brazil.....                                       | 57.8  | 50.6  | 50.3  | 47.0  | 55.6  |

<sup>1</sup> Less than 500,000 pounds.

Source: Compiled by the United States Tariff Commission from official trade statistics of the respective countries, and from other sources (see tables 2 to 14, inclusive); world trade in coffee compiled from *International Yearbook of Agricultural Statistics*.

Colombia ranks next to Brazil as an exporter of coffee, and is the leading producer of mild coffee; the Netherlands Indies ranks third, El Salvador fourth, and Guatemala fifth. Practically every Central American Republic, as well as Mexico, and every island in the West Indies, is a producer and exporter of coffee. Some countries, like Cuba and Mexico, rank higher in production than in exports because of the large proportion of their production consumed within their own borders.

#### Latin American exports.

The United States is the greatest consumer of coffee in the world. Coffee, except that imported into Puerto Rico,<sup>3</sup> enters the United

<sup>2</sup> The decline in the proportion of international trade in coffee supplied by Brazil in 1920-24 as compared with 1910-14 may be attributed principally to the high coffee prices prevailing during the World War (1914-18) which stimulated production in other Latin American countries. The sharp increase in Brazil's share of world coffee exports in 1938 as compared with 1937 was caused by a modification of the coffee valorization program and a reduction in the export tax, both of which operated to reduce the price of Brazilian coffee and thus stimulate exports.

<sup>3</sup> Tariff Act of 1930, par. 1654. The duty on raw coffee entering Puerto Rico is 15 cents per pound and is designed to preserve the local market for coffee grown in Puerto Rico. For the fiscal year 1938-39, shipments of coffee from Puerto Rico amounted to 3,667,104 pounds valued at \$527,101. Of that total, 2,734,869 pounds or 74.6 percent was shipped to the United States for reexport to a foreign market and 499,954 pounds or 13.6 percent was shipped for direct consumption in the United States; 405,734 pounds or 11.1 percent was exported to Cuba. Other important markets for Puerto Rican coffee have been France, Norway, the Netherlands, Germany, Belgium, and Australia.

States free of duty.<sup>4</sup> Imports into the United States in the 3-year period 1936-38 amounted to practically half of the coffee exported from all producing countries; 96 percent of the imports came from Latin American countries, and about 57 percent from Brazil alone. Other sources, with the percentage of United States imports received from each, were Colombia (23), El Salvador (4), Guatemala (3), Mexico (3), Venezuela (2), the Netherlands Indies (2), and other countries (6).

The United States has been the leading market for the coffee exported from a number of Latin American countries. France has been the principal market for Haiti, the Dominican Republic, and Ecuador, and Germany for El Salvador, Venezuela, and Guatemala. In 1937, exports from the 13 leading Latin American producing countries, amounting to 2.8 billion pounds, were distributed as follows: The United States, 56 percent; Germany, 13 percent; France, 8 percent; the Netherlands, 2 percent; and the United Kingdom, less than 1 percent.<sup>5</sup> The consumption of coffee in the United Kingdom is small. Its people prefer tea, and it secures most of its imports of coffee from its colonial possessions, which are accorded substantial preferences in the United Kingdom market.<sup>6</sup> The Scandinavian countries as a group have been important consumers of Latin American coffee. The per capita consumption in these countries has been large, and their aggregate purchases in recent years have ranged from 3 to 5 percent of total Latin American exports; in 1938 exports of coffee from Latin America to the four Scandinavian countries amounted to approximately 130 million pounds.

Although Brazil has been the principal source of coffee for most of the leading coffee-consuming countries, Germany was a larger user of the mild coffees, and considerably more than half of its coffee came from Colombia, Venezuela, and the Central American republics. France, on the contrary, was a very large user of Brazilian coffee, despite the high duty on imports from foreign countries and the duty-free entry accorded imports from its assimilated colonies. France obtained about 70 percent of its coffee of American origin from Brazil. The Netherlands, which obtained large supplies from its East Indian possessions, also used a greater proportion of Brazilian than it did of other Latin American coffees. Exports of coffee from the principal Latin American producing countries to principal markets, in specified years, 1929 to 1938, are shown in tables 3 to 15 at the end of this section.

<sup>4</sup> The duty-free entry of coffee into the United States was guaranteed in trade agreements with the following Latin American countries:

| Country          | Effective date of agreement |
|------------------|-----------------------------|
| Haiti.....       | June 3, 1935                |
| Brazil.....      | Jan. 1, 1936                |
| Honduras.....    | Mar. 2, 1936                |
| Colombia.....    | May 20, 1936                |
| Guatemala.....   | June 15, 1936               |
| Nicaragua.....   | Oct. 1, 1936                |
| El Salvador..... | May 31, 1937                |
| Costa Rica.....  | Aug. 2, 1937                |
| Ecuador.....     | Oct. 23, 1938               |
| Venezuela.....   | Dec. 16, 1940               |

<sup>5</sup> Some European countries have high internal-revenue taxes on coffee; by increasing the cost of coffee to consumers, such taxes operate to restrict consumption.

<sup>6</sup> The United Kingdom tariff on raw coffee is 14 shillings per hundredweight (112 pounds) and the preferential Empire rate is 4 shillings 8 pence per hundredweight, or one-third of the full duty.



In 1938 about one-half of the coffee exported from Brazil went to the United States. Germany, France, and the Netherlands ranked next in importance. Other European markets were Sweden, Italy, Belgium and Luxemburg, Finland, and Denmark. In 1938, 1.2 billion pounds out of total Brazilian exports of 2.3 billion pounds went to the United States, 241 million pounds to Germany, and 210 million pounds to France. In that year, the principal European markets took 809 million pounds, or slightly more than one-third of total Brazilian exports of coffee. The quantities of Brazilian coffee taken by the various markets have varied considerably. Only in the case of Germany did purchases in the period 1936-38 increase regularly; these amounted to 149 million pounds in 1936 and to 241 million pounds in 1938. (See table 3.)

The principal market for Colombian coffee has been the United States; in 1938, the United States took 447 million pounds of total exports of 561 million pounds. Other important markets were Germany, which purchased 83 million pounds, and Canada, 16 million pounds. (See table 4.)

In 1938 Germany was the leading market for Venezuelan coffee, taking 44 million pounds of total exports of 79 million pounds; the United States (19 million pounds), and France (5 million pounds) were the other important Venezuelan markets. In 1936 the United States took 45 million pounds of Venezuelan coffee, Germany 37 million pounds, and France 30 million pounds. Total exports of coffee from Venezuela declined from 136 million pounds in 1936 to 79 million pounds in 1938. (See table 15.)

Of the Central American and West Indian producers of coffee, El Salvador leads in exports. In 1938, shipments totaled 119 million pounds, of which 75 million pounds went to the United States, 13.5 million pounds to Norway, and 12.8 million pounds to Germany. Guatemala, the second largest Central American exporter, exported 107 million pounds in 1938, of which 63 million pounds was purchased by the United States, 21 million pounds by Germany, and 7.6 million pounds by Sweden. (See tables 9 and 10.)

Other Latin American producers of coffee, with exports for 1938, are Costa Rica, 55 million pounds; Nicaragua, 31 million pounds; the Dominican Republic, 19 million pounds, and Cuba, 15 million pounds. (See tables 5, 6, 7, and 13.)

#### **Competitive conditions and prices.**

Coffee trees require 5 to 7 years before they produce a satisfactory crop, a fact which has great significance in any attempt to adjust production to demand. Because of inflexible consumer habits and the low cost of the beverage (except in certain countries which impose high duties or taxes on coffee as a source of revenue), consumption is fairly inelastic despite marked variations in the price of the coffee bean. Production, however, fluctuates appreciably, especially in individual regions. Usually a very large crop so depletes the vitality of the trees that the next crop is small, and crops for 1 or 2 years thereafter are moderate or average. These fluctuations in production create a condition in which marketing controls may be especially advantageous to coffee producers; and for many years Brazil has attempted to influence the price of coffee through such controls.

Brazilian control, exercised by the Federal Government or by the Government of the State of São Paulo, first took the form of withholding from the market surplus stocks arising when crops were large and prices low; these stocks were later released when crops were small and prices had increased. The surplus coffee was acquired for warehousing either by Government purchase or by loan. This action was carried on during the period 1921-30, and operated to stabilize the price of coffee. But it also stimulated production in other coffee-producing countries and encouraged the development of new coffee lands in Brazil, thus increasing the supply and aggravating the problem. In 1931 two additional features were added to the coffee-control program. The Federal Government imposed a prohibitive tax on new plantings and an export tax to provide funds for the purchase and destruction of the large coffee stocks.<sup>7</sup> This latter feature was later revised by the adoption of a "sacrifice quota" plan providing for the acquisition by the Government, at an arbitrarily low price, of a substantial proportion of each grower's crop for destruction. The Brazilian Government is still continuing its control program in an effort to stabilize and to improve coffee prices.<sup>8</sup>

Despite coffee-control programs, the prices of coffee declined during the period 1929-39. Prices declined sharply in 1930 and 1931; they recovered somewhat in 1932 and thereafter remained relatively stable until 1938-39, when they declined once again. In 1938-39 the average prices of two basic grades of Brazilian coffee (Rio No. 7 and Santos No. 4) were the lowest in the period 1929-39, and approximated one-third of the average prices prevailing in 1929 (see table 2).<sup>9</sup> The low prices for Brazilian coffee in 1938-39 followed the modification of the valorization scheme and the reduction in the export tax on coffee; exports of Brazilian coffee increased sharply in 1938. The average unit values of United States imports of coffee from Brazil and Colombia have followed trends similar to those of the United States prices shown in table 2. The quantities of coffee exported from these countries, however, have been greater in recent years than in 1929, hence the total value of exports has not declined so abruptly as have prices and average unit values.

<sup>7</sup> In November 1937, the export tax was reduced from 45 to 12 milreis per bag of 60 kilos, and the valorization scheme was modified. In 1938 prices declined and exports increased sharply.

<sup>8</sup> Figures showing production of coffee in Brazil, the quantity destroyed, and the ratios of amounts destroyed to production are given below:

| Crop year    | Production                | Quantity destroyed        | Ratio of amount destroyed to production |
|--------------|---------------------------|---------------------------|---|
|              | <i>Millions of pounds</i> | <i>Millions of pounds</i> | <i>Percent</i>                          |
| 1931-32..... | 3,446                     | 1,106                     | 32.1                                    |
| 1932-33..... | 1,967                     | 1,284                     | 65.3                                    |
| 1933-34..... | 3,881                     | 1,457                     | 37.5                                    |
| 1934-35..... | 2,292                     | 769                       | 34.4                                    |
| 1935-36..... | 2,746                     | 194                       | 7.1                                     |
| 1936-37..... | 3,381                     | 1,438                     | 42.5                                    |
| 1937-38..... | 2,940                     | 1,913                     | 65.1                                    |
| 1938-39..... | 2,867                     | 613                       | 21.2                                    |
| Total.....   | 23,540                    | 8,794                     | 37.4                                    |

<sup>9</sup> Prices of coffee in 1929 were not materially different from those that had prevailed in several preceding years.

TABLE 2.—Coffee (raw or green): Prices of specified grades, and unit values of United States imports from BRAZIL and COLOMBIA, 1929-39, and January-March 1940

[Cents per pound]

| Year          | Prices <sup>1</sup> |              | Unit values of United States imports from— |          |
|---------------|---------------------|--------------|--|----------|
|               | Rio No. 7           | Santos No. 4 | Brazil <sup>2</sup>                        | Colombia |
| 1929.....     | 15.7                | 22.1         | 18.7                                       | 25.3     |
| 1930.....     | 8.7                 | 13.2         | 10.3                                       | 20.5     |
| 1931.....     | 6.2                 | 8.7          | 7.4  | 18.3     |
| 1932.....     | 8.1                 | 10.7         | 7.5  | 13.0     |
| 1933.....     | 7.8                 | 9.3          | 6.5  | 11.1     |
| 1934.....     | 9.8                 | 11.2         | 7.5  | 12.1     |
| 1935.....     | 7.2                 | 8.9          | 6.5  | 11.2     |
| 1936.....     | 7.5                 | 9.5          | 6.4  | 11.2     |
| 1937.....     | 8.8                 | 11.1         | 8.1  | 11.0     |
| 1938.....     | 5.3                 | 7.8          | 5.6  | 10.1     |
| 1939.....     | 6.2                 | 7.5          | 5.5  | 10.9     |
| 1940:         |                     |              |  |          |
| January.....  | 5.5                 | 7.5          | 5.4  | 10.2     |
| February..... | 5.6                 | 7.4          | 5.5  | 10.4     |
| March.....    | 5.6                 | 7.3          | 5.4  | 10.3     |

<sup>1</sup> Two basic grades of Brazilian coffee.

<sup>2</sup> Unit values are computed from foreign invoice values and do not include insurance, freight, and brokerage charges.

<sup>3</sup> Unit values for 1939 and 1940 are based on preliminary statistics.

Source: Unit values compiled from official statistics of the U. S. Department of Commerce; prices from U. S. Bureau of Labor Statistics (based on spot wholesale prices on the New York Coffee Exchange).

#### Effects of the war.

The countries at war have taken steps to curtail the importation and the consumption of coffee by civilian populations. Germany and certain other belligerents, as well as some of the neutral countries, have been and may continue to be unable to obtain adequate supplies, and recourse is being had, as during the World War of 1914-18, to a variety of substitutes. In many of the European countries consumption has already been curtailed by coffee rationing. As a result, exports from certain of the Latin American countries, notably Brazil and Colombia, have declined.

Two of the belligerent nations—France and Germany—together imported over 600 million pounds of Latin American coffee in 1937, or about 20 percent of total Latin American exports. Imports of coffee into the Netherlands, Belgium, and the Scandinavian countries, all of which have been affected by the war through interruption of ocean transportation or otherwise, bring the total exports directly or indirectly influenced by the war to about 800 million pounds or approximately 30 percent of the Latin American coffee trade. Loss of the German market alone caused a reduction in sales of about 400 million pounds.

Because of the accumulation of stocks in the producing countries resulting from the loss of the European market, the interested American Republics appointed a committee to study the problem and recommend joint action beneficial to American trade and to the coffee industry. This committee, in an endeavor to prevent ruinous competition (especially in the United States market), signed the Inter-American Coffee Agreement on November 28, 1940. This agreement, which came into force April 16, 1941, provides for export

quotas to control shipments from the Latin American countries to the United States and to all other countries, and for import quotas to control the receipts of coffee into the United States.

Latin American countries can easily supply all United States requirements of coffee, although certain types used in special blends are not available in Latin America. The satisfaction of the United States requirements by the producing countries of Latin America can be impeded only by the lack of adequate shipping facilities.

TABLE 3.—Coffee: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929      | 1932      | 1936      | 1937      | 1938 (preliminary) |
|--|-----------|-----------|-----------|-----------|--------------------|
| Quantity (1,000 pounds)                            |           |           |           |           |                    |
| Total, all countries                               | 1,889,009 | 1,578,746 | 1,876,402 | 1,603,557 | 2,272,948          |
| UNITED STATES                                      | 941,038   | 857,946   | 1,061,084 | 871,710   | 1,214,095          |
| Germany  | 106,800   | 123,719   | 149,236   | 166,907   | 241,708            |
| France   | 261,749   | 184,170   | 211,348   | 165,922   | 210,801            |
| Netherlands  | 107,318   | 65,703    | 65,890    | 38,546    | 104,862            |
| Sweden   | 56,654    | 39,879    | 54,540    | 62,753    | 81,861             |
| Argentina  | 75,917    | 31,034    | 28,030    | 43,588    | 58,144             |
| Italy  | 114,817   | 75,299    | 53,083    | 33,418    | 52,494             |
| Belgium-Luxemburg                                  | 46,077    | 36,584    | 46,437    | 31,419    | 44,582             |
| Finland  | 11,077    | 16,061    | 27,201    | 29,758    | 40,453             |
| Denmark  | 24,456    | 14,893    | 25,292    | 19,069    | 37,931             |
| All other <sup>1</sup>                             | 143,108   | 133,458   | 144,291   | 140,517   | 186,022            |
| Percentage to the United States                    | 49.8      | 54.3      | 56.5      | 54.4      | 53.4               |
| Value (1,000 milreis)                              |           |           |           |           |                    |
| Total, all countries                               | 2,740,073 | 1,823,948 | 2,231,473 | 2,159,431 | 2,296,110          |
| Value (1,000 U. S. dollars)                        |           |           |           |           |                    |
| Total, all countries                               | 323,603   | 129,865   | 145,871   | 147,384   | 133,174            |
| UNITED STATES                                      | 167,547   | 71,621    | 84,005    | 80,387    |                    |
| Germany  | 18,896    | 10,511    | 12,030    | 16,908    |                    |
| France   | 44,837    | 14,721    | 15,701    | 13,983    |                    |
| Netherlands  | 18,756    | 5,704     | 5,220     | 3,667     |                    |
| Sweden   | 9,935     | 3,342     | 4,361     | 6,139     |                    |
| Argentina  | 12,139    | 2,421     | 2,727     | 3,757     |                    |
| Italy  | 17,322    | 5,838     | 4,072     | 3,123     |                    |
| Belgium-Luxemburg                                  | 8,033     | 3,012     | 3,651     | 2,991     |                    |
| Finland  | 1,621     | 1,192     | 1,963     | 2,455     |                    |
| Denmark  | 4,385     | 1,280     | 2,034     | 1,722     |                    |
| All other <sup>1</sup>                             | 20,162    | 10,223    | 10,107    | 12,252    |                    |
| Percentage to the United States                    | 51.8      | 55.2      | 57.6      | 54.6      |                    |
| Unit value per pound of total exports <sup>2</sup> | \$0.171   | \$0.082   | \$0.078   | \$0.092   | \$0.050            |

<sup>1</sup> Consists of numerous markets, none of outstanding importance.

<sup>2</sup> This total varies slightly from that shown in table 2 of the Brazilian exports in pt. II because the value was converted from the gold pound.

<sup>3</sup> Not reported separately.

<sup>4</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 bag=60 kilos; 1 kilo=2.2046 pounds; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1 gold pound=1937, \$8.2397; 1938, \$8.058.

TABLE 4.—Coffee: Exports from COLOMBIA to principal markets, in specified years, 1929 to 1938

| Country  | 1929     | 1932     | 1936     | 1937             | 1938             |
|--|----------|----------|----------|------------------|------------------|
| Quantity (1,000 pounds)                                  |          |          |          |                  |                  |
| Total, all countries.....                                | 375, 114 | 421, 376 | 521, 479 | 552, 646         | 565, 336         |
| UNITED STATES.....                                       | 318, 756 | 357, 491 | 376, 885 | 430, 210         | 450, 377         |
| Germany.....   | 6, 700   | 12, 898  | 112, 997 | 76, 706          | 83, 684          |
| Canada.....  | 1, 551   | 3, 757   | 7, 045   | 16, 993          | 16, 516          |
| Netherlands.....   | 4, 616   | 14, 302  | 5, 514   | 5, 148           | 2, 494           |
| Denmark.....   | 433      | 732      | 1, 358   | 617              | 1, 909           |
| France.....  | 1, 892   | 7, 917   | 5, 633   | 5, 488           | 1, 812           |
| Italy.....   | 784      | 2, 219   | 925      | 6, 381           | 1, 635           |
| United Kingdom.....                                      | 2, 670   | 3, 146   | 786      | 188              | 55               |
| Spain.....   | 1, 271   | 1, 849   | 3, 531   | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Venezuela.....   | 27, 983  | 13, 756  | .....    | .....            | .....            |
| All other.....   | 3, 458   | 3, 309   | 7, 305   | 10, 915          | 2 6, 854         |
| Percentage to the United States.....                     | 85. 0    | 84. 8    | 72. 2    | 77. 8            | 79. 7            |
| Value (1,000 pesos)                                      |          |          |          |                  |                  |
| Total, all countries.....                                | 76, 887  | 42, 910  | 91, 971  | 99, 175          | 88, 775          |
| Value (1,000 U. S. dollars)                              |          |          |          |                  |                  |
| Total, all countries.....                                | 74, 396  | 40, 894  | 52, 580  | 56, 094          | 49, 654          |
| UNITED STATES.....                                       | 63, 219  | 34, 683  | 38, 232  | 43, 427          | 39, 126          |
| Germany.....   | 1, 329   | 1, 254   | 11, 102  | 7, 934           | 7, 811           |
| Canada.....  | 307      | 367      | 712      | 1, 768           | 1, 455           |
| Netherlands.....   | 1, 907   | 1, 383   | 553      | 536              | 255              |
| Denmark.....   | 86       | 73       | 134      | 57               | 164              |
| France.....  | 375      | 750      | 560      | 585              | 144              |
| Italy.....   | 165      | 213      | 99       | 677              | 133              |
| United Kingdom.....                                      | 630      | 304      | 79       | 189              | 5                |
| Spain.....   | 252      | 177      | 353      | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Venezuela.....   | 5, 550   | 1, 372   | .....    | .....            | .....            |
| All other.....   | 686      | 318      | 756      | 1, 091           | 2 561            |
| Percentage to the United States.....                     | 85. 0    | 84. 8    | 72. 7    | 77. 4            | 78. 8            |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0. 198 | \$0. 073 | \$0. 101 | \$0. 101         | \$0. 088         |

<sup>1</sup> Not over 500.<sup>2</sup> Includes exports to the following countries:

| Country             | 1,000 pounds | 1,000 U. S. dollars |
|---------------------|--------------|---------------------|
| Sweden.....         | 2, 537       | 217                 |
| Czechoslovakia..... | 2, 061       | 181                 |

<sup>3</sup> See footnote 4, table 3.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Colombia. Converted to U. S. weights and currency by applying the following factors: 1 kilo gross=2.2046 pounds; 1 peso=1929, \$0.9676; 1932, \$0.9330; 1936, \$0.5717; 1937, \$0.5656; 1938, \$0.5593.

TABLE 5.—Coffee: Exports from COSTA RICA to principal markets, in specified years, 1929 to 1938

| Country  | 1929                | 1932               | 1936             | 1937             | 1938               |
|--|---------------------|--------------------|------------------|------------------|--------------------|
| Quantity (1,000 pounds)                                  |                     |                    |                  |                  |                    |
| Total, all countries.....                                | 43,393              | 40,784             | 47,016           | 58,466           | 55,073             |
| United Kingdom.....                                      | 31,162              | 28,564             | 18,825           | 19,026           | 23,029             |
| Germany.....   | 6,445               | 4,254              | 14,178           | 17,249           | 14,091             |
| UNITED STATES.....                                       | 5,064               | 6,576              | 8,247            | 12,725           | 12,664             |
| France.....  | 1                   |                    | 1,326            | 2,672            | 1,057              |
| Sweden.....  |                     | 35                 | 697              | 1,554            | 1,131              |
| Netherlands.....   | 662                 | 1,228              | 642              | 1,800            | 1,288              |
| Canada.....  |                     | 65                 | 387              | 662              | 573                |
| Italy.....   | 30                  | 45                 | 1,729            | 1,964            | 106                |
| All other.....   | 29                  | 17                 | 955              | 814              | <sup>1</sup> 1,134 |
| Percentage to the United States.....                     | 11.7                | 16.1               | 17.5             | 21.8             | 23.0               |
| Value (1,000 colones)                                    |                     |                    |                  |                  |                    |
| Total, all countries.....                                | 48,012              | 23,739             | ( <sup>2</sup> ) | ( <sup>2</sup> ) | ( <sup>2</sup> )   |
| Value (1,000 U. S. dollars)                              |                     |                    |                  |                  |                    |
| Total, all countries.....                                | <sup>3</sup> 12,228 | <sup>3</sup> 5,396 | 4,574            | 6,106            | 4,938              |
| United Kingdom.....                                      | 8,964               | 3,837              | 2,066            | 2,139            | 2,166              |
| Germany.....   | 1,372               | 960                | 4,072            | 1,750            | 1,274              |
| UNITED STATES.....                                       | 1,161               | 814                | 749              | 1,245            | 1,035              |
| France.....  | 1                   |                    | 160              | 267              | 105                |
| Sweden.....  |                     | 5                  | 56               | 155              | 100                |
| Netherlands.....   | 213                 | 162                | 72               | 195              | 77                 |
| Canada.....  |                     | 8                  | 36               | 62               | 47                 |
| Italy.....   | 9                   | 7                  | 200              | 214              | 8                  |
| All other.....   | 8                   | 3                  | 113              | 79               | <sup>1</sup> 126   |
| Percentage to the United States.....                     | 9.5                 | 15.1               | 16.4             | 20.4             | 21.0               |
| Unit value per pound of total exports <sup>4</sup> ..... | \$0.282             | \$0.132            | \$0.097          | \$0.104          | \$0.090            |

<sup>1</sup> Includes 517,000 pounds, valued at \$58,000, exported to Japan.

<sup>2</sup> Reported in U. S. dollars.

<sup>3</sup> C. i. f. value. The f. o. b. values, for comparison with later years, were: 1929, \$9,760,574; 1932, \$4,316,056.

<sup>4</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Costa Rica. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 colon=1929, \$0.2500; 1932, \$0.273.

TABLE 6.—*Coffee: Exports from CUBA to principal markets, in specified years, 1932 to 1938*<sup>1</sup>

| Country                                    | 1932             | 1936             | 1937    | 1938    |
|--|------------------|------------------|---------|---------|
| Quantity (1,000 pounds)                    |                  |                  |         |         |
| Total, all countries.....                  | 13,424           | 4,942            | 14,683  | 15,041  |
| UNITED STATES.....                         | 8,903            | 1,677            | 9,250   | 7,645   |
| France.....                                | 2,501            | 53               | 2,549   | 6,075   |
| Czechoslovakia.....                        |                  | 911              | 1,051   | 546     |
| Spain.....                                 | 1,356            | 1,054            | 599     | 279     |
| Germany.....                               | 218              | 110              | 103     | 339     |
| Denmark.....                               |                  | 1,125            | 598     | 67      |
| Netherlands.....                           | 446              | ( <sup>2</sup> ) | 139     |         |
| All other.....                             | ( <sup>3</sup> ) | 12               | 394     | *100    |
| Percentage to the United States.....       | 66.3             | 33.9             | 63.0    | 50.8    |
| Value (1,000 U. S. dollars)                |                  |                  |         |         |
| Total, all countries.....                  | 1,206            | 427              | 1,131   | 677     |
| UNITED STATES.....                         | 825              | 115              | 653     | 318     |
| France.....                                | 205              | 4                | 199     | 257     |
| Czechoslovakia.....                        |                  | 102              | 111     | 56      |
| Spain.....                                 | 124              | 89               | 60      | 17      |
| Germany.....                               | 15               | 13               | 9       | 17      |
| Denmark.....                               |                  | 103              | 53      | 4       |
| Netherlands.....                           | 37               | ( <sup>2</sup> ) | 12      |         |
| All other.....                             | ( <sup>3</sup> ) | 1                | 34      | *8      |
| Percentage to the United States.....       | 68.4             | 27.0             | 57.7    | 47.0    |
| Unit value per pound of total exports..... | \$0.090          | \$0.086          | \$0.077 | \$0.045 |

<sup>1</sup> Exports in 1929 were negligible.<sup>2</sup> Not over 500.<sup>3</sup> Includes 77,000 pounds, valued at \$7,000, exported to Italy.<sup>4</sup> One Cuban peso=1 U. S. dollar (all years).<sup>5</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=\$1.00 (all years).

TABLE 7.—*Coffee: Exports from the DOMINICAN REPUBLIC to principal markets, in specified years, 1929 to 1938*

| Country                                    | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                    |         |         |         |         |         |
| Total, all countries.....                  | 12,142  | 14,137  | 32,121  | 24,359  | 18,552  |
| France.....                                | 4,526   | 5,358   | 18,887  | 13,350  | 7,417   |
| UNITED STATES.....                         | 1,443   | 1,611   | 4,612   | 6,490   | 5,983   |
| Netherlands.....                           | 276     | 859     | 1,212   | 1,010   | 1,967   |
| Germany.....                               | 87      | 458     | 3,424   | 1,662   | 1,183   |
| Spain.....                                 | 664     | 1,574   | 2,647   | 84      | 324     |
| Italy.....                                 | 670     | 2,526   | 429     | 884     | 153     |
| French West Indies.....                    | 185     | 57      | 206     | 58      | 77      |
| Puerto Rico.....                           | 1,329   | 1,414   |         |         |         |
| All other.....                             | 2,762   | 280     | 704     | 821     | 1,448   |
| Percentage to the United States.....       | 11.9    | 11.4    | 14.4    | 26.6    | 32.3    |
| Value (1,000 U. S. dollars) <sup>1</sup>   |         |         |         |         |         |
| Total, all countries.....                  | 2,444   | 1,255   | 2,020   | 1,765   | 1,040   |
| France.....                                | 889     | 431     | 1,203   | 968     | 281     |
| UNITED STATES.....                         | 277     | 137     | 265     | 438     | 358     |
| Netherlands.....                           | 56      | 73      | 84      | 79      | 127     |
| Germany.....                               | 13      | 31      | 184     | 127     | 61      |
| Spain.....                                 | 179     | 139     | 170     | 4       | 15      |
| Italy.....                                 | 125     | 236     | 25      | 71      | 9       |
| French West Indies.....                    | 33      | 4       | 12      | 3       | 4       |
| Puerto Rico.....                           | 333     | 177     |         |         |         |
| All other.....                             | 539     | 27      | 47      | 55      | 85      |
| Percentage to the United States.....       | 11.3    | 10.9    | 14.6    | 24.8    | 34.4    |
| Unit value per pound of total exports..... | \$0.201 | \$0.089 | \$0.063 | \$0.072 | \$0.056 |

<sup>1</sup> Reported in U. S. dollars.<sup>2</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of the Dominican Republic. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 pounds.

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TABLE 8.—Coffee: Exports from ECUADOR to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932             | 1936 <sup>1</sup> | 1937 <sup>1</sup> | 1938 <sup>1</sup> |
|--|---------|------------------|-------------------|-------------------|-------------------|
| Quantity (1,000 pounds)                                  |         |                  |                   |                   |                   |
| Total, all countries.....                                | 16,120  | 17,697           | 30,433            | 31,010            | 30,221            |
| France.....  | 2,329   | 5,947            | 12,746            | 12,702            | 12,061            |
| UNITED STATES.....                                       | 255     | 2,752            | 9,463             | 11,456            | 10,637            |
| Chile.....   | 2,364   | 374              | 2,177             | 2,719             | 2,998             |
| Peru.....  | 31      | 84               | 251               | 550               | 683               |
| Italy.....   | 2,311   | 2,981            | 671               | 749               | 763               |
| Germany.....   | 148     | ( <sup>2</sup> ) | 1,563             | 849               | 514               |
| Spain.....   | 5,383   | 5,271            | 2,179             | -----             | ( <sup>2</sup> )  |
| All other.....   | 2,279   | 268              | 1,353             | 1,965             | 1,945             |
| Percentage to the United States.....                     | 1.6     | 15.5             | 31.1              | 36.9              | 35.2              |
| Value (1,000 sucres)                                     |         |                  |                   |                   |                   |
| Total, all countries.....                                | 11,672  | 8,048            | 19,803            | 24,613            | 16,704            |
| Value (1,000 U. S. dollars)                              |         |                  |                   |                   |                   |
| Total, all countries.....                                | 2,334   | 1,342            | 1,885             | 2,240             | 1,246             |
| France.....  | 337     | 445              | 799               | 936               | 508               |
| UNITED STATES.....                                       | 41      | 236              | 577               | 808               | 422               |
| Chile.....   | 356     | 28               | 110               | 175               | 141               |
| Peru.....  | 5       | 5                | 12                | 40                | 35                |
| Italy.....   | 488     | 219              | 45                | 57                | 35                |
| Germany.....   | 34      | ( <sup>2</sup> ) | 109               | 65                | 23                |
| Spain.....   | 776     | 386              | 132               | -----             | ( <sup>2</sup> )  |
| All other.....   | 297     | 23               | 101               | 159               | 82                |
| Percentage to the United States.....                     | 1.7     | 17.6             | 30.6              | 36.1              | 33.9              |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.145 | \$0.076          | \$0.062           | \$0.072           | \$0.041           |

<sup>1</sup> Preliminary.

<sup>2</sup> Not reported separately.

<sup>3</sup> Not over 600.

<sup>4</sup> See footnote 4, table 3.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Ecuador and U. S. Consular Report No. 8671. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 sucre=1929, \$0.2000; 1932, \$0.1667; 1936, \$0.0952; 1937, \$0.0910; 1938, \$0.0746.



TABLE 9.—Coffee: Exports from EL SALVADOR to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938 (prel.) |
|--|---------|---------|---------|---------|--------------|
| Quantity (1,000 pounds)                                  |         |         |         |         |              |
| Total, all countries.....                                | 103,137 | 87,423  | 108,927 | 149,071 | 149,071      |
| UNITED STATES.....                                       | 18,928  | 12,058  | 60,646  | 90,856  | 75,205       |
| Germany.....   | 34,759  | 31,254  | 16,655  | 17,582  | 12,781       |
| Norway.....  | 9,161   | 9,314   | 8,669   | 11,316  | 13,473       |
| Sweden.....  | 8,536   | 6,022   | 7,241   | 7,171   | 8,150        |
| Italy.....   | 9,418   | 10,909  | 6,679   | 4,392   | 1,032        |
| France.....  | 1,980   | 4,689   | 3,870   | 4,400   | 1,094        |
| Finland.....   | 1,331   | 318     | 1,056   | 1,686   | 1,990        |
| Netherlands.....   | 10,842  | 8,969   | 1,443   | 943     | 881          |
| Belgium.....   | 687     | 534     | 239     | 760     | 565          |
| Denmark.....   | 1,343   | 776     | 1,723   | 602     | 407          |
| Chile.....   | 803     | 397     | 363     | 450     | 607          |
| United Kingdom.....                                      | 1,217   | 186     | 820     | 45      | 1            |
| Spain.....   | 1,487   | 1,688   | 830     | .....   | 11           |
| All other.....   | 1,951   | 262     | 4,999   | 8,898   | 32,814       |
| Percentage to the United States.....                     | 18.4    | 13.8    | 55.7    | 60.9    | 50.5         |
| Value (1,000 colones)                                    |         |         |         |         |              |
| Total, all countries.....                                | 34,090  | 12,867  | 22,523  | 35,313  | 23,773       |
| Value (1,000 U. S. dollars)                              |         |         |         |         |              |
| Total, all countries.....                                | 16,793  | 5,082   | 9,009   | 14,125  | 9,509        |
| UNITED STATES.....                                       | 3,022   | 722     | 5,065   | 8,705   | (1)          |
| Germany.....   | 5,715   | 1,809   | 1,419   | 1,676   |              |
| Norway.....  | 1,451   | 539     | 682     | 1,014   |              |
| Sweden.....  | 1,566   | 349     | 569     | 678     |              |
| Italy.....   | 1,541   | 635     | 52      | 412     |              |
| France.....  | 325     | 280     | 279     | 371     |              |
| Finland.....   | 220     | 19      | 85      | 155     |              |
| Netherlands.....   | 1,736   | 503     | 125     | 91      |              |
| Belgium.....   | 113     | 35      | 18      | 71      |              |
| Denmark.....   | 221     | 43      | 138     | 59      |              |
| Chile.....   | 130     | 22      | 31      | 42      |              |
| United Kingdom.....                                      | 200     | 10      | 50      | 4       |              |
| Spain.....   | 244     | 100     | 60      | .....   |              |
| All other.....   | 309     | 16      | 436     | 847     |              |
| Percentage to the United States.....                     | 18.0    | 14.2    | 56.2    | 61.6    | .....        |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.163 | \$0.058 | \$0.063 | \$0.095 | \$0.064      |

<sup>1</sup> Not available.<sup>2</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of El Salvador and U. S. Consular Report No. 3593. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 colon=1929, \$0.4928; 1932, \$0.3950; 1936-38, \$0.4000.

TABLE 10.—Coffee: Exports from GUATEMALA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1935    | 1937    | 1938               |
|--|---------|---------|---------|---------|--------------------|
| Quantity (1,000 pounds)                                  |         |         |         |         |                    |
| Total, all countries.....                                | 97,412  | 100,500 | 112,124 | 103,891 | 108,069            |
| UNITED STATES.....                                       | 34,320  | 27,642  | 54,342  | 52,002  | 63,946             |
| Germany.....   | 47,990  | 38,355  | 28,039  | 24,706  | 21,639             |
| Sweden.....  | 2,936   | 5,378   | 7,350   | 6,718   | 7,499              |
| Netherlands.....   | 9,096   | 21,032  | 9,778   | 6,820   | 5,516              |
| Norway.....  | 477     | 925     | 542     | 767     | 976                |
| France.....  | 245     | 1,098   | 2,743   | 2,188   | 850                |
| Denmark.....   | 459     | 480     | 708     | 746     | 686                |
| All other.....   | 1,889   | 5,590   | 8,622   | 9,944   | <sup>1</sup> 6,957 |
| Percentage to the United States.....                     | 35.2    | 27.5    | 48.5    | 50.1    | 59.2               |
| Value (1,000 U. S. dollars) <sup>2</sup>                 |         |         |         |         |                    |
| Total, all countries.....                                | 19,094  | 7,385   | 10,606  | 10,525  | 10,090             |
| UNITED STATES.....                                       | 6,753   | 2,044   | 5,073   | 5,196   | 5,933              |
| Germany.....   | 9,375   | 2,810   | 2,593   | 2,611   | 2,002              |
| Sweden.....  | 579     | 308     | 701     | 667     | 711                |
| Netherlands.....   | 1,788   | 1,547   | 972     | 685     | 538                |
| Norway.....  | 94      | 66      | 52      | 77      | 92                 |
| France.....  | 48      | 81      | 224     | 207     | 76                 |
| Denmark.....   | 91      | 36      | 64      | 74      | 65                 |
| All other.....   | 366     | 401     | 827     | 1,008   | <sup>1</sup> 673   |
| Percentage to the United States.....                     | 35.4    | 27.7    | 47.8    | 49.4    | 58.8               |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.196 | \$0.073 | \$0.095 | \$0.101 | \$0.093            |

<sup>1</sup> Includes exports to the following countries:

| Country             | 1,000 pounds | 1,000 U. S. dollars |
|---------------------|--------------|---------------------|
| Poland.....         | 1,756        | 170                 |
| Czechoslovakia..... | 1,617        | 157                 |
| Finland.....        | 1,313        | 126                 |

<sup>2</sup> One quetzal=1 U. S. dollar (all years).<sup>3</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Guatemala. Converted to U. S. weights by applying the following factor: 1 quintal=101.43 pounds.

TABLE 11.—Coffee: Exports from HAITI to principal markets, in specified years, 1929 to 1938<sup>1</sup>

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 62,956  | 51,188  | 79,565  | 54,689  | 55,253  |
| UNITED STATES.....                                       | 1,896   | 1,065   | 1,709   | 10,221  | 19,523  |
| Belgium.....   | 4,452   | 6,022   | 12,445  | 12,397  | 13,728  |
| France.....  | 37,850  | 28,497  | 53,468  | 11,149  | 5,812   |
| Denmark.....   | 6,162   | 6,375   | 7,429   | 4,696   | 6,060   |
| Netherlands.....   | 1,303   | 275     | 753     | 2,030   | 2,890   |
| Sweden.....  | 511     | 146     | 379     | 1,972   | 1,278   |
| Norway.....  | 379     | 127     | 139     | 926     | 1,136   |
| Italy.....   | 5,947   | 7,308   | 728     | 8,426   | 1,180   |
| Germany.....   | 1,169   | 541     | 1,691   | 1,596   | 984     |
| Spain.....   | 2,665   | 617     | 456     |         |         |
| All other.....   | 1,122   | 185     | 368     | 1,276   | 2,662   |
| Percentage to the United States.....                     | 3.0     | 2.1     | 2.1     | 18.7    | 35.3    |
| Value (1,000 gourdes)                                    |         |         |         |         |         |
| Total, all countries.....                                | 64,494  | 26,335  | 29,345  | 23,393  | 17,327  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 12,899  | 5,267   | 5,869   | 4,679   | 3,465   |
| UNITED STATES.....                                       | 383     | 110     | 124     | 818     | 1,215   |
| Belgium.....   | 915     | 624     | 938     | 1,081   | 837     |
| France.....  | 7,759   | 2,931   | 3,912   | 927     | 376     |
| Denmark.....   | 1,275   | 655     | 533     | 417     | 371     |
| Netherlands.....   | 267     | 28      | 62      | 165     | 186     |
| Sweden.....  | 107     | 15      | 31      | 196     | 93      |
| Norway.....  | 77      | 13      | 10      | 82      | 74      |
| Italy.....   | 1,225   | 752     | 53      | 724     | 72      |
| Germany.....   | 237     | 56      | 126     | 134     | 57      |
| Spain.....   | 440     | 64      | 33      |         |         |
| All other.....   | 214     | 19      | 27      | 115     | 184     |
| Percentage to the United States.....                     | 3.0     | 2.1     | 2.1     | 17.5    | 35.1    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.205 | \$0.103 | \$0.074 | \$0.085 | \$0.063 |

<sup>1</sup> Fiscal years ended September 30.<sup>2</sup> Includes 1,060,000 pounds, valued at \$80,000, exported to Switzerland.<sup>3</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Haiti. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 gourde=\$0.2000 (all years).

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TABLE 12.—Coffee: Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country  | 1929                        | 1933 <sup>1</sup> | 1936    | 1937    | 1938             |
|--|-----------------------------|-------------------|---------|---------|------------------|
|  | Quantity (1,000 pounds)     |                   |         |         |                  |
| Total, all countries.....                                | 65,864                      | 90,952            | 94,417  | 77,273  | 77,419           |
| UNITED STATES.....                                       | 31,584                      | 54,889            | 53,259  | 45,199  | 52,490           |
| Germany.....   | 25,371                      | 23,836            | 33,371  | 22,561  | 18,543           |
| France.....  | 951                         | 3,474             | 2,742   | 2,472   | 1,332            |
| Sweden.....  | 232                         | 66                | 535     | 87      | 428              |
| Netherlands.....   | 2,074                       | 1,575             | 564     | 3,074   | 419              |
| Spain.....   | 2,710                       | 5,863             | 3,164   | .....   | ( <sup>2</sup> ) |
| All other.....   | 2,942                       | 1,249             | 782     | 3,880   | 4,207            |
| Percentage to the United States.....                     | 48.0                        | 60.3              | 56.4    | 58.5    | 67.8             |
|  | Value (1,000 pesos)         |                   |         |         |                  |
| Total, all countries.....                                | 32,184                      | 26,887            | 28,887  | 27,915  | 25,691           |
|  | Value (1,000 U. S. dollars) |                   |         |         |                  |
| Total, all countries.....                                | 15,506                      | 7,555             | 8,019   | 7,746   | 5,683            |
| UNITED STATES.....                                       | 7,630                       | 4,541             | 4,623   | 4,523   | 3,963            |
| Germany.....   | 5,743                       | 2,031             | 2,783   | 2,229   | 1,360            |
| France.....  | 225                         | 293               | 204     | 259     | 90               |
| Sweden.....  | 56                          | 5                 | 46      | 9       | 34               |
| Netherlands.....   | 483                         | 138               | 48      | 292     | 27               |
| Spain.....   | 631                         | 451               | 249     | .....   | ( <sup>2</sup> ) |
| All other.....   | 738                         | 96                | 66      | 434     | 309              |
| Percentage to the United States.....                     | 49.2                        | 60.1              | 57.6    | 58.4    | 69.7             |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.235                     | \$0.083           | \$0.085 | \$0.100 | \$0.073          |

<sup>1</sup> Exports by destination are not available for 1932.<sup>2</sup> Not over 500.<sup>3</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1929, \$0.4818; 1933, \$0.2610; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 13.—Coffee: Exports from NICARAGUA to principal markets, in specified years, 1929 to 1938

| Country  | 1929                                     | 1932    | 1936    | 1937    | 1938    |
|--|--|---------|---------|---------|---------|
|  | Quantity (1,000 pounds)                  |         |         |         |         |
| Total, all countries.....                                | 29,207                                   | 17,918  | 28,896  | 34,808  | 31,439  |
| UNITED STATES.....                                       | 8,926                                    | 1,072   | 8,008   | 14,375  | 16,273  |
| Germany.....   | 6,905                                    | 4,607   | 8,747   | 8,171   | 6,387   |
| France.....  | 4,576                                    | 5,023   | 8,750   | 8,483   | 4,343   |
| Netherlands.....   | 3,851                                    | 2,271   | 967     | 1,705   | 2,727   |
| Finland.....   | 313                                      | 84      | 669     | 751     | 1,046   |
| Italy.....   | 952                                      | 480     | 398     | 479     | 272     |
| United Kingdom.....                                      | 1,912                                    | 3,366   | 490     | 405     | 94      |
| Belgium.....   | 301                                      | 53      | 149     | 175     | 8       |
| Norway.....  | 190                                      | 175     | 23      | 8       | 7       |
| Spain.....   | 891                                      | 749     | 213     | .....   | .....   |
| All other.....   | 890                                      | 38      | 482     | 246     | 282     |
| Percentage to the United States.....                     | 30.6                                     | 6.0     | 27.7    | 41.3    | 51.8    |
|  | Value (1,000 U. S. dollars) <sup>1</sup> |         |         |         |         |
| Total, all countries.....                                | 5,903                                    | 1,479   | 2,115   | 3,078   | 2,031   |
| UNITED STATES.....                                       | 1,768                                    | 94      | 635     | 1,376   | 1,050   |
| Germany.....   | 1,249                                    | 396     | 653     | 789     | 521     |
| France.....  | 868                                      | 375     | 589     | 574     | 185     |
| Netherlands.....   | 871                                      | 216     | 70      | 158     | 181     |
| Finland.....   | 160                                      | 6       | 48      | 64      | 50      |
| Italy.....   | 187                                      | 40      | 27      | 43      | 17      |
| United Kingdom.....                                      | 399                                      | 293     | 29      | 35      | 7       |
| Belgium.....   | 63                                       | 5       | 12      | 15      | 1       |
| Norway.....  | 36                                       | 12      | 1       | 1       | (?)     |
| Spain.....   | 139                                      | 38      | 13      | .....   | .....   |
| All other.....   | 163                                      | 3       | 38      | 23      | 19      |
| Percentage to the United States.....                     | 30.0                                     | 6.3     | 30.0    | 44.7    | 51.7    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.202                                  | \$0.083 | \$0.073 | \$0.088 | \$0.065 |

<sup>1</sup> One cordoba=1 U. S. dollar (all years).

<sup>2</sup> Not over 500.

<sup>3</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Nicaragua. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 pounds.

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TABLE 14.—Coffee: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937             | 1938             |
|--|---------|---------|---------|------------------|------------------|
| Quantity (1,000 pounds)                                  |         |         |         |                  |                  |
| Total, all countries.....                                | 1,760   | 5,337   | 6,890   | 6,451            | 5,431            |
| Germany.....   | 249     | 1,565   | 1,014   | 169              | 1,623            |
| Italy.....   | 410     | 641     | 2,592   | 2,376            | 1,244            |
| UNITED STATES.....                                       | 492     | 236     | 412     | ( <sup>1</sup> ) | 628              |
| France.....  | 8       | 26      | 574     | 528              | 694              |
| Netherlands.....   | 42      | 653     | 232     | 235              | 439              |
| Chile.....   | 246     | 201     | 868     | 1,133            | 353              |
| Belgium.....   | 206     | 984     | 733     | 906              | 79               |
| Great Britain.....                                       | 17      | 964     | 70      | 368              | 4                |
| Japan.....   | 13      | 20      | 40      | 27               | 3                |
| All other.....   | 77      | 17      | 665     | 709              | 364              |
| Percentage to the United States.....                     | 27.9    | 4.4     | 6.6     | ( <sup>1</sup> ) | 11.6             |
| Value (1,000 soles)                                      |         |         |         |                  |                  |
| Total, all countries.....                                | 770     | 1,709   | 2,005   | 1,876            | 1,736            |
| Value (1,000 U. S. dollars)                              |         |         |         |                  |                  |
| Total, all countries.....                                | 308     | 364     | 499     | 473              | 389              |
| Germany.....   | 41      | 105     | 83      | 11               | 130              |
| Italy.....   | 74      | 49      | 222     | 197              | 96               |
| UNITED STATES.....                                       | 86      | 16      | 2       | ( <sup>1</sup> ) | 46               |
| France.....  | 1       | 2       | 31      | 31               | 31               |
| Netherlands.....   | 7       | 40      | 12      | 13               | 28               |
| Chile.....   | 45      | 13      | 61      | 85               | 26               |
| Belgium.....   | 37      | 60      | 41      | 55               | 4                |
| Great Britain.....                                       | 3       | 75      | 6       | 33               | ( <sup>1</sup> ) |
| Japan.....   | 2       | 2       | 4       | 2                | ( <sup>1</sup> ) |
| All other.....   | 12      | 2       | 37      | 46               | 29               |
| Percentage to the United States.....                     | 27.9    | 4.4     | 0.4     | ( <sup>1</sup> ) | 11.8             |
| Unit value per pound of total exports <sup>4</sup> ..... | \$0.175 | \$0.068 | \$0.072 | \$0.073          | \$0.072          |

<sup>1</sup> Not over 500.<sup>2</sup> Includes 329,000 pounds, valued at \$27,000, exported to Sweden.<sup>3</sup> Less than one-tenth of 1 percent.<sup>4</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 kilo, gross=2.2046 pounds; 1 Peruvian pound=1929, \$4.0000; 1 sol=1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2530; 1938, \$0.2242.

TABLE 15.—Coffee: Exports from VENEZUELA to principal markets, in specified years, 1929 to 1938

| Country  | 1929                        | 1932    | 1936    | 1937    | 1938    |
|--|-----------------------------|---------|---------|---------|---------|
|  | Quantity (1,000 pounds)     |         |         |         |         |
| Total, all countries.....                                | 141,907                     | 108,517 | 135,721 | 91,949  | 79,130  |
| Germany.....   | 32,518                      | 21,315  | 37,270  | 36,185  | 44,430  |
| UNITED STATES.....                                       | 41,072                      | 37,774  | 45,159  | 23,557  | 18,679  |
| France.....  | 19,592                      | 24,070  | 30,096  | 15,164  | 5,482   |
| Denmark.....   | 3,201                       | 4,132   | 5,584   | 3,493   | 4,454   |
| Italy.....   | 3,220                       | 1,056   | 7,538   | 8,523   | 2,615   |
| Netherlands West Indies.....                             | 1,582                       | 2,112   | 1,576   | 1,061   | 480     |
| Finland.....   | 1,206                       | 347     | 856     | 502     | 309     |
| Spain.....   | 23,016                      | 11,039  | 4,544   | 167     | 352     |
| Netherlands.....   | 8,827                       | 5,406   | 562     | 993     | 129     |
| Canary Islands.....                                      | 643                         | 407     | 371     | 35      | 100     |
| Belgium.....   | 430                         | 124     | 151     | 177     | 13      |
| All other.....   | 6,600                       | 735     | 2,014   | 2,092   | 2,087   |
| Percentage to the United States.....                     | 28.9                        | 34.8    | 33.3    | 26.6    | 23.6    |
|  | Value (1,000 bolívares)     |         |         |         |         |
| Total, all countries.....                                | 133,792                     | 58,323  | 39,689  | 38,091  | 25,677  |
|  | Value (1,000 U. S. dollars) |         |         |         |         |
| Total, all countries.....                                | 25,822                      | 8,801   | 10,125  | 10,767  | 8,050   |
| Germany.....   | 6,353                       | 1,686   | 3,097   | 4,243   | 4,775   |
| UNITED STATES.....                                       | 7,683                       | 3,353   | 3,472   | 2,788   | 2,029   |
| France.....  | 3,392                       | 1,797   | 1,939   | 1,812   | 323     |
| Denmark.....   | 540                         | 331     | 360     | 388     | 313     |
| Italy.....   | 580                         | 82      | 590     | 963     | 263     |
| Netherlands West Indies.....                             | 282                         | 174     | 126     | 129     | 68      |
| Finland.....   | 216                         | 28      | 61      | 60      | 29      |
| Spain.....   | 3,815                       | 826     | 266     | 13      | 22      |
| Netherlands.....   | 1,686                       | 421     | 39      | 112     | 12      |
| Canary Islands.....                                      | 116                         | 31      | 30      | 4       | 10      |
| Belgium.....   | 77                          | 10      | 10      | 11      | 1       |
| All other.....   | 1,082                       | 59      | 134     | 234     | 215     |
| Percentage to the United States.....                     | 29.8                        | 38.1    | 34.3    | 25.9    | 25.2    |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.182                     | \$0.081 | \$0.075 | \$0.117 | \$0.102 |

<sup>1</sup> See footnote 4, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Venezuela. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 bolívar=1929, \$0.1930; 1932, \$0.1509; 1936, \$0.2551; 1937, \$0.2824; 1938, \$0.3135.

## COPPER

Copper is an essential material in the production of a wide variety of industrial and consumer products, and also in the manufacture of munitions. In few uses are substitutes for copper economically practicable.

### Position of Latin America in world production.

The world output of new copper is usually well over 1 million short tons, and in certain years has exceeded 2 million short tons; in 1929 world production amounted to 2.1 million short tons, and in 1938 to 2.2 million short tons. Measured in terms of value, the world production of new copper is larger than that of any other nonferrous metal except gold.

Latin America usually produces between 20 and 25 percent of all the new copper mined in the world; its share was 24.5 percent in 1929 and 22.5 percent in 1938. The United States is the world's largest copper producer. In 1938 it contributed 25 percent of total world production; its share, however, has declined from 48.5 percent in 1929.<sup>1</sup> Other important producing areas are Canada, Northern Rhodesia, and the Belgian Congo. During the decade 1929-38, these regions increased their production both absolutely and in relation to the world total. In 1929 Canada accounted for 5.7 percent of world production, and Rhodesia and the Belgian Congo (combined) for 8.1 percent; 10 years later (1938) the share of Canada was 13.3 percent and that of Rhodesia and the Belgian Congo 17.2 percent (10.9 percent and 6.3 percent, respectively).

The most important copper-producing countries in Latin America are Chile, Mexico, Peru, Cuba, and Bolivia, in the order named. In 1938, Chilean production alone was 79 percent of the total Latin American output, and 18 percent of world production. Copper deposits exist in many other parts of Latin America. Some mining is carried on in Brazil. Costa Rica and Guatemala have a number of small deposits, but few are worked, and these only on a small scale. Production of copper in the principal producing countries of Latin America and of the world, in specified years, 1929 to 1938, is shown in table 1. World production and production in Latin America and in the United States were large in 1929; for the period 1925-29, average annual world production was 1,784,000 short tons.

<sup>1</sup> Imports of copper into the United States are large, but are almost entirely for refining in bond and re-export.



TABLE 1.—Copper: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1938

| Country  | 1929        | 1932     | 1936        | 1937        | 1938        |
|--|-------------|----------|-------------|-------------|-------------|
| Quantity (short tons—copper content)                           |             |          |             |             |             |
| Chile.....   | 349, 221    | 113, 728 | 282, 418    | 455, 165    | 387, 315    |
| Mexico.....  | 86, 759     | 37, 588  | 35, 960     | 51, 538     | 45, 662     |
| Peru.....  | 59, 980     | 23, 610  | 36, 764     | 39, 316     | 40, 021     |
| Cuba.....  | 15, 740     | 5, 941   | 12, 800     | 13, 800     | 14, 800     |
| Bolivia.....   | 7, 700      | 3, 000   | 2, 000      | 4, 076      | 3, 178      |
| Total production of Latin American countries listed above..... | 519, 400    | 183, 867 | 369, 942    | 563, 895    | 490, 976    |
| UNITED STATES.....   | 1, 026, 348 | 255, 509 | 614, 971    | 834, 835    | 553, 430    |
| Canada.....  | 121, 151    | 128, 370 | 210, 824    | 262, 432    | 290, 200    |
| Rhodesia.....  | 1 172, 561  | 80, 456  | 154, 337    | 234, 405    | 237, 362    |
| Belgian Congo.....   |             | 59, 522  | 105, 454    | 165, 993    | 136, 685    |
| All other.....   | 278, 749    | 293, 379 | 392, 993    | 442, 406    | 475, 614    |
| Total world production.....                                    | 2, 118, 209 | 998, 103 | 1, 848, 521 | 2, 803, 966 | 2, 184, 267 |
| Percent of total world production                              |             |          |             |             |             |
| Latin American countries listed above.....                     | 24. 5       | 16. 0    | 20. 0       | 22. 5       | 22. 5       |
| UNITED STATES.....   | 48. 5       | 25. 6    | 33. 3       | 33. 3       | 25. 3       |
| All other countries.....                                       | 27. 0       | 58. 4    | 46. 7       | 44. 2       | 52. 2       |

<sup>1</sup> Statistics are for total Africa.

Source: Compiled by the United States Tariff Commission from *Yearbook of the American Bureau of Metal Statistics*, 1934 and 1938. Statistics based where possible on blister copper plus new copper going to direct production of sulfate, by countries wherein ore originated, excluding copper derived from junk.

#### Latin American exports.

Although the Latin American countries rank high as producers of copper, they rank even higher as exporters. Direct consumption in these countries is small, amounting to less than 1 percent of the world output. As a group, the Latin American countries are the world's largest exporters of copper. Exports from these countries are principally in the form of copper metal in bars, unrefined except in the case of Chile, which exports both unrefined and refined bars. Some copper ore and concentrates are also exported.

Some Latin American statistics, unlike those of the United States, do not give the weight of the copper content of ore, concentrates, and unrefined metal.<sup>2</sup> Consequently, the only way of presenting the exports of copper in all forms from a given country, and comparing the exports of copper from the several countries, is in terms of value. These value figures, in turn, are more or less misleading, because many of the shipments represent virtually intercompany transfers, and because the ore sometimes contains precious metals as well as copper. Table 2 summarizes, in terms of value, the exports from the several copper-exporting countries of Latin America to the world as a whole and to the United States.

<sup>2</sup> Chilean and Cuban statistics are expressed in terms of gross weight. Peruvian statistics are given in terms of copper content except in 1929 when the gross weight is recorded. In Mexican statistics, gross or net weight is not specified.

TABLE 2.—Unmanufactured copper: Exports from Latin American countries to all countries and to the United States, in specified years, 1929 to 1938

| From—              | To—                | 1929                        | 1932   | 1936   | 1937    | 1938   |
|--------------------|--------------------|-----------------------------|--------|--------|---------|--------|
|                    |                    | Value (1,000 U. S. dollars) |        |        |         |        |
| Chile.....         | All countries..... | 114,596                     | 15,026 | 44,096 | 104,397 | 67,840 |
|                    | UNITED STATES..... | 64,842                      | 4,980  | 10,938 | 29,935  | 12,483 |
| Cuba.....          | All countries..... | 1,916                       | 313    | 1,547  | 2,034   | 2,380  |
|                    | UNITED STATES..... | 1,903                       | 311    | 1,547  | 2,006   | 2,352  |
| Mexico.....        | All countries..... | 42,850                      | 5,998  | 7,201  | 14,511  | 8,594  |
|                    | UNITED STATES..... | 42,793                      | 5,898  | 7,064  | 14,131  | 8,362  |
| Peru.....          | All countries..... | 26,687                      | 3,073  | 11,199 | 13,424  | 13,987 |
|                    | UNITED STATES..... | 26,673                      | 3,064  | 11,199 | 13,421  | 13,720 |
| Latin America..... | All countries..... | 187,049                     | 24,400 | 64,034 | 135,366 | 92,695 |
|                    | UNITED STATES..... | 126,211                     | 14,253 | 30,748 | 60,498  | 36,917 |
|                    |                    | Percent                     |        |        |         |        |
| Chile.....         | UNITED STATES..... | 47                          | 33     | 26     | 29      | 18     |
| Cuba.....          | UNITED STATES..... | 99                          | 99     | 99     | 99      | 99     |
| Mexico.....        | UNITED STATES..... | 100                         | 100    | 98     | 97      | 97     |
| Peru.....          | UNITED STATES..... | 100                         | 100    | 100    | 100     | 99     |
| Latin America..... | UNITED STATES..... | 67                          | 58     | 48     | 45      | 40     |

<sup>1</sup> 1933.

Sources: Compiled by the United States Tariff Commission from official trade statistics of Chile, Cuba, Mexico, and Peru. Converted to U. S. currency at following rates of exchange: Chile: 1 peso=1929 and 1932, \$0.1217; 1936-38, \$0.2060. Cuba: 1 peso=1 U. S. dollar. Mexico: 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212. Peru: 1 sol=1929, \$0.4004; 1932, \$0.2130; 1936, \$0.2460; 1937, \$0.2520; 1938, \$0.2242.

In the more detailed tables of exports from the several countries (appearing at the end of this section), both quantities and values are shown, and unit values are computed. Variations in the nature of the product exported as between different years and different countries of origin and destination, however, make such unit values of little significance, except as general indexes of price trends. The proportion of copper in the exports of ore may vary greatly, and there may also be variations in the ore content of other, mainly more valuable, metals. In the case of unrefined copper (blister and matte), unit values have somewhat greater significance. But though copper may make up 98 percent or more of the total weight, the content of the more valuable metals (principally silver, but frequently including some gold and platinum), varies widely; often unrefined metal is worth more than the refined, because of the content of these other metals.

In the period 1932-39, Latin American exports of copper to European markets increased, whereas the quantity going to the United States decreased. Direct shipments to Europe were promoted by the establishment of refining plants in Chile and in Europe, and the development of a market in Europe for certain grades of unrefined copper. Furthermore, most of the copper shipped to the United States was destined, after refining under bond, for consumption in European and other markets. Hence, prior to 1940, all but a small part of Latin American output was dependent upon the European market.

Exports of unrefined and refined copper (blister, cathodes, and electrolytic crude shapes) from Chile to principal markets, in specified years, 1929 to 1938, are shown in table 4 at the end of this section. There has been considerable variation in the quantities exported and the relative importance of the principal markets in recent years. In 1938, exports were valued at 67.7 million dollars, of which the United Kingdom accounted for 36 percent and the United States for 18 percent. Most of the remainder was distributed among a number of European countries. Exports to France represented 8 percent of the total value, and those to Germany less than 2 percent.<sup>3</sup> The value of copper exported from Chile in forms other than metal was small. Copper ore, as well as copper concentrates and copper precipitates and cement copper, went principally to Japan and the United States. (See tables 5 to 7.)

Exports of copper ore and concentrates and scrap from Cuba, valued at 2.3 million dollars in 1938, went almost exclusively to the United States. (See table 8.) Exports of copper ore, concentrates, and unrefined metal from Mexico in 1938 were valued at about 8.6 million dollars, of which shipments to the United States accounted for 97 percent. (See table 9.) Unrefined copper metal in bars (the major copper export), copper concentrates, and copper matte exported from Peru in 1938 were valued at more than 13 million dollars and went entirely to the United States, as did all copper cement in 1937, the latest year for which statistics are available. Copper ore exported from Peru in 1938 was valued at \$726,000, most of which was represented by exports to the United States and, to a lesser extent, to Japan. (See tables 10 and 11.)

#### **Competitive conditions and prices.**

The average price of electrolytic copper in the United States in 1929 was 18 cents per pound; it declined thereafter and in 1932 amounted to 5.5 cents per pound. From this low average the price rose substantially and almost steadily to about 16 cents in March 1937. This sharp rise began about the same time that the United States import-excite tax of 4 cents per pound was imposed, but the rise in price was nearly treble the amount of the tax. Inasmuch as prices in New York and London were approximately the same at all times during the period of advancing prices (taking transportation charges into account), the marked increase in prices in New York cannot be attributed to the tax. United States prices of electrolytic copper declined from March 1937 until June 1938, when they were less than 9 cents per pound. Since then prices have ranged between 9 and 12 cents per pound; in the months of October 1939 to March 1940 they averaged about 12 cents. (See table 3.)

Prior to the imposition of the import-excite tax in 1932, the price of electrolytic copper in London was slightly in excess of the New York price, chiefly because of transportation charges. After the tax was imposed, the New York price customarily exceeded that in London, though never by an amount even approximately equal to the tax. But in the months immediately preceding the outbreak of war in Europe (May to August 1939), the London price again exceeded the domestic price at New York because of the great demand for copper in the United Kingdom arising out of its armament program. After the outbreak of war in September 1939, the prices of copper in the

<sup>3</sup> German imports of copper, which were considerable before the war, came chiefly from other sources.

United Kingdom were fixed by government fiat, and the Canadian and Rhodesian production were commandeered for ultimate disposition by the British Government through bulk-buying agreements. London prices, therefore, lost their former significance as an index of conditions in the world copper market, and export prices at New York (quoted since the imposition of the excise tax) became more representative. From 1932 until the outbreak of the war, the domestic price of electrolytic copper at New York generally exceeded the export price.<sup>4</sup> After September 1939, however, the export price was higher than the domestic price, the spread amounting to two-thirds of a cent in November 1939 and to one-fourth of a cent in March 1940. Under such circumstances, the excise tax exercises little influence upon the price of copper in the United States.

TABLE 3.—*Electrolytic copper: Domestic and export prices at New York and prices at London, 1929-39 and in the first quarter of 1940*

[Cents per pound]

| Year                    | Quotation |        |        | Excess of—           |                      | Excess of—                    |                               |
|-------------------------|-----------|--------|--------|----------------------|----------------------|-------------------------------|-------------------------------|
|                         | New York  |        | London | New York             |                      | New York domestic over London | London over New York domestic |
|                         | Domestic  | Export |        | Domestic over export | Export over domestic |                               |                               |
| 1929.....               | 18.11     | -----  | 18.45  | -----                | -----                | -----                         | 0.34                          |
| 1930.....               | 12.98     | -----  | 13.27  | -----                | -----                | -----                         | .29                           |
| 1931.....               | 8.12      | -----  | 8.52   | -----                | -----                | -----                         | .40                           |
| 1932 <sup>1</sup> ..... | 5.56      | -----  | 5.62   | -----                | -----                | -----                         | .06                           |
| 1933.....               | 7.09      | 6.71   | 6.68   | 0.32                 | -----                | 0.15                          | -----                         |
| 1934.....               | 8.43      | 7.27   | 7.50   | 1.16                 | -----                | .93                           | -----                         |
| 1935.....               | 6.65      | 7.57   | 7.80   | 1.06                 | -----                | .85                           | -----                         |
| 1936.....               | 9.47      | 9.23   | 9.46   | .26                  | -----                | .01                           | -----                         |
| 1937.....               | 13.17     | 13.02  | 13.09  | .15                  | -----                | .08                           | -----                         |
| 1938.....               | 10.00     | 9.70   | 9.68   | .30                  | -----                | .12                           | -----                         |
| 1939.....               | 10.97     | 10.72  | (?)    | .25                  | -----                | -----                         | -----                         |
| 1939:                   |           |        |        |                      |                      |                               |                               |
| January.....            | 11.03     | 9.91   | 10.10  | 1.12                 | -----                | .93                           | -----                         |
| February.....           | 11.03     | 9.74   | 9.91   | 1.29                 | -----                | 1.12                          | -----                         |
| March.....              | 11.03     | 9.99   | 10.07  | 1.14                 | -----                | .96                           | -----                         |
| April.....              | 10.27     | 9.82   | 9.84   | .45                  | -----                | .48                           | -----                         |
| May.....                | 9.63      | 9.74   | 9.93   | .09                  | -----                | -----                         | .10                           |
| June.....               | 9.78      | 9.74   | 9.94   | .04                  | -----                | -----                         | .16                           |
| July.....               | 9.96      | 9.94   | 10.21  | .04                  | -----                | -----                         | .23                           |
| August.....             | 10.26     | 10.21  | 10.38  | .66                  | -----                | -----                         | .12                           |
| September.....          | 11.64     | 11.69  | (?)    | -----                | 0.05                 | -----                         | -----                         |
| October.....            | 12.22     | 12.49  | (?)    | -----                | .27                  | -----                         | -----                         |
| November.....           | 12.26     | 12.63  | (?)    | -----                | .65                  | -----                         | -----                         |
| December.....           | 12.26     | 12.63  | (?)    | -----                | .35                  | -----                         | -----                         |
| 1940:                   |           |        |        |                      |                      |                               |                               |
| January.....            | 11.95     | 12.00  | (?)    | -----                | .05                  | -----                         | -----                         |
| February.....           | 11.15     | 11.47  | (?)    | -----                | .32                  | -----                         | -----                         |
| March.....              | 11.16     | 11.41  | (?)    | -----                | .25                  | -----                         | -----                         |

<sup>1</sup> Import-excise tax of 4 cents per pound, effective June 21, 1932.

<sup>2</sup> Prices stabilized by government fiat on Sept. 12, 1939, at £51 per long ton, c. l. l. United Kingdom ports, and on Dec. 18, 1939, at £62 per long ton, delivered at buyer's works.

Source: *Engineering and Mining Journal*.

Prior to the beginning of the war the prices of copper in world markets, other than the United States, were directly affected by the activities of the International Copper Cartel, and prices in the United States were indirectly affected by them. The cartel, composed of the principal producers in Chile, Rhodesia, and the Belgian Congo, restricted and regulated the output of its membership and thereby

<sup>4</sup> Exceptions were the last 3 months of 1936 and 5 of the first 7 months of 1937, when European demand was especially strong.

influenced prices in foreign markets. Although no copper companies in the United States were directly connected with the cartel, several South American affiliates of United States companies were members, and United States prices moved in close harmony with world prices. In formulating their policies, directors of the cartel were doubtless influenced, at least to some extent, by the production, stocks, and prices of copper in the United States;<sup>5</sup> and consumers of copper in this country, in selecting an appropriate time for the purchase of copper, were probably concerned with, among other things, the price relationship of copper in London and in New York.<sup>6</sup>

With the outbreak of the war, the demand for and the production of copper increased appreciably. The action of the British Government in fixing copper prices and concluding bulk-buying agreements with Canadian and Rhodesian producers removed an important part of foreign production from the customary channels of distribution. Because of these developments the cartel suspended its operations, thus removing the restraint exercised over the productive activities of its members.

#### Effects of the war.

Copper is a strategic war material, and the current war has expanded the demand for it among the belligerent countries. Prior to 1941 most of the Latin American output of copper was destined, directly or indirectly, for consumption in European markets, and hence was greatly affected by changes in European demand. The loss to Latin America of exports to Germany (the third largest world market) was of minor importance, as that country had taken only insignificant quantities from this source. The loss of other European markets has been more than offset by the increased demand for copper in other countries, especially the United States.

<sup>5</sup> Should stocks accumulate in the United States and adversely affect world prices, the cartel might restrict the production of its members in an attempt to restore the previous price level; such action, for example, was taken on July 1, 1938, when output was reduced from 105 percent to 95 percent of agreed-on parities of production.

<sup>6</sup> Should domestic prices be high in relation to prices in London, consumers in the United States would be likely to restrict their purchases to essential current requirements, withholding more substantial orders in anticipation of a downward revision in domestic prices. Such action, of course, would operate to hasten the anticipated decline.

TABLE 4.—Copper metal, unrefined and refined in bars, cathodes, etc.:<sup>1</sup> Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929     | 1932     | 1936     | 1937     | 1938     |
|--|----------|----------|----------|----------|----------|
| Quantity (short tons—gross weight)                           |          |          |          |          |          |
| Total, all countries.....                                    | 339,844  | 133,061  | 263,712  | 424,191  | 385,056  |
| United Kingdom.....  | 56,200   | 39,450   | 83,057   | 126,536  | 139,189  |
| UNITED STATES.....   | 149,517  | 42,293   | 66,735   | 121,697  | 74,035   |
| Belgium.....   | 17,077   | 2,293    | 5,981    | 40,193   | 53,405   |
| Italy.....   | 13,557   | 10,592   | 28,226   | 37,298   | 31,871   |
| France.....  | 41,247   | 8,678    | 32,956   | 34,214   | 30,013   |
| Sweden.....  | 9,686    | 4,036    | 13,605   | 28,768   | 23,027   |
| Germany and Austria.....                                     | 48,545   | 19,920   | 6,379    | 5,655    | 7,395    |
| All other.....   | 4,015    | 5,869    | 26,743   | 29,830   | 26,121   |
| Percentage to the United States.....                         | 44.0     | 31.8     | 25.3     | 28.7     | 19.2     |
| Value (1,000 pesos)  |          |          |          |          |          |
| Total, all countries.....                                    | 925,681  | 120,891  | 213,530  | 505,313  | 328,818  |
| Value (1,000 U. S. dollars)                                  |          |          |          |          |          |
| Total, all countries.....                                    | 112,655  | 14,712   | 43,987   | 104,094  | 67,737   |
| United Kingdom.....  | 17,499   | 4,356    | 13,753   | 30,904   | 24,605   |
| UNITED STATES.....   | 51,132   | 4,691    | 10,901   | 29,760   | 12,441   |
| Belgium.....   | 5,889    | 243      | 1,120    | 10,201   | 9,982    |
| Italy.....   | 3,911    | 1,169    | 4,618    | 8,873    | 5,655    |
| France.....  | 13,998   | 958      | 5,813    | 8,590    | 5,278    |
| Sweden.....  | 3,201    | 446      | 2,314    | 7,235    | 4,216    |
| Germany and Austria.....                                     | 15,802   | 2,199    | 1,075    | 1,506    | 1,215    |
| All other.....   | 1,223    | 650      | 4,393    | 7,025    | 4,347    |
| Percentage to the United States.....                         | 45.4     | 31.9     | 24.8     | 28.6     | 18.4     |
| Unit value per short ton of total exports <sup>2</sup> ..... | \$331.49 | \$110.57 | \$166.80 | \$245.40 | \$175.91 |

<sup>1</sup> Includes broken anodes in 1937, not specified in other years.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries, and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 metric quintal=220.46 pounds; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936-38, \$0.3060.

TABLE 5.—Copper ore: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932   | 1936   | 1937    | 1938    |
|--|---------|--------|--------|---------|---------|
| Quantity (short tons—gross weight)                           |         |        |        |         |         |
| Total, all countries.....                                    | 116,773 | 5,852  | 7,164  | 24,861  | 5,769   |
| Japan.....   |         |        | 4,686  | 10,078  | 2,230   |
| UNITED STATES.....   | 108,779 | 5,844  | 2,478  | 14,753  | 1,991   |
| All other.....   | 7,994   | 8      |        |         | 548     |
| Percentage to the United States.....                         | 93.2    | 99.9   | 34.6   | 59.5    | 34.5    |
| Value (1,000 pesos)  |         |        |        |         |         |
| Total, all countries.....                                    | 27,511  | 425    | 308    | 1,304   | 285     |
| Value (1,000 U. S. dollars)                                  |         |        |        |         |         |
| Total, all countries.....                                    | 3,346   | 52     | 64     | 209     | 59      |
| Japan.....   |         |        | 38     | 123     | 24      |
| UNITED STATES.....   | 3,125   | 52     | 26     | 147     | 17      |
| All other.....   | 223     |        |        |         | 8       |
| Percentage to the United States.....                         | 93.3    | 99.9   | 40.6   | 54.8    | 29.5    |
| Unit value per short ton of total exports <sup>1</sup> ..... | \$28.67 | \$8.83 | \$8.87 | \$10.80 | \$10.17 |

<sup>1</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 quintal=220.46 pounds; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936-38, \$0.3060.

TABLE 6.—Copper concentrates: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936             | 1937    | 1938    |
|--|---------|---------|------------------|---------|---------|
| Quantity (short tons—gross weight)                           |         |         |                  |         |         |
| Total, all countries.....                                    | 10, 537 | 19, 479 | 65               | 169     | 942     |
| UNITED STATES.....   | 10, 537 | 17, 692 | 8                | 122     | 774     |
| Japan.....   |         |         | 67               | 47      | 168     |
| Germany.....   |         | 1, 787  |                  |         |         |
| Percentage to the United States.....                         | 100.0   | 90.8    | 12.3             | 72.2    | 82.2    |
| Value (1,000 pesos)  |         |         |                  |         |         |
| Total, all countries.....                                    | 4, 807  | 2, 121  | 6                | 58      | 156     |
| Value (1,000 U. S. dollars)                                  |         |         |                  |         |         |
| Total, all countries.....                                    | 585     | 258     | 1                | 12      | 32      |
| UNITED STATES.....   | 585     | 234     | ( <sup>1</sup> ) | 7       | 17      |
| Japan.....   |         |         | 1                | 6       | 16      |
| Germany.....   |         | 24      |                  |         |         |
| Percentage to the United States.....                         | 100.0   | 90.8    | 8.7              | 55.3    | 54.1    |
| Unit value per short ton of total exports <sup>2</sup> ..... | \$55.52 | \$13.25 | \$20.57          | \$71.24 | \$34.21 |

<sup>1</sup> Not over \$500.<sup>2</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 quintal=220.46 pounds; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936-38, \$0.2060.

TABLE 7.—Copper precipitates and cement copper: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929             | 1932    | 1936    | 1937    | 1938    |
|--|------------------|---------|---------|---------|---------|
| Quantity (short tons—gross weight)                           |                  |         |         |         |         |
| Total, all countries.....                                    | 46               | 129     | 227     | 256     | 177     |
| UNITED STATES.....   | 1                | 117     | 187     | 245     | 133     |
| Japan.....   |                  |         | 40      | 11      | 44      |
| Germany.....   | 45               | 12      |         |         |         |
| Percentage to the United States.....                         | 2.2              | 90.7    | 82.4    | 95.7    | 76.1    |
| Value (1,000 pesos)  |                  |         |         |         |         |
| Total, all countries.....                                    | 69               | 34      | 66      | 103     | 56      |
| Value (1,000 U. S. dollars)                                  |                  |         |         |         |         |
| Total, all countries.....                                    | 8                | 4       | 14      | 22      | 12      |
| UNITED STATES.....   | ( <sup>1</sup> ) | 3       | 11      | 21      | 8       |
| Japan.....   |                  |         | 3       | 1       | 4       |
| Germany.....   | 8                | 1       |         |         |         |
| Percentage to the United States.....                         | 1.3              | 76.3    | 76.7    | 93.4    | 65.9    |
| Unit value per short ton of total exports <sup>2</sup> ..... | \$182.07         | \$31.81 | \$60.63 | \$85.68 | \$64.98 |

<sup>1</sup> Not over \$500.<sup>2</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 quintal=220.46 pounds; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936-38, \$0.2060.

TABLE 8.—Copper ore and concentrates, and copper scrap: Exports from CUBA to principal markets, in specified years, 1929 to 1938

| Country  | 1929     | 1932    | 1936    | 1937     | 1938     |
|--|----------|---------|---------|----------|----------|
| <i>Ore and concentrates</i>                                  |          |         |         |          |          |
| Quantity <sup>1</sup> (short tons <sup>2</sup> )             |          |         |         |          |          |
| Total, all countries <sup>3</sup> .....                      | 63,988   | 23,818  | 48,501  | 44,349   | 55,929   |
| Value (1,000 U. S. dollars <sup>4</sup> )                    |          |         |         |          |          |
| Total, all countries <sup>3</sup> .....                      | 1,851    | 309     | 1,543   | 2,977    | 2,342    |
| Unit value per ton of total exports <sup>4</sup> .....       | \$28.93  | \$12.97 | \$31.81 | \$67.14  | \$41.82  |
| <i>Copper scrap</i>  |          |         |         |          |          |
| Quantity (short tons <sup>2</sup> )                          |          |         |         |          |          |
| Total, all countries.....                                    | 572      | 187     | 309     | 451      | 358      |
| Germany.....   | 291      | 153     | 309     | 214      | 124      |
| UNITED STATES.....   | 281      | 24      | 80      | 207      | 78       |
| All other.....   |          |         | 20      | 30       | 151      |
| Percentage to the United States.....                         | 49.1     | 18.3    | 26.0    | 45.8     | 22.1     |
| Value (1,000 U. S. dollars <sup>4</sup> )                    |          |         |         |          |          |
| Total, all countries.....                                    | 65       | 4       | 25      | 67       | 38       |
| Germany.....   | 13       | 2       | 19      | 24       | 19       |
| UNITED STATES.....   | 52       | 2       | 4       | 29       | 10       |
| All other.....   |          |         | 2       | 4        | 9        |
| Percentage to the United States.....                         | 80.0     | 49.9    | 17.0    | 51.1     | 26.5     |
| Unit value per short ton of total exports <sup>4</sup> ..... | \$114.00 | \$21.42 | \$79.33 | \$126.96 | \$107.92 |

<sup>1</sup> Quantities are believed to be expressed in terms of gross weight.

<sup>2</sup> All exports are shipped to the United States.

<sup>3</sup> One Cuban peso=1 U. S. dollar (all years).

<sup>4</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 pounds.

TABLE 9.—Copper ore, concentrates, and unrefined metal: Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country  | 1929             | 1933     | 1936             | 1937             | 1938             |
|--|------------------|----------|------------------|------------------|------------------|
| Quantity (short tons <sup>1</sup> )                          |                  |          |                  |                  |                  |
| Total, all countries.....                                    | 161,536          | 45,319   | 40,120           | 54,433           | 47,166           |
| UNITED STATES.....   | 161,336          | 44,647   | 39,347           | 52,938           | 45,801           |
| Belgium.....   | ( <sup>2</sup> ) | 302      | 566              | 703              | 860              |
| France.....  |                  | 342      | 172              | 254              | 333              |
| All other.....   | 200              | 26       | 35               | 538              | 43               |
| Percentage to the United States.....                         | 99.9             | 98.5     | 98.1             | 97.3             | 97.3             |
| Value (1,000 pesos)  |                  |          |                  |                  |                  |
| Total, all countries.....                                    | 88,938           | 21,308   | 25,942           | 52,293           | 38,853           |
| Value (1,000 U. S. dollars)                                  |                  |          |                  |                  |                  |
| Total, all countries.....                                    | 42,850           | 5,988    | 7,201            | 14,511           | 8,504            |
| UNITED STATES.....   | 42,793           | 5,896    | 7,064            | 14,121           | 8,363            |
| Belgium.....   | ( <sup>2</sup> ) | 41       | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) |
| France.....  |                  | 44       | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) |
| All other.....   | 57               | 8        | 137              | 390              | 237              |
| Percentage to the United States.....                         | 99.9             | 98.5     | 98.1             | 97.4             | 97.3             |
| Unit value per short ton of total exports <sup>4</sup> ..... | \$265.27         | \$132.12 | \$179.30         | \$266.59         | \$182.21         |

<sup>1</sup> Gross or net weight is not specified.

<sup>2</sup> Less than one-half ton.

<sup>3</sup> Not over \$50.

<sup>4</sup> Not shown separately.

<sup>5</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 peso=1929, \$0.4616; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.



TABLE 10.—Copper ore and concentrates: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932             | 1936             | 1937    | 1938    |
|--|---------|------------------|------------------|---------|---------|
| <i>Ore</i>   |         |                  |                  |         |         |
| Quantity (short tons) <sup>1</sup>                           |         |                  |                  |         |         |
| Total, all countries.....                                    | 11,868  | 1,526            | 8,211            | 6,660   | 14,896  |
| UNITED STATES.....   | 11,798  | 1,525            | 8,201            | 6,603   | 10,587  |
| Japan.....   |         |                  | 10               | 16      | 4,244   |
| All other.....   | 70      | 1                |                  | 41      | 65      |
| Percentage to the United States.....                         | 99.4    | 99.9             | 99.9             | 99.1    | 71.1    |
| Value (1,000 soles)  |         |                  |                  |         |         |
| Total, all countries.....                                    | 730     | 166              | 1,147            | 1,075   | 3,237   |
| Value (1,000 U. S. dollars)                                  |         |                  |                  |         |         |
| Total, all countries.....                                    | 292     | 35               | 286              | 271     | 726     |
| UNITED STATES.....   | 285     | 35               | 286              | 268     | 565     |
| Japan.....   |         |                  | ( <sup>2</sup> ) | 1       | 158     |
| All other.....   | 7       | ( <sup>3</sup> ) |                  | 2       | 3       |
| Percentage to the United States.....                         | 97.4    | 99.9             | 99.9             | 98.7    | 77.9    |
| Unit value per short ton of total exports <sup>4</sup> ..... | \$24.63 | \$23.23          | \$34.78          | \$40.66 | \$48.73 |
| <i>Concentrates</i>  |         |                  |                  |         |         |
| Quantity (short tons) <sup>1</sup>                           |         |                  |                  |         |         |
| Total, all countries <sup>5</sup> .....                      | 1,034   | 2,708            | 1,569            | 1,508   | 1,015   |
| Value (1,000 soles)  |         |                  |                  |         |         |
| Total, all countries.....                                    | 172     | 384              | 689              | 423     | 410     |
| Value (1,000 U. S. dollars)                                  |         |                  |                  |         |         |
| Total, all countries.....                                    | 69      | 82               | 171              | 107     | 92      |
| Unit value per short ton of total exports <sup>4</sup> ..... | \$66.48 | \$30.17          | \$109.28         | \$70.69 | \$90.68 |

<sup>1</sup> Quantities are expressed in terms of copper content, except in 1929; in that year they are expressed in terms of gross weight.

<sup>2</sup> Not over \$500.

<sup>3</sup> Includes "on order."

<sup>4</sup> See footnote 2, table 4.

<sup>5</sup> All exports are shipped to the United States, except 20 short tons, valued at \$2,000, exported to Belgium in 1932.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 sol=1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242. Values for 1929 reported in Peruvian pounds; 1 Peruvian pound=10 soles.

## COPPER

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TABLE 11.—Copper metal (unrefined, in bars, etc.), matte, and cement: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country  | 1929     | 1932             | 1936     | 1937     | 1938             |
|--|----------|------------------|----------|----------|------------------|
| <i>Metal (unrefined, in bars, etc.)</i>                      |          |                  |          |          |                  |
| Quantity (short tons) <sup>1</sup>                           |          |                  |          |          |                  |
| Total, all countries <sup>2</sup> .....                      | 61,186   | 24,836           | 36,120   | 39,276   | 40,656           |
| Value (1,000 soles)  |          |                  |          |          |                  |
| Total, all countries.....                                    | 65,745   | 13,752           | 43,094   | 50,866   | 57,890           |
| Value (1,000 U. S. dollars)                                  |          |                  |          |          |                  |
| Total, all countries.....                                    | 26,298   | 2,929            | 10,731   | 12,818   | 12,979           |
| Unit value per short ton of total exports <sup>3</sup> ..... | \$429.80 | \$117.94         | \$297.08 | \$326.36 | \$319.24         |
| <i>Matte</i>   |          |                  |          |          |                  |
| Quantity (short tons)  |          |                  |          |          |                  |
| Total, all countries.....                                    | 111      | 255              | 62       | 182      | 273              |
| UNITED STATES.....   | 64       | 173              | 62       | 182      | 273              |
| All other.....   | 47       | 82               |          |          |                  |
| Percentage to the United States.....                         | 57.9     | 67.8             | 100.0    | 100.0    | 100.0            |
| Value (1,000 soles)  |          |                  |          |          |                  |
| Total, all countries.....                                    | 41       | 125              | 23       | 155      | 375              |
| Value (1,000 U. S. dollars)                                  |          |                  |          |          |                  |
| Total, all countries.....                                    | 16       | 27               | 6        | 39       | 84               |
| UNITED STATES.....   | 10       | 18               | 6        | 39       | 84               |
| All other.....   | 6        | 9                |          |          |                  |
| Percentage to the United States.....                         | 64.2     | 68.1             | 100.0    | 100.0    | 100.0            |
| Unit value per short ton of total exports <sup>3</sup> ..... | \$146.20 | \$104.62         | \$93.66  | \$214.22 | \$307.98         |
| <i>Cement</i>  |          |                  |          |          |                  |
| Quantity (short tons)  |          |                  |          |          |                  |
| Total, all countries <sup>4</sup> .....                      | 116      | 22               | 36       | 1,462    | ( <sup>5</sup> ) |
| Value (1,000 soles)  |          |                  |          |          |                  |
| Total, all countries.....                                    | 30       | 2                | 20       | 752      | ( <sup>5</sup> ) |
| Value (1,000 U. S. dollars)                                  |          |                  |          |          |                  |
| Total, all countries.....                                    | 12       | ( <sup>6</sup> ) | 5        | 199      | ( <sup>6</sup> ) |
| Unit value per short ton of total exports <sup>3</sup> ..... | \$102.60 | \$19.90          | \$142.48 | \$129.62 | ( <sup>7</sup> ) |

<sup>1</sup> Quantities are expressed in terms of copper content, except in 1929; in that year they are expressed in terms of gross weight.

<sup>2</sup> All exports are shipped to the United States.

<sup>3</sup> See footnote 2, table 4.

<sup>4</sup> All exports are shipped to the United States, except 5 short tons, valued at \$728, shipped to the United Kingdom in 1929.

<sup>5</sup> Not available.

<sup>6</sup> Not over \$500.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 kilo = 2.2046 pounds; 1 sol = 1929, \$0.4000; 1932 \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242. Values for 1929 reported in Peruvian pounds; 1 Peruvian pound = 10 soles.

## CORN

Corn is native to the Western Hemisphere; it was being cultivated by the Indians when the first white settlers arrived. Because it is an excellent food and feed which can be grown on many different types of soil and under climatic conditions which vary widely, the production of this cereal has expanded rapidly and is now carried on in practically all countries. The major portion of the world's production, however, is centered in only a few countries.

### Position of Latin America in world production.

World production of corn amounts to from 4 to 5 billion bushels annually, and surpasses that of any other cereal crop except wheat. The production of corn in all Latin American countries usually amounts to from 500 to 700 million bushels per year; in 1937-38 the 20 Latin American countries accounted for over 10 percent of world production. In the same year, the United States produced over 50 percent of the world crop and countries in the Danubian basin (principally Yugoslavia, Rumania, and Hungary) produced over 10 percent. Other corn-producing countries of importance are China, the Soviet Union, and Italy, but exports from these countries are negligible.

Except for years of crop shortage, production of corn in the United States and in Latin America has been fairly constant, averaging more than 2.5 billion bushels for the United States and 500 million bushels for Latin America. World production in 1938, however, was substantially larger than in 1929, and, therefore, the relative importance of the United States and Latin America as world producers has declined. In 1929 the United States accounted for 64 percent of the total and Latin America for 13 percent; in 1939 the United States provided 52 percent and Latin America 11 percent. Other countries supplied 23 percent of the total in 1929 and 37 percent in 1938.

Production of corn in the principal producing countries of Latin America, and in the United States and the world, in specified years, 1929 to 1938, is shown in table 1.

Argentina, with an annual production of from 200 to 400 million bushels, is the leading corn-growing country of Latin America. Brazil ranks second in importance with a yearly production of more than 200 million bushels, and Mexico third with from 60 to 80 million bushels. Uruguayan production in recent years has varied between 4 million and 7 million bushels; that of Chile has been between 2 and 3 million bushels. Cuba and the Dominican Republic produce only limited quantities of this cereal, but customarily have some exportable surplus.

TABLE 1.—*Corn: Production in principal producing countries of Latin America, and of the world, in specified years, 1929 to 1938*<sup>1</sup>

| Country  | 1929                              | 1932      | 1936      | 1937      | 1938      |
|--|-----------------------------------|-----------|-----------|-----------|-----------|
|  | Quantity (1,000 bushels)          |           |           |           |           |
| Argentina.....   | 280,617                           | 257,761   | 359,615   | 174,163   | 212,586   |
| Brazil.....  | 173,878                           | 238,176   | 260,832   | † 240,000 | † 240,000 |
| Mexico.....  | 57,824                            | 77,691    | 62,878    | 64,357    | 66,926    |
| Uruguay.....   | 7,168                             | 6,340     | 4,879     | 4,571     | 6,456     |
| Chile.....   | 2,346                             | 3,250     | 2,702     | 2,211     | 2,498     |
| Total production of Latin American countries listed above..... | 521,833                           | 593,218   | 690,908   | 485,302   | 528,465   |
| UNITED STATES.....   | 2,535,386                         | 2,906,873 | 1,507,089 | 2,651,284 | 2,542,238 |
| All other.....   | 921,567                           | 1,239,909 | 1,866,005 | 1,791,414 | 1,798,297 |
| Total world production.....                                    | 3,978,786                         | 4,740,000 | 4,064,000 | 4,928,000 | 4,869,000 |
|  | Percent of total world production |           |           |           |           |
| Latin American countries listed above.....                     | 13.1                              | 12.5      | 17.0      | 9.8       | 10.9      |

<sup>1</sup> Harvests of the Northern Hemisphere countries are combined with those of the Southern Hemisphere for the following year; thus for 1937 the crop harvested in the Northern Hemisphere in 1937 is combined with the Southern Hemisphere harvest which takes place early in 1938.

<sup>2</sup> Estimated.

Source: U. S. Department of Agriculture, *Agricultural Statistics*.

#### Latin American exports.

Prior to the war the international trade in corn was only a small part of world production and usually ranged between 300 and 400 million bushels annually. Of this quantity, about 35 percent went to the United Kingdom, and from 5 to 10 percent each to the Netherlands, France, and Belgium. Other important importing countries were Denmark, Canada, and Germany. Total international trade in corn had been increasing for many years and so also had exports from Argentina, the only Latin American country of any importance in the trade.

Argentina made greater gains in the last 30 years, in both the production and exportation of corn, than any other major producing country. Argentine production, which averaged 192 million bushels annually in the 5-year period 1909-13, increased to an average of 346 million bushels annually in the years 1933-37. Average yearly exports for the same periods (based on crop years, April to the following March) increased from 116 million to 271 million bushels. Of the total quantity of corn entering international trade, Argentina supplied about 44 percent during the period 1909-13 and about 75 percent during the period 1933-37. In the period 1929-38, exports of corn ranged from 69 to over 90 percent of Argentine production. These exports went to all the leading corn-importing countries, and to many of the lesser ones. Exports of corn from Argentina to principal markets, in specified years, 1929 to 1938, are shown in table 2.

Brazil exports virtually no corn, and corn does not appear as a principal export from Uruguay and Chile. Uruguay has in the past

exported corn in substantial quantities, but shipments from that country have been negligible since 1933. Cuban exports of corn, which amounted to 26,000 bushels, valued at \$19,000, in 1938, go almost entirely to Puerto Rico.<sup>1</sup> Exports of corn from Mexico usually have been very small and go almost entirely to the United States.<sup>2</sup> During the years 1934-37, when there was a shortage of corn in the United States, imports of corn from Mexico amounted to 2.6 million bushels in 1934, 3.2 million in 1935, 179,000 in 1936, and 15,000 in 1937. No Mexican corn was imported into the United States in either 1938 or 1939.

The United States usually is not an important market for foreign corn, but because its supplies of this cereal were seriously curtailed as a result of the severe droughts in 1934 and 1936, it imported 43 million bushels in 1935, 20 million bushels in 1936, and 86 million bushels in 1937. Since the harvesting of the 1937 crop, supplies have been ample to satisfy domestic requirements, and imports in 1938 and 1939 amounted to less than one-half million bushels annually.<sup>3</sup> Exports from the United States, which had ranged from 13 million to 42 million bushels annually in the period 1920-29, declined to slightly over 6 million bushels in 1930. They remained unimportant through 1937, reaching a low point of 177,000 bushels in 1935. In 1938, however, after two successive short crops in Argentina, United States exports amounted to 147 million bushels, and in 1939 to 32 million bushels.

<sup>1</sup> Exports of corn from Cuba in specified years, 1929 to 1938, are given below:

| Year      | Quantity (in 1,000 bushels of 56 pounds) | Value (in 1,000 dollars) |
|-----------|--|--------------------------|
| 1932..... | 162                                      | 82                       |
| 1936..... | 44                                       | 29                       |
| 1937..... | 57                                       | 57                       |
| 1938..... | 26                                       | 19                       |

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Cuba.

<sup>2</sup> Exports of corn from Mexico in specified years, 1929 to 1938, are given below:

| Year       | Quantity (bushels of 56 pounds) | Value     |               |
|------------|---------------------------------|-----------|---------------|
|            |                                 | Pesos     | U. S. dollars |
| 1929.....  | 28                              | 116       | 56            |
| 1933.....  | 14                              | 40        | 11            |
| 1934.....  | 2,798,240                       | 4,908,967 | 1,361,720     |
| 1935.....  | 3,189,391                       | 6,037,780 | 1,677,295     |
| 1936.....  | 175,281                         | 309,276   | 85,555        |
| 1937.....  | 57                              | 165       | 46            |
| 1938*..... | 1                               | 11        | 3             |

\* Preliminary.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. weights and currency by applying the following factors: 1 kilo=0.039368 bushel of 56 pounds; 1 peso=1929, \$0.4818; 1933, \$0.2610; 1934, \$0.2774; 1935, \$0.2778; 1936, \$0.2776; 1937, \$0.2775; and 1938, \$0.2212.

<sup>3</sup> Entered principally on the Pacific coast because of low ocean-freight charges.

TABLE 2.—*Corn: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country                                | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 56 pounds)  |         |         |         |         |         |
| Total, all countries                   | 198,721 | 277,755 | 329,969 | 357,750 | 104,016 |
| United Kingdom                         | 56,014  | 83,916  | 135,237 | 115,928 | 32,449  |
| Germany                                | 17,117  | 12,364  | 7,582   | 25,500  | 19,361  |
| Belgium                                | 31,080  | 39,946  | 43,241  | 50,029  | 18,862  |
| Netherlands                            | 24,071  | 40,036  | 35,342  | 45,218  | 11,506  |
| Ireland                                |         | 14,377  | 8,087   | 8,315   | 6,709   |
| Norway                                 | 1,746   | 6,340   | 4,917   | 5,913   | 3,112   |
| Italy                                  | 21,827  | 14,853  | 6,608   | 3,682   | 2,835   |
| Sweden                                 | 2,034   | 6,609   | 2,776   | 4,820   | 2,245   |
| Denmark                                | 2,768   | 14,373  | 12,508  | 12,434  | 1,831   |
| Finland                                | 69      | 559     | 3,274   | 2,147   | 1,321   |
| Japan                                  |         | 33      | 6,519   | 1,755   | 684     |
| France                                 | 20,290  | 24,798  | 3,371   | 2,789   | 513     |
| Spanish Africa                         | 1,193   | 1,757   | 1,621   | 801     | 445     |
| UNITED STATES                          | 730     | 145     | 37,638  | 42,364  | 59      |
| Uruguay                                | 490     | 35      | 12      | 69      | 10      |
| Canada                                 | 5,699   |         | 16,561  | 28,036  | (1)     |
| Spain                                  | 12,894  | 10,707  | 655     |         |         |
| All other                              | 699     | 888     | 4,020   | 1,950   | 2,074   |
| Percentage to the United States        | 0.4     | 0.1     | 11.4    | 11.8    | 0.1     |
| Value (1,000 paper pesos)              |         |         |         |         |         |
| Total, all countries                   | 381,902 | 320,760 | 445,270 | 598,473 | 180,522 |
| Value (1,000 U. S. dollars)            |         |         |         |         |         |
| Total, all countries                   | 159,853 | 82,476  | 129,960 | 184,689 | 53,669  |
| United Kingdom                         | 45,195  | 24,881  | 52,896  | 60,561  | 16,218  |
| Germany                                | 13,707  | 3,689   | 2,823   | 13,614  | 10,326  |
| Belgium                                | 25,202  | 11,842  | 16,907  | 29,235  | 10,172  |
| Netherlands                            | 19,488  | 13,643  | 13,856  | 23,174  | 5,899   |
| Ireland                                |         | 4,289   | 3,110   | 4,351   | 3,348   |
| Norway                                 | 1,389   | 1,884   | 1,908   | 3,122   | 1,577   |
| Italy                                  | 17,302  | 4,433   | 2,424   | 1,871   | 1,411   |
| Sweden                                 | 1,631   | 1,954   | 1,082   | 2,480   | 1,261   |
| Denmark                                | 2,221   | 4,282   | 4,977   | 6,378   | 934     |
| Finland                                | 57      | 167     | 1,210   | 1,083   | 665     |
| Japan                                  |         | 10      | 2,413   | 919     | 347     |
| France                                 | 16,122  | 7,406   | 1,283   | 1,383   | 272     |
| Spanish Africa                         | 961     | 519     | 591     | 396     | 226     |
| UNITED STATES                          | 573     | 43      | 15,608  | 20,962  | 32      |
| Uruguay                                | 386     | 10      | 4       | 37      | 6       |
| Canada                                 | 4,604   |         | 7,139   | 14,111  | (1)     |
| Spain                                  | 10,431  | 3,157   | 221     |         |         |
| All other                              | 584     | 267     | 1,478   | 1,012   | 975     |
| Percentage to the United States        | 0.4     | 0.1     | 12.0    | 11.3    | 0.1     |
| Unit value per bushel of total exports | \$0.80  | \$0.30  | \$0.39  | \$0.52  | \$0.52  |

<sup>1</sup> Not over 500.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measures and currency by applying the following factors: 1 metric ton=39,367.857 bushels of 56 pounds; 1 paper peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973. For 1929 and 1932, the U. S. dollar value has been converted from the gold-peso value; conversion rates are as follows: 1929, \$0.5513; and 1932, \$0.5844.

**Trade barriers, prices, and competitive conditions.**

The duty on corn entering the United States is 25 cents per bushel of 56 pounds,<sup>4</sup> except corn from Cuba, which is dutiable at 10 cents per bushel.<sup>5</sup> Production of corn in the United States usually amounts to about 2,500 million bushels annually. Imports have not exceeded 5 million bushels in any year since 1923, except during the period 1935-37.

Imports of yellow corn (in grain form) into the United Kingdom, Belgium, and the Netherlands are free of duty; the combined imports into these three countries generally constitute more than half of the corn which enters international trade. Belgium and the Netherlands, however, impose some restrictions in the form of quotas and internal taxes, and Germany has maintained a policy of encouraging the use of domestic cereals in place of imported corn for animal feed. In most of the other European countries the duty on corn is either nominal or not high enough appreciably to restrict importation.

The price of Argentine corn at Buenos Aires is customarily lower than that of United States corn at Chicago, though not enough so to make it profitable for Argentine corn to enter the United States after payment of transportation charges and the United States duty of 25 cents a bushel. In recent years, however, crop conditions in the two countries have caused some considerable deviation from the usual price relationship. Because of a very short crop in the United States, prices of corn in this country rose during the crop year November 1936-October 1937 to an average of \$1.18 per bushel; in that same period the average price of Argentine corn was 52 cents per bushel. As a result large quantities of Argentine corn (nearly 80 million bushels in 1937) were exported from that country to the United States. In the next two crop years, 1937-38 and 1938-39, the corn crop in Argentina was adversely affected by weather conditions, and the price of corn in Argentina was higher than that in the United States. This situation checked Argentine exports to the United States, and resulted in the sale of large quantities of United States corn in third markets. During the 6 months October 1939 to March 1940, the price of Argentine corn declined because of an improved harvest, and the customary relationship in the prices of United States and Argentine corn was restored. On May 9, 1940, however, the United States Department of Agriculture extended its export-subsidy program to include corn in an effort to regain foreign markets and reduce surpluses.<sup>6</sup> The amount of the subsidy will vary with the spread between the prices of United States and other corn in foreign markets. While this program is in effect, therefore, it is probable that the prices of United States and Argentine corn in foreign markets will be approximately the same.

Prices of corn in the United States and in Argentina for the period 1929-39 and the first quarter of 1940 are shown in table 3.

<sup>4</sup> Tariff Act of 1930, par. 724.

<sup>5</sup> Trade agreement with Cuba, effective September 3, 1934.

<sup>6</sup> On that date the Department announced the sale, through private exporters, of 20 million bushels of corn to the United Kingdom and Canada under the export program. The corn will be taken from stocks controlled by the Government through its corn-loan program.

TABLE 3.—*Corn: Prices in the United States and in ARGENTINA 1929-39, and January-March 1940*

| Crop year     | United States:<br>No. 3 Yellow<br>at Chicago <sup>1</sup> | Argentine<br>corn at<br>Buenos Aires <sup>2</sup> | Argentina:<br>Percentage of<br>United States<br>price |
|---------------|---|---|---|
|               | <i>Cents per<br/>bushel</i>                               | <i>Cents per<br/>bushel</i>                       |   |
| 1929-30.....  | 83  | 63  | 76  |
| 1930-31.....  | 60  | 32  | 53  |
| 1931-32.....  | 36  | 30  | 83  |
| 1932-33.....  | 35  | 30  | 86  |
| 1933-34.....  | 52  | 44  | 85  |
| 1934-35.....  | 86  | 43  | 50  |
| 1935-36.....  | 75  | 42  | 56  |
| 1936-37.....  | 118   | 52  | 44  |
| 1937-38.....  | 56  | 68  | 121   |
| 1938-39.....  | 49  | 52  | 106   |
| 1939:         |   |   |   |
| October.....  |   | 53.8  | .....   |
| November..... | 49.7  | 54.8  | 110   |
| December..... | 56.3  | 53.1  | 94  |
| 1940:         |   |   |   |
| January.....  | 58.5  | 47.4  | 81  |
| February..... | 57.6  | 39.2  | 68  |
| March.....    | 57.9  | (?)   | (?)   |

<sup>1</sup> Years beginning Nov. 1.<sup>2</sup> Years beginning Oct. 1.<sup>3</sup> Not available.Source: U. S. Department of Agriculture, *Agricultural Statistics and The Feed Situation*.**Effects of the war.**

European countries usually consume practically all of the corn that enters international trade. The United States imports substantial quantities only during years when crops are short. The United Kingdom has been the largest market for corn, usually taking more than one-fourth of the quantity entering international trade. Other leading European importers have been the Netherlands, France, Belgium, Denmark, Germany, and Ireland. Germany absorbed about 5 percent of the corn entering international trade during the years 1930-34, but in more recent years (except in 1937) the percentage taken by this market has been less than 5 percent. It appears certain that Germany and other European countries will cease to be important importers of corn for the duration of the war.

The Union of South Africa is the only country within the British Empire that usually exports substantial quantities of corn, but exports therefrom have never amounted to more than one-fifth of the imports into the United Kingdom. The adequacy of shipping facilities and the fluctuations in production in the United States and Latin America are probably more important than European markets in affecting the current international trade of Latin America in corn.



## COTTON

Cotton is grown in the Torrid Zone and in the warm parts of both Temperate Zones, and is one of the most widely distributed of commercial crops. Some varieties flourish in regions of heavy rainfall and others under irrigation in arid climates. Different varieties have different physical lint properties which make them desirable for particular uses. Some of these properties, such as roughness, appear to be dependent upon the locality of production as well as upon the variety produced. Because of these peculiarities, one type of cotton can be used to replace another only within limited ranges. In a broader sense, however, one cotton may be substituted for another, just as other textile fibers may, to a certain extent, be substituted for cotton.

### **Position of Latin America in world production.**

Cotton is said to have been found growing in Brazil and Peru when the Portuguese and Spaniards first occupied those areas; it has been of commercial importance ever since. In recent years the production of cotton in Latin America has increased, especially in Brazil, Peru, and Argentina, which, with Mexico, account for all but a small part of the Latin American total. Although annual variations are great, Brazil now produces approximately 2 million bales; Peru, 400,000 bales; Argentina, 300,000 bales; and Mexico, 250,000 to 300,000 bales. Ten years ago these four countries together produced less than 1.3 million bales. In the crop year 1929-30, Latin America produced about 5 percent of the total world cotton crop; in 1938-39 the output was approximately 10 percent of the total. The actual quantitative increase was more than 100 percent, while total world production increased less than 6 percent.

In recent years the United States, the largest cotton-producing country in the world, has declined in relative importance as a producer; in 1929-30 this country accounted for approximately 55 percent of total world production, and in 1938-39 for 41 percent. Countries other than the United States and Latin America (principally British India, the Soviet Union, China, and Egypt) increased their production; in 1929-30 they accounted for 40 percent of total world production, and in 1938-39 for over 48 percent. Most of this development is the result of a marked increase in the production of the Soviet Union, which, during the decade 1929-38, expanded its output by more than 300 percent; it now ranks as the third most important cotton-producing country in the world, being exceeded only by the United States and British India. Brazil ranks as the fifth most important cotton-producing country, following China. Available data on cotton production in the principal producing countries of Latin America and of the world, in specified years, 1929 to 1938, are shown in table 1.

TABLE 1.—Cotton, raw: Production in principal producing countries of Latin America and of the world, in specified years, 1929-30 to 1938-39

| Country  | 1929-30                              | 1933-34          | 1936-37          | 1937-38          | 1938-39          |
|--|--------------------------------------|------------------|------------------|------------------|------------------|
|  | Quantity (1,000 bales of 478 pounds) |                  |                  |                  |                  |
| Brazil.....  | 571                                  | 1,014            | 1,824            | 2,075            | 1,913            |
| Peru.....  | 302                                  | 278              | 386              | 415              | 393              |
| Argentina.....   | 150                                  | 200              | 144              | 237              | 327              |
| Mexico.....  | 246                                  | 250              | 395              | 340              | 308              |
| Colombia.....  | 110                                  | 16               | 40               | ( <sup>1</sup> ) | ( <sup>2</sup> ) |
| Ecuador.....   | 7                                    | 8                | ( <sup>1</sup> ) | ( <sup>1</sup> ) | ( <sup>2</sup> ) |
| Haiti.....   | 24                                   | 24               | 25               | 22               | 22               |
| Nicaragua.....   | ( <sup>2</sup> )                     | ( <sup>2</sup> ) | 8                | 5                | 5                |
| Paraguay.....  | 17                                   | 13               | 55               | 42               | 42               |
| Venezuela.....   | ( <sup>2</sup> )                     | 10               | 12               | 12               | ( <sup>2</sup> ) |
| Total production of Latin American countries listed above..... | 1,327                                | 1,823            | 2,889            | 3,148            | 3,008            |
| UNITED STATES.....   | 14,825                               | 13,047           | 12,399           | 18,946           | 11,943           |
| British India (including Burma).....                           | 4,387                                | 4,274            | 5,285            | 4,867            | 4,374            |
| Soviet Union.....  | 1,229                                | 1,887            | 3,400            | 3,700            | 3,800            |
| China (including Manchukuo).....                               | 2,458                                | 2,081            | 3,870            | 3,600            | 2,800            |
| Egypt.....   | 1,768                                | 1,777            | 1,887            | 2,281            | 1,728            |
| All other.....   | 866                                  | 1,101            | 1,740            | 2,108            | 1,847            |
| Estimated world production.....                                | 26,860                               | 26,890           | 31,470           | 38,650           | 29,000           |
|  | Percent of total world production    |                  |                  |                  |                  |
| Latin American countries listed above.....                     | 4.9                                  | 6.8              | 9.2              | 8.1              | 10.4             |

<sup>1</sup> From an unofficial source.<sup>2</sup> Not available.<sup>3</sup> Exports.

Source: Compiled by the U. S. Bureau of Agricultural Economics from official sources and reports of the International Institute of Agriculture, or estimates of the Bureau of Agricultural Economics.

Cotton from Brazil, Argentina, and Mexico is quite similar to that grown in the United States. Peruvian cotton is almost all longer than the average United States cotton, is slightly rough, and commands a premium over United States Middling  $\frac{3}{8}$ -inch cotton. Haitian cotton, a small but constant crop, is partly of the high-priced Sea Island variety, but in general it is mixed and extremely irregular in staple length. The small quantities of cotton raised in other Latin American countries are principally for domestic consumption. There are possibilities for greatly increased production in Brazil and in Argentina. Development depends upon the relative values of cotton and of other crops, the price of cotton in relation to the cost of developing new and inaccessible areas, and the migration of effective agricultural management and workers into the newly developed regions. Further expansion in Peru is limited.

In the past, the principal crop of southern Brazil has been coffee, but the poor return from that crop during recent years has led to the transfer of large acreages to the production of cotton. Brazilian production, moreover, has been stimulated in recent years by the relatively high price of United States cotton in world markets. New lands have been opened for cotton cultivation both in southern Brazil and in northeastern Brazil, which has long been an important cotton-producing area. A large part of the cotton produced in Brazil is absorbed by the home market.

Peru is the second largest cotton-producing country in Latin America; its cotton is grown chiefly for export. About half of the

cotton grown in Argentina is now used by the local textile industries.<sup>1</sup> Argentina has an acreage suitable for cotton, and virtually unused for other crops, equal to the maximum planted in the United States. Much of this land is owned by the Government; its utilization, however, requires irrigation, and development of transportation, in addition to experienced personnel. Mexico ranks fourth among the Latin American countries in cotton production. In 1938 approximately two-thirds of the Mexican crop was consumed within the country; customarily the ratio of local consumption to production is even higher, although in 1936 exports were exceptionally large.

#### **Latin American exports.**

Combined exports of raw cotton from Latin American countries in recent years have amounted to over 1.5 million bales annually, or approximately 10 percent of total world exports. (See table 2.) In 1938 cotton constituted about 15 to 20 percent of the total values of exports from Brazil and from Peru, about 2 percent from Mexico, and about 1 percent from Argentina. Brazil has a flourishing cotton-textile industry, but prior to the outbreak of war, about 60 percent of the Brazilian crop (by far the largest in Latin America) was exported. In 1938 Germany took approximately 30 percent of Brazilian cotton exports; Japan, over 20 percent; the United Kingdom, nearly 20 percent; and France, over 10 percent. (See table 5.) Although Brazilian cotton is used in the United States only under exceptional circumstances, in 1937 nearly 10,000 bales of Brazilian cotton were imported into this market; in 1938 such imports amounted to fewer than 125 bales, and in 1939 to 3,000 bales.

Until recently, Peru was the chief Latin American exporter of cotton. It supplies long-staple varieties used in medium to fine counts of cotton yarn, and in coarser counts where added strength is desired. Peruvian long-staple cotton, because of its slightly rough fiber, is also used for mixing with wool and with asbestos. The perennial cotton known as "full-rough," for which Peru once was famous, is no longer grown. Two or three thousand bales of "semi-rough" are grown near Iquitos, and reach world markets by way of the Amazon. The United States imports some of this short, harsh cotton.

The United Kingdom, which is the most important consuming and distributing market for Peruvian cotton, took about 55 percent of total exports in 1938; Germany was second with over 25 percent, followed by Belgium and the Netherlands. Of the small quantity now used in the United States (from 1,000 to 2,000 bales), about half is imported from the United Kingdom. Before the United States duty was imposed on long-staple cotton, about 20,000 bales of Peruvian cotton were used in the United States annually, as well as large quantities of Egyptian cotton. (See table 7.) These have been largely replaced by long-staple cotton produced in the United States, but at the same time United States exports of long-staple cotton have declined sharply and the formerly large foreign markets for United States long-staple cotton are now supplied by Egyptian, Peruvian, and other growths.

<sup>1</sup> Plans for fixing the domestic price of Argentine cotton have recently been announced (April 1940). The plan provides for a "pool" representing the spinning mills which will buy direct from the growers and independent ginners at the fixed price.

TABLE 2.—Cotton, raw: Exports from principal producing countries of Latin America and of the world, in specified years, 1929 to 1933

| Country  | 1929         | 1932         | 1936         | 1937         | 1938         |
|--|--------------|--------------|--------------|--------------|--------------|
| Quantity (bales of 478 pounds net)                     |              |              |              |              |              |
| Brazil.....  | 224, 739     | 2, 377       | 923, 873     | 1, 089, 298  | 1, 239, 368  |
| Peru.....  | 200, 232     | 204, 714     | 354, 321     | 356, 076     | 306, 636     |
| Argentina.....   | 108, 839     | 130, 392     | 226, 940     | 57, 559      | 103, 132     |
| Mexico.....  | 74, 167      | 17, 397      | 229, 752     | 41, 466      | 97, 308      |
| Haiti <sup>1</sup> .....                               | 21, 929      | 29, 095      | 26, 539      | 24, 867      | 21, 533      |
| Paraguay.....  | 12, 544      | 12, 671      | 40, 373      | 51, 949      | 40, 240      |
| Total exports from above Latin American countries..... | 642, 450     | 396, 646     | 1, 801, 798  | 1, 621, 215  | 1, 808, 277  |
| UNITED STATES.....                                     | 7, 769, 533  | 9, 429, 261  | 5, 652, 157  | 6, 069, 557  | 4, 576, 873  |
| British India.....                                     | 3, 320, 243  | 1, 340, 422  | 3, 336, 250  | 3, 049, 062  | 2, 137, 058  |
| Egypt.....   | 1, 580, 016  | 1, 898, 028  | 1, 618, 382  | 1, 847, 175  | 1, 647, 225  |
| All other.....   | 2, 051, 992  | 2, 055, 693  | 1, 883, 461  | 2, 191, 289  | 2, 392, 774  |
| Total world exports.....                               | 15, 364, 234 | 14, 610, 050 | 14, 292, 048 | 14, 778, 298 | 12, 562, 207 |
| Percent of total world exports                         |              |              |              |              |              |
| Latin America.....                                     | 4.2          | 2.7          | 12.6         | 11.0         | 14.4         |
| UNITED STATES.....                                     | 50.6         | 64.5         | 39.5         | 41.1         | 36.4         |

<sup>1</sup> Data are for fiscal years ended Sept. 30.

Source: Compiled by the United States Tariff Commission from official trade statistics of the respective countries; world total from *International Yearbook of Agricultural Statistics*.

#### Trade barriers, prices, and competitive conditions.

More than 50 percent of the total world consumption of cotton takes place in the five most important producing countries. These countries—the United States, the Soviet Union, British India, Brazil, and China—exercise import controls, and British India, Brazil, and China have tariffs on cotton. The United States duty (7 cents per pound) applies only to long-staple cotton,<sup>2</sup> but in 1939 this country imposed quotas on imported cotton (both long- and short-staple) and on imported cotton waste,<sup>3</sup> because it was anticipated that imports, under the changed price situation resulting in part from the payment of a subsidy on exports, might jeopardize the cotton program of this country.

Of the markets outside of cotton-producing countries, Japan, Germany, and Italy (aggregating about 25 percent of world consumption) have applied strict import control for a number of years, in order to regulate their foreign exchange and to build up their synthetic-yarn industries. Exchange restrictions in a number of smaller countries add to the difficulties of trade. The United Kingdom and France (aggregating about 15 percent of world consumption) have been free markets, but since the inception of the European war, imports into these countries have been placed under strict government control.

Almost one-half of the world's cotton crop must find markets outside of the countries of production. To the world cotton-export trade the United States contributes about 45 percent; British India, 20 percent; Egypt, 15 percent; Brazil, 8 percent; Peru, 3 percent; Uganda and the Anglo-Egyptian Sudan, 4 percent; and the rest of the world, about 5 percent. Not all of the various cottons exported from these countries are directly competitive. There are differences

<sup>2</sup> Tariff Act of 1930, par. 783.

<sup>3</sup> Under sec. 22 of the Agricultural Adjustment Act of 1933.

in quality which, in a very general way, can be applied to whole crops. Staple length is one of the most important elements of quality. On this basis, the world's principal cotton-export crops may be roughly divided into long staples, from Egypt, Peru, the Anglo-Egyptian Sudan, and Uganda;<sup>4</sup> medium staples, from the United States and Brazil; and short staples, from India.

Price relationships in free markets, the largest of which has been Liverpool, reflect these quality differences as well as changes in the amounts available of the various growths to supply their respective demands. On a base price for United States Middling  $\frac{3}{8}$ -inch cotton in Liverpool for the 10-year period 1927-28 to 1936-37, Egyptian Sakellaridis (extra-long staple) averaged about 149 percent; Egyptian Uppers (medium-long staple), 118 percent; Peruvian (medium-long staple), 119 percent; Brazilian, 98 percent; and Indian, 78 percent. These average price differences are primarily due to differences in staple length, except in the case of Brazilian cotton. This cotton commanded a slightly lower price than United States cotton because of unevenness and inferior preparation, defects which are being lessened through government assistance.

Prices of foreign cottons relative to United States cotton were much lower during the first 6 months of 1939; in June 1939 Egyptian Uppers at Liverpool averaged 104 percent; Peruvian, 108 percent; Brazilian, 92 percent; and Indian, 69 percent. The United States export subsidy of  $1\frac{1}{2}$  cents a pound, which became effective July 27, 1939, reduced the price of United States cotton in foreign markets to approximately its previous relationship with foreign cotton. In December 1939, world cotton prices increased substantially and the United States export subsidy was gradually abandoned. In the first quarter of 1940 the price of Peruvian cotton averaged 114 percent of that of United States Middling  $\frac{3}{8}$ -inch cotton, and Brazilian cotton (contrary to custom), averaged 101 percent. (See table 3.)

The prices of cotton have been subject to wide fluctuations in recent years. In the crop year 1927-28 the average price of Brazilian cotton, fair grade (São Paulo), at Liverpool, was 21.72 cents per pound. By 1931-32 the average price had declined to 7.5 cents; it was 14.12 cents in 1936-37, and 9.63 cents in 1938-39. Following the outbreak of war in Europe in September 1939, the prices of the various types of cotton advanced sharply; in January 1940 quotations for Brazilian cotton at Liverpool averaged 14.65 cents per pound, and in March 1940, 12.36 cents. Prices of other types of cotton have followed similar trends. (See table 3.)

Under the present control of production in the United States, through cooperation between farmers and the Government, the United States plants about 25 million acres having an average yield of about 12 million bales of cotton, of which approximately 6.5 million bales have been consumed domestically and 5.5 million bales have been available for export. The United States has produced crops of 18 million bales, but total world consumption of United States cotton has never reached 16 million bales; during the last 6 years total annual production has averaged 12.4 million bales and total annual consumption 12.1 million bales. The United States crop of 1937 was 18 million bales, but in the 2 succeeding years total consumption of United States cotton has been below the 6-year average. As a consequence

<sup>4</sup> United States long-staple cotton is not exported in appreciable quantities.

the world carry-over of United States cotton on August 1, 1939, was 14 million bales, the largest on record, amounting to 125 percent of total consumption of United States cotton in the crop year 1938-39.

TABLE 3.—Raw cotton: Averages of spot prices at Liverpool of United States, Brazilian, and Peruvian cottons, for crop years 1927-28 to 1938-39, and by months, August 1939-March 1940<sup>1</sup>

[Cents per pound]

| Crop year (beginning August 1) | United States Middling (3/8-inch) | Brazilian fair (São Paulo) | Peruvian good <sup>2</sup> (Tanguis) | Percentage of United States Middling |                         |
|--------------------------------|-----------------------------------|----------------------------|--------------------------------------|--------------------------------------|-------------------------|
|                                |                                   |                            |                                      | Brazilian fair (São Paulo)           | Peruvian good (Tanguis) |
| 1927-28.....                   | 22.65                             | 21.72                      | 25.39                                | 95.9                                 | 112.1                   |
| 1928-29.....                   | 21.36                             | 20.64                      | 24.88                                | 96.6                                 | 116.5                   |
| 1929-30.....                   | 18.44                             | 17.27                      | 21.15                                | 93.6                                 | 114.6                   |
| 1930-31.....                   | 11.61                             | 11.36                      | 13.78                                | 98.1                                 | 118.9                   |
| 1931-32.....                   | 7.54                              | 7.50                       | 9.67                                 | 99.4                                 | 128.2                   |
| 1932-33.....                   | 8.52                              | 8.61                       | 10.56                                | 101.0                                | 124.3                   |
| 1933-34.....                   | 12.47                             | 12.28                      | 15.06                                | 98.8                                 | 121.0                   |
| 1934-35.....                   | 14.24                             | 13.86                      | 16.16                                | 97.4                                 | 113.4                   |
| 1935-36.....                   | 13.50                             | 13.45                      | 15.74                                | 99.8                                 | 116.6                   |
| 1936-37.....                   | 14.62                             | 14.12                      | 16.23                                | 96.6                                 | 124.6                   |
| 1937-38.....                   | 10.31                             | 10.18                      | 14.21                                | 96.7                                 | 138.1                   |
| 1938-39.....                   | 10.16                             | 9.63                       | 12.34                                | 94.9                                 | 121.8                   |
| 1939-40:                       |                                   |                            |                                      |                                      |                         |
| August.....                    | 10.16                             | 9.37                       | 10.91                                | 92.2                                 | 107.4                   |
| September.....                 | 11.10                             | 10.60                      | 12.29                                | 95.5                                 | 110.7                   |
| October.....                   | 10.63                             | 10.43                      | 12.08                                | 98.1                                 | 113.6                   |
| November.....                  | 11.38                             | 11.32                      | 13.30                                | 99.4                                 | 116.9                   |
| December.....                  | 13.82                             | 13.82                      | 15.90                                | 100.0                                | 115.1                   |
| January.....                   | 14.58                             | 14.65                      | 16.63                                | 100.5                                | 114.1                   |
| February.....                  | 13.52                             | 13.72                      | 15.70                                | 101.5                                | 116.1                   |
| March.....                     | 12.20                             | 12.36                      | 15.16                                | 101.3                                | 124.3                   |

<sup>1</sup> Converted from pence by using appropriate rates of exchange published by the Board of Governors of the Federal Reserve System.

<sup>2</sup> The consistently high price for Peruvian cotton is attributed to its long staple.

Source: U. S. Department of Agriculture, *Statistics on Cotton and Related Data*.

#### Effects of the war.

Although Latin American exports of cotton are likely to be adversely affected by the war, the situation will depend in part on the price relationship with United States cotton. In 1937-38, total world consumption amounted to 27.5 million bales, of which 40 percent was United States cotton. Europe, exclusive of the self-sufficient Soviet Union, used about 8.2 million bales, of which 3.7 million bales were from the United States and 4.5 million bales were "other cotton." Consumption in Germany has been greatly reduced by the war.

Countries which may maintain or increase cotton consumption are the United States, which consumed 5.7 million bales in 1937-38 (practically all domestic); the United Kingdom, which consumed 2.6 million bales (of which 1.1 million were United States cotton); and Latin American countries, which together consumed 1.5 million bales (practically all Latin American grown).

The world market for export cotton of medium staple has been a little over 7 million bales, of which the United States has supplied between 5.5 million and 6 million bales (only 3.3 million in 1938); most of the remainder is supplied by Latin America. A decrease in total world consumption would undoubtedly cause contraction in export demand for medium staples; if demand for long staples in their present uses were more than proportionately reduced, the long-staple Egyptian and Peruvian cotton might be utilized in these markets usually supplied by medium-staple cotton. Should the demand for, and consequently the price of, the very short staples decline appreciably, Indian and Peruvian cotton would attract some manufacturers now using cotton of medium staples. Latin American producers of medium staples, however, may be benefited somewhat by the efforts of certain countries to curtail purchases of United States cotton in order to conserve dollar exchange.

The position of the Latin American countries in the world cotton-export trade under war conditions will depend upon whether the factors which have been favorable to an increase in consumption of Latin American cottons will continue under reduced world consumption, or whether these factors will be offset by policies of the United States Government, such as an export subsidy.

World consumption of foreign cotton rose from an average of about 11 million bales in 1930 to over 17 million bales in 1938. World carry-over of foreign cotton on August 1, 1939, was 7.8 million bales (about 45 percent of world consumption of foreign cotton). World carry-over of United States cotton was 14 million bales. No data on the world carry-over of Latin American cotton, separate from other foreign cotton, are available; it seems probable, however, that the ratio of carry-over to consumption is much smaller than for United States cotton.

So long as the British blockade remains effective, the continental European market for cotton will almost certainly be lost to suppliers from the Western Hemisphere. The United Kingdom, for financial reasons, may attempt to purchase increased quantities of cotton from British India and possibly from Brazil. But should world prices for cotton rise appreciably, the large United States carry-over would become available for sale.

TABLE 4.—Cotton, raw: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938<sup>1</sup>

| Country   | 1929    | 1932    | 1936    | 1937    | 1938             |
|---|---------|---------|---------|---------|------------------|
| Quantity (bales of 478 pounds, net)                     |         |         |         |         |                  |
| Total, all countries.....                               | 108,839 | 130,392 | 226,940 | 57,559  | 103,132          |
| Germany.....  | 10,461  | 22,149  | 43,243  | 20,672  | 97,261           |
| United Kingdom.....                                     | 51,862  | 83,965  | 97,353  | 26,437  | 2,569            |
| Belgium.....  | 13,936  | 8,110   | 7,167   | 1,499   | 2,094            |
| Netherlands.....  | 322     | 51      | 15,469  | 1,139   | 770              |
| Japan.....  | -----   | -----   | 17,355  | 3,487   | 470              |
| France.....   | 12,511  | 12,691  | 5,585   | 1,550   | 14               |
| Italy.....  | 5,700   | 779     | 4,737   | 2,375   | -----            |
| Spain.....  | 13,929  | 3,225   | 33,756  | -----   | -----            |
| All other.....  | 118     | 22      | 2,265   | 400     | 4                |
| Value (1,000 paper pesos)                               |         |         |         |         |                  |
| Total, all countries.....                               | 16,338  | 13,761  | 38,903  | 11,784  | 12,122           |
| Value (1,000 U. S. dollars <sup>2</sup> )               |         |         |         |         |                  |
| Total, all countries.....                               | 6,839   | 3,538   | 11,352  | 3,637   | 3,604            |
| Germany.....  | 717     | 581     | 2,142   | 1,328   | 3,395            |
| United Kingdom.....                                     | 3,299   | 2,264   | 4,914   | 1,623   | 90               |
| Belgium.....  | 921     | 212     | 369     | 69      | 78               |
| Netherlands.....  | 12      | 1       | 776     | 79      | 25               |
| Japan.....  | -----   | -----   | 864     | 233     | 15               |
| France.....   | 835     | 373     | 283     | 94      | 1                |
| Italy.....  | 274     | 18      | 238     | 165     | -----            |
| Spain.....  | 778     | 88      | 1,653   | -----   | -----            |
| All other.....  | 3       | 1       | 113     | 26      | ( <sup>3</sup> ) |
| Unit value per bale of total exports <sup>4</sup> ..... | \$62.83 | \$27.13 | \$50.02 | \$63.18 | \$34.95          |

<sup>1</sup> Reexports of cotton from Paraguay, for which separate statistics are not available, are here included.

<sup>2</sup> For 1929 and 1932, the U. S. dollar value has been converted from the gold-peso value. The conversion rates for the gold peso are as follows: 1929, \$0.9513; and 1932, \$0.5844. One gold peso=2.272727 paper pesos.

<sup>3</sup> Not over \$500.

<sup>4</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton, net=4.612 bales; 1 paper peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.



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TABLE 5.—Cotton, raw: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country   | 1929     | 1932     | 1936     | 1937        | 1938        |
|---|----------|----------|----------|-------------|-------------|
| Quantity (bales of 478 pounds, net)                     |          |          |          |             |             |
| Total, all countries.....                               | 224, 739 | 2, 377   | 923, 873 | 1, 069, 298 | 1, 239, 368 |
| Germany.....  | 9, 179   | 611      | 190, 957 | 390, 860    | 377, 286    |
| Japan.....  |          |          | 199, 835 | 234, 841    | 277, 461    |
| United Kingdom.....                                     | 191, 575 | 814      | 303, 574 | 218, 292    | 232, 673    |
| France.....   | 6, 890   | 49       | 69, 004  | 58, 616     | 137, 206    |
| Italy.....  | 3        |          | 41, 219  | 36, 837     | 42, 362     |
| Belgium and Luxemburg.....                              | 395      |          | 37, 903  | 28, 208     | 34, 596     |
| Netherlands.....  | 4, 316   |          | 31, 432  | 22, 692     | 32, 815     |
| Poland.....   |          |          | 16, 400  | 22, 226     | 26, 926     |
| Portugal.....   | 11, 926  | 903      | 10, 748  | 33, 761     | 23, 388     |
| All other.....  | 455      |          | 22, 801  | 42, 965     | 54, 655     |
| Value (1,000 milreis)                                   |          |          |          |             |             |
| Total, all countries.....                               | 163, 915 | 1, 767   | 930, 281 | 944, 363    | 929, 856    |
| Value (1,000 U. S. dollars)                             |          |          |          |             |             |
| Total, all countries.....                               | 18, 177  | 126      | 60, 812  | 64, 462     | 53, 932     |
| Germany.....  | 742      | 30       | 12, 746  | 21, 599     | 16, 603     |
| Japan.....  |          |          | 13, 266  | 15, 206     | 12, 459     |
| United Kingdom.....                                     | 15, 488  | 46       | 19, 747  | 12, 726     | 9, 769      |
| France.....   | 541      | 3        | 4, 326   | 3, 305      | 5, 841      |
| Italy.....  | (1)      |          | 2, 832   | 2, 394      | 1, 846      |
| Belgium and Luxemburg.....                              | 31       |          | 2, 322   | 1, 752      | 1, 520      |
| Netherlands.....  | 350      |          | 2, 136   | 1, 358      | 1, 426      |
| Poland.....   |          |          | 1, 161   | 1, 409      | 1, 170      |
| Portugal.....   | 980      | 47       | 680      | 1, 948      | 964         |
| All other.....  | 45       |          | 1, 595   | 2, 765      | 2, 334      |
| Unit value per bale of total exports <sup>1</sup> ..... | \$80. 88 | \$52. 93 | \$65. 82 | \$59. 18    | \$43. 52    |

<sup>1</sup> Not over \$500.<sup>2</sup> See footnote 4, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo, net=0.004612134 bale; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06828; 1938, \$0.0680.

TABLE 6.—Cotton, raw: <sup>1</sup> Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1933 <sup>2</sup> | 1936             | 1937             | 1938    |
|---|---------|-------------------|------------------|------------------|---------|
| Quantity (bales of 478 pounds, net)                     |         |                   |                  |                  |         |
| Total, all countries.....                               | 74,167  | 6,076             | 229,752          | 41,466           | 97,308  |
| UNITED STATES.....                                      | 61,856  | 1,448             | 83,509           | 2,352            | 39,321  |
| Italy.....  |         | ( <sup>3</sup> )  | 5,073            | 2,532            | 17,810  |
| Germany.....  | 2,966   | 3,729             | 57,152           | 14,702           | 15,306  |
| United Kingdom.....                                     | 3,939   | ( <sup>3</sup> )  | 10,828           | 4,522            | 12,685  |
| France.....   | 4,754   | 422               | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 6,375   |
| Poland.....   |         | ( <sup>3</sup> )  | ( <sup>3</sup> ) |                  | 407     |
| Japan.....  |         | ( <sup>3</sup> )  | 60,518           | 15,088           |         |
| All other.....  | 652     | 477               | 12,672           | 2,270            | 5,404   |
| Percentage to the United States.....                    | 83.4    | 23.8              | 36.3             | 5.7              | 40.4    |
| Value (1,000 pesos)                                     |         |                   |                  |                  |         |
| Total, all countries.....                               | 12,926  | 479               | 46,364           | 8,383            | 17,680  |
| Value (1,000 U. S. dollars)                             |         |                   |                  |                  |         |
| Total, all countries.....                               | 6,228   | 135               | 12,871           | 2,326            | 3,911   |
| UNITED STATES.....                                      | 5,232   | 61                | 4,950            | 120              | 1,565   |
| Italy.....  |         | ( <sup>3</sup> )  | 284              | 123              | 748     |
| Germany.....  | 237     | 67                | 2,916            | 981              | 589     |
| United Kingdom.....                                     | 306     | ( <sup>3</sup> )  | 603              | 197              | 474     |
| France.....   | 408     | 7                 | ( <sup>3</sup> ) | ( <sup>3</sup> ) | 266     |
| Poland.....   |         | ( <sup>3</sup> )  | ( <sup>3</sup> ) |                  | 19      |
| Japan.....  |         | ( <sup>3</sup> )  | 3,394            | 771              | 230     |
| All other.....  | 45      | 10                | 724              | 134              |         |
| Percentage to the United States.....                    | 84.0    | 37.9              | 38.5             | 5.2              | 40.0    |
| Unit value per bale of total exports <sup>4</sup> ..... | \$83.97 | \$22.16           | \$56.02          | \$56.10          | \$40.19 |

<sup>1</sup> Includes negligible exports of unginned cotton. Data for unginned cotton are not yet available for 1938.

<sup>2</sup> Data for 1932, available in totals only, are as follows: Pesos, 1,602,439; bales, 17,397; U. S. dollars, 510,377.

<sup>3</sup> Not separately reported.

<sup>4</sup> See footnote 4, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. weights and currency by applying the following factors: 1 kilo, gross=0.0044092 bale; 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2776; 1938, \$0.2212.

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TABLE 7.—Cotton, raw: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country   | 1929 <sup>1</sup> | 1932             | 1936     | 1937     | 1938     |
|---|-------------------|------------------|----------|----------|----------|
| Quantity (bales of 478 pounds, net)                     |                   |                  |          |          |          |
| Total, all countries.....                               | 200, 232          | 204, 714         | 354, 321 | 354, 076 | 304, 636 |
| United Kingdom.....                                     | 161, 417          | 136, 188         | 151, 690 | 187, 883 | 175, 078 |
| Germany.....  | 13, 636           | 51, 707          | 103, 890 | 102, 917 | 77, 777  |
| Netherlands.....  | 61                | 1, 040           | 5, 965   | 10, 636  | 14, 050  |
| Belgium.....  | 92                | 3, 245           | 11, 792  | 16, 410  | 12, 715  |
| France.....   | 1, 002            | 1, 177           | 8, 589   | 10, 851  | 6, 832   |
| Japan.....  | 2                 | ( <sup>2</sup> ) | 54, 458  | 11, 929  | 5, 524   |
| Italy.....  | 190               | 1, 720           | 2, 494   | 2, 666   | 1, 785   |
| British India.....                                      |                   |                  | 3, 663   | 355      | 203      |
| UNITED STATES.....                                      | 23, 120           | 7, 589           | 1, 461   | 550      |          |
| All other.....  | 712               | 2, 948           | 9, 409   | 10, 879  | 12, 674  |
| Percentage to the United States.....                    | 11. 6             | 3. 7             | 0. 4     | 0. 2     |          |
| Value (1,000 soles)                                     |                   |                  |          |          |          |
| Total, all countries.....                               | 51, 271           | 34, 026          | 91, 499  | 88, 839  | 60, 563  |
| Value (1,000 U. S. dollars)                             |                   |                  |          |          |          |
| Total, all countries.....                               | 20, 507           | 7, 247           | 22, 781  | 22, 387  | 13, 578  |
| United Kingdom.....                                     | 16, 543           | 4, 721           | 9, 885   | 11, 698  | 7, 736   |
| Germany.....  | 1, 375            | 1, 900           | 6, 602   | 6, 477   | 2, 430   |
| Netherlands.....  | 6                 | 44               | 382      | 712      | 628      |
| Belgium.....  | 8                 | 133              | 751      | 1, 091   | 565      |
| France.....   | 106               | 44               | 52       | 685      | 302      |
| Japan.....  | ( <sup>3</sup> )  | ( <sup>3</sup> ) | 3, 453   | 799      | 253      |
| Italy.....  | 20                | 55               | 227      | 223      | 80       |
| British India.....                                      |                   |                  | 260      | 20       | 10       |
| UNITED STATES.....                                      | 2, 376            | 274              | 82       | 32       |          |
| All other.....  | 73                | 76               | 1, 087   | 650      | 654      |
| Percentage to the United States.....                    | 11. 6             | 3. 8             | 6. 4     | 0. 1     |          |
| Unit value per bale of total exports <sup>4</sup> ..... | \$102. 42         | \$35. 40         | \$64. 29 | \$62. 87 | \$44. 28 |

<sup>1</sup> Does not include 189 bales, valued at \$19,000 (44,000 soles), which cannot be allocated by countries. This difference occurs between the totals in the summary table and the table showing exports by markets.

<sup>2</sup> Not separately reported.

<sup>3</sup> Not over \$500.

<sup>4</sup> See footnote 4, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 kilo, gross=0.0044692 bale; 1 Peruvian pound=1929, \$4.000; 1 sol=1932, \$0.2150; 1936, \$0.2990; 1937, \$0.2520; 1938, \$0.2242.

## HENEQUEN AND SISAL

There are two fibers commonly known in the market by the name sisal. These fibers are obtained from the leaves of two closely related but distinct species of the agave plant. One of these species, known as *Agave sisalana*, is the source of true sisal, and the other, known as *Agave fourcroydes*, yields henequen. Both species originated in Yucatán, and all production elsewhere is the result of introduced plants. True sisal and henequen usually differ in the appearance and condition in which they enter commerce; true sisal is usually more carefully prepared than is henequen. When henequen is prepared in the same manner as true sisal, it is difficult to distinguish one from the other.

Until about 1825, European and United States ropemakers utilized soft fibers such as hemp and flax. But the hard fibers—abacá (which is grown principally in the Philippines), sisal, and henequen—proved to be superior for ropemaking and displaced hemp and flax. Abacá is employed in the manufacture of those types of rope in which high tensile strength is required. Sisal is used chiefly in the manufacture of wrapping twines and small ropes, and henequen principally in the manufacture of binder twine. In recent years the use of henequen as a filling material in upholstered furniture has been increasing; the fiber is also used to a limited extent in the manufacture of small ropes.

### Latin American production.

Henequen is produced principally in Mexico, with a relatively small production in Cuba and El Salvador. True sisal is produced principally in Java, Tanganyika, and Kenya, but small quantities are also grown in Haiti.<sup>1</sup> The production of true sisal in Latin American countries is negligible in relation to world production, whereas the production of henequen in Mexico accounts for a large part of the world's supply. Cuba ranks next to Mexico in the production of henequen fiber, but Cuban production in 1938 amounted to only 33 million pounds, as compared with 293 million pounds in Mexico (see table 1). Production in Haiti in 1938 amounted to about 16 million pounds.

TABLE 1.—*Henequen and sisal:*<sup>1</sup> *Production in principal producing countries of Latin America, in specified years, 1929 to 1938*

[In thousands of pounds]

| Country                  | 1929             | 1933    | 1936    | 1937    | 1938    |
|--------------------------|------------------|---------|---------|---------|---------|
| Mexico.....              | 285,480          | 210,652 | 247,003 | 235,991 | 293,470 |
| Cuba <sup>2</sup> .....  | ( <sup>3</sup> ) | 22,000  | 33,000  | 33,000  | 33,000  |
| Haiti <sup>4</sup> ..... | 105              | 8,239   | 12,483  | 13,662  | 15,924  |

<sup>1</sup> Classified as henequen in Mexican statistics, as henequen and sisal in Cuban statistics, and as sisal in Haitian statistics.

<sup>2</sup> Cuban production is estimated.

<sup>3</sup> Not available.

<sup>4</sup> Exports from Haiti for fiscal years ended September 30. Export statistics are believed to represent entire production.

Source: Compiled by the United States Tariff Commission from official statistics of Mexico, Cuba, and Haiti, reports of the Pan American Union, and information supplied by the U. S. Bureau of Plant Industry.

<sup>5</sup> In 1938 world production of henequen and sisal combined amounted to approximately 600,000 tons. Of this amount, Latin America supplied about 170,000 tons, or more than two-fifths.

## Latin American exports.

The United States is the principal market for henequen exported from Mexico and Cuba, as well as for combined exports of true sisal from Java, Tanganyika, Kenya, and Haiti. More than 80 percent of the exports from Mexico, 99 percent of the exports from Cuba, and 95 percent of the exports from Haiti are shipped to the United States.

The decline in exports of henequen from Mexico, as shown in table 2, was accompanied by a substantial increase in the United States imports of henequen binder twine and, in recent months, of wrapping twine from Mexico; imports of sisal from the Netherlands Indies and British East Africa have also increased. Imports of sisal and henequen are recorded in an inclusive total in official United States statistics. In 1939, combined imports of these fibers were 266 million pounds, of which Mexico supplied 116 million pounds, other Latin American countries 32 million, the Netherlands Indies 83 million, British East Africa 33 million, and all other countries 2 million. In that year, Latin American countries supplied 56 percent of United States imports.

TABLE 2.—*Henequen and sisal:*<sup>1</sup> *Exports from principal producing countries of Latin America, in specified years, 1929 to 1938*

| Country                           | 1929      | 1933      | 1936    | 1937    | 1938    |
|-----------------------------------|-----------|-----------|---------|---------|---------|
| Quantity (1,000 pounds)           |           |           |         |         |         |
| Mexico.....                       | * 229,083 | * 218,389 | 226,470 | 169,999 | 127,687 |
| Cuba.....                         | 7,009     | 9,177     | 12,810  | 23,202  | 18,302  |
| Haiti <sup>1</sup> .....          | 105       | 8,239     | 12,488  | 13,662  | 15,924  |
| Value (foreign currencies)        |           |           |         |         |         |
| Mexico (1,000 pesos).....         | 29,235    | 15,661    | 36,114  | 33,868  | 19,290  |
| Cuba (1,000 pesos).....           | 480       | 235       | 688     | 1,269   | 661     |
| Haiti (1,000 gourdes).....        | 44        | 1,141     | 3,012   | 3,823   | 3,236   |
| Value (1,000 U. S. dollars)       |           |           |         |         |         |
| Mexico.....                       | 14,085    | 4,401     | 10,025  | 9,398   | 4,260   |
| Cuba.....                         | 480       | 235       | 688     | 1,269   | 661     |
| Haiti.....                        | 9         | 228       | 602     | 765     | 647     |
| Unit value per pound <sup>4</sup> |           |           |         |         |         |
| Mexico.....                       | \$0.061   | \$0.020   | \$0.044 | \$0.055 | \$0.033 |
| Cuba.....                         | .068      | .026      | .054    | .055    | .036    |
| Haiti.....                        | .065      | .028      | .048    | .056    | .041    |

<sup>1</sup> Classified as henequen in Mexican statistics, as henequen and sisal in Cuban statistics, and as sisal in Haitian statistics.

<sup>2</sup> Cleaned only. Data for 1935-38 include cleaned and spotted.

<sup>3</sup> Data cover fiscal years ended Sept. 30. Export statistics are believed to represent entire production.

<sup>4</sup> The unit values appearing in this table should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official statistics of Mexico, Cuba, and Haiti. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2,2046 pounds; Mexico, 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212; Cuba, 1 peso=1 U. S. dollar (all years); Haiti, 1 gourde=\$0.20 (all years).

Mexican exports of binder twine, as well as those from Cuba, go largely to the United States. Exports of binder twine from Mexico to the United States increased irregularly from 2.8 million pounds, valued at about \$300,000, in 1929, to 21.7 million pounds, valued at

more than 1 million dollars, in 1937. Since that year, exports from Mexico have declined sharply; in 1939 United States imports of binder twine from Mexico amounted to 6.2 million pounds, valued at \$244,053. Cuban exports of binder twine to the United States, which totaled over 1 million pounds, valued at \$133,122, in 1929, increased irregularly to nearly 8 million pounds, valued at \$448,901, in 1935. Exports in 1936 and 1937 were smaller; those for 1937 amounted to slightly over 5 million pounds, valued at \$338,096. In 1939, United States imports of binder twine from Cuba aggregated 4 million pounds, valued at \$194,660.

Exports of henequen from Progreso, Yucatán, the most important port for henequen in Mexico, amounted to 277,993 bales in 1938, and to 433,715 bales in 1939 (see table 3).<sup>2</sup> Exports to the United States in 1938 were 232,543 bales, or 84 percent of total exports.<sup>3</sup> Shipments to this country in 1939 increased somewhat (273,663 bales) but constituted only 63 percent of total exports. The decline in the relative importance of the United States as a market for henequen in 1939 was accompanied by a large increase in exports to European countries in that year; such exports totaled 39,478 bales, or 14 percent of total exports in 1938, and 153,162 bales, or 35 percent, in 1939. Principal European markets in 1939 were the Netherlands, France, Belgium, and Germany. In the first 4 months of 1940, total exports from Progreso were 98,842 bales, of which 95,575 bales, or 97 percent, were shipped to the United States. In that period, France was the only European market for henequen from Progreso; in April 1940, no shipments were made to Europe.

TABLE 3.—Henequen: Exports from Progreso, Yucatán, to principal markets, 1938, 1939, and January–April 1940

| Country            | 1938                           |                           | 1939                           |                           | 1940 (Jan.–April)              |                           |
|--------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|--------------------------------|---------------------------|
|                    | Quantity in bales <sup>1</sup> | Percent of total quantity | Quantity in bales <sup>1</sup> | Percent of total quantity | Quantity in bales <sup>1</sup> | Percent of total quantity |
| UNITED STATES..... | 232,543                        | 83.7                      | 273,663                        | 63.1                      | 95,575                         | 96.7                      |
| Europe.....        | 39,478                         | 14.2                      | 153,162                        | 35.2                      | <sup>2</sup> 2,442             | 2.5                       |
| South America..... | .....                          | .....                     | <sup>4</sup> 6,646             | 1.5                       | <sup>4</sup> 825               | .8                        |
| Canada.....        | 5,972                          | 2.1                       | 344                            | .1                        | .....                          | .....                     |
| Total.....         | 277,993                        | 100.0                     | 433,715                        | 100.0                     | 98,842                         | 100.0                     |

<sup>1</sup> One bale weighs approximately 400 pounds.

<sup>2</sup> Exported entirely to France. No shipments were made in April.

<sup>3</sup> Exported entirely to Brazil.

<sup>4</sup> Exported entirely to Argentina in the month of April.

Source: U. S. Bureau of Foreign and Domestic Commerce, *Textile Raw Materials*.

#### Trade barriers, competitive conditions, and prices.

Imports of henequen into the principal European markets are free of duty, although in some countries, notably France, certain internal-revenue taxes are assessed on importation. Since the beginning of the war, however, imports of henequen have been subject to licenses and strict government control despite its duty-free status. Henequen enters the United States free of duty.<sup>4</sup> Cuba imposes quotas upon imports of the fiber.

<sup>1</sup> One bale weighs approximately 400 pounds.

<sup>2</sup> The share of the United States is probably overstated by the statistics, inasmuch as large quantities of henequen and sisal are customarily exported from this country to Canada.

<sup>4</sup> Tariff Act of 1930, par. 1064.

Henequen does not compete with any fiber grown in the United States. Although there is some overlapping of uses, henequen does not, in general, compete with true sisal from Java and British East Africa, primarily because henequen has not the light color and clean appearance of true sisal. Should henequen be as carefully prepared as true sisal, the two fibers could probably be employed interchangeably in many uses.

Henequen production in Mexico is controlled by a government organization, which has taken over the functions of the Cooperative Society of Henequen Growers of Yucatán and which regulates production and exports and fixes prices. An export tax was levied on henequen on April 1, 1937. Subsequently an export tax was levied on binder twine; this tax is considerably higher than that on henequen fiber. Cuba also is developing a binder-twine industry, employing Cuban henequen.

The price of henequen is customarily somewhat below the price of Javanese or African sisal; in May 1940, henequen was approximately one-half cent per pound cheaper than sisal. The price of henequen in New York fluctuated widely during the period 1929-39. In 1929 the annual average wholesale price was 7.5 cents per pound; in 1932 it was 2.3 cents per pound. The price then increased and in 1937 reached 6 cents per pound. Thereafter it again declined, and amounted to 3.2 cents in 1939 (see table 4). Since the outbreak of the war in Europe (September 1939), reports from the trade<sup>5</sup> indicate that prices have not increased appreciably. Prices in Progreso, Yucatán, however, were increased slightly (3 centavos per kilo, or about 0.23 cent per pound) on May 14, 1940.

TABLE 4.—*Henequen or Mexican sisal: Annual average wholesale price per pound in New York, 1929-39*

| Year | Price per pound | Year | Price per pound |
|------|-----------------|------|-----------------|
| 1929 | \$0.075         | 1935 | \$0.040         |
| 1930 | .062            | 1936 | .060            |
| 1931 | .035            | 1937 | .057            |
| 1932 | .023            | 1938 | .039            |
| 1933 | .031            | 1939 | .032            |
| 1934 | .035            |      |                 |

<sup>1</sup> Four-month average (no quotations in April and May; series ended in June). Data for 1940 are not available.

Source: U. S. Bureau of Labor Statistics, *Wholesale Prices*.

#### Effects of the war.

Exports of henequen from Cuba and of sisal from Haiti go almost entirely to the United States. Inasmuch as 80 percent or more of Mexican exports is also shipped to the United States, it appears improbable that this industry will be adversely affected by the war. Moreover, a part of the European trade may be retained even though continental European countries cannot now be readily supplied. The maintenance of exports to the United Kingdom will be dependent upon financial arrangements and the availability of shipping facilities. Should the United States be unable to acquire its customary supplies of sisal from the Netherlands Indies and Africa, it would probably increase its imports of henequen from Mexico.

<sup>5</sup> Actual quotations are not available.

## HIDES AND SKINS

The principal types of hides and skins are cattle hides, calf and kip skins, sheep and lamb skins, and goat and kid skins. Most cattle hides are tanned into heavy leathers such as sole, welting, belting, upholstery, and upper leather. Other important leathers produced from cattle hides are harness and saddlery leather, work-glove leather, hydraulic and packing leather, lace leather, and leather for carders, combers, and pickers used on textile machinery. Calf and kip skins are used principally for shoe-upper leather. Sheep and lamb skins are utilized in the manufacture of leather for shoes (principally linings), gloves, traveling bags and cases, fancy leather goods, wearing apparel, chamois, and rollers for textile machinery. Goat and kid leather is used chiefly for shoe uppers and lining. Other uses are for pocketbooks, fancy leather goods, gloves, and wearing apparel.

### Position of Latin America in production and exports.

Livestock have been raised in Latin America since the beginning of the Spanish and Portuguese occupations. Cattle were first introduced from Spain, and exports of hides and skins were important during the colonial period and the early nineteenth century. In the last quarter of the nineteenth century, the Rio de la Plata area became one of the world's principal meat-producing regions and the center of a greatly expanded international trade in hides and skins.

Certain Latin American countries rank high as world producers and exporters of cattle hides, and comparatively high as producers of sheep and lamb skins. They lead in the less important trade in wild pig and hog skins but are small producers of calfskins, which are chiefly a byproduct of the dairy industry. Latin America also produces substantial quantities of goat and kid skins, but compared with a number of other world producers the Latin American countries are not particularly important in the production of these skins. As a rule, Latin American countries rank higher as exporters of hides and skins than as producers. The production of bovine hides and skins<sup>1</sup> (principally cattle hides) and of sheep and lamb skins in the principal producing countries of Latin America, in specified years, 1929 to 1938, is shown in tables 1 and 2. Statistics of production of wild pig and hog skins or of goat and kid skins in Latin American countries are not available.

TABLE 1.—Cattle hides, kipskins, and calfskins: Production in principal producing countries of Latin America, in specified years, 1929 to 1938

[In thousands of pieces]

| Country                      | 1929  | 1932  | 1936  | 1937             | 1938             |
|------------------------------|-------|-------|-------|------------------|------------------|
| Argentina <sup>1</sup> ..... | 7,000 | 6,100 | 7,800 | 8,100            | 7,157            |
| Brazil.....                  | 3,175 | 3,087 | 4,200 | ( <sup>2</sup> ) | ( <sup>2</sup> ) |
| Uruguay.....                 | 2,040 | 1,575 | 1,732 | 1,631            | 1,838            |

<sup>1</sup> Estimated except in 1938.

<sup>2</sup> Not available.

Source: U. S. Department of Commerce, Leather Raw Materials Bulletins, and unpublished data.

<sup>1</sup> Bovine hides and skins include cattle hides, kipskins, and calfskins.



TABLE 2.—*Sheep and lamb skins: Production in principal producing countries of Latin America, in specified years, 1929 to 1938*

[In thousands of pieces]

| Country        | 1929   | 1932  | 1936   | 1937             | 1938             |
|----------------|--------|-------|--------|------------------|------------------|
| Argentina..... | 10,480 | 9,305 | 11,168 | 11,362           | 12,460           |
| Uruguay.....   | 4,592  | 3,354 | 2,860  | 3,100            | ( <sup>1</sup> ) |
| Chile.....     | 3,139  | 3,074 | 2,994  | 3,044            | 3,150            |
| Brazil.....    | 2,400  | 2,285 | 1,750  | ( <sup>1</sup> ) | ( <sup>1</sup> ) |

<sup>1</sup> Not available.

Source: U. S. Department of Commerce, Leather Raw Materials Bulletins, and unpublished data.

*Cattle hides.*—The three countries of the Rio de la Plata—Argentina, Brazil, and Uruguay—are the leading Latin American producers and exporters of cattle hides. Other important producers are the United States, Canada, British India, Australia, and New Zealand. Argentina is by far the principal Latin American producer, the output of that country being about twice that of Brazil (see table 1). During the 10-year period 1929–38, Argentina produced an average of more than 7 million bovine hides and skins annually,<sup>2</sup> most of which were cattle hides, and ranked as the world's largest exporter.

In Argentina, cattle hides are obtained principally from four sources: Frigorificos (large fresh-meat-packing establishments), saladeros (dried-meat-producing plants), public mataderos (large municipal slaughterhouses), and small country butchers. Frigorifico hides are similar to the so-called packer hides produced in the United States by the large meat packers. The Argentine saladero and matadero hides correspond in general to the hides produced by the small meat packers in the United States, and the hides produced in Argentina by small country butchers are similar to the country hides of the United States. As a rule, the saladero and matadero hides are of lower quality than those from the frigorificos, but of higher quality than the hides produced by country butchers.

The leather-tanning industry in Argentina consumes only about 15 percent of the Argentine production of cattle hides, and large quantities of such hides are exported. Exports of bovine hides and skins (consisting principally of cattle hides) from Argentina to principal markets, in specified years, 1929 to 1938, are shown in table 3. The United States has ranked second to Germany as a market for Argentine hides in all recent years except 1929 and 1936, when the United States was the principal purchaser. Other important markets for Argentine hides have been the United Kingdom, Italy, Belgium, the Scandinavian countries, the Netherlands, and France.

Argentina, for many years, has usually supplied about 50 percent of United States imports of cattle hides from all sources. About 60 to 65 percent of the hides supplied by Argentina are of the frigorifico type, which are heavy, fine-quality hides used by United States tanners of heavy leathers, such as sole leather and belting leather. The supply in the United States of hides similar in quality to the frigorificos is not sufficient to meet the requirements of this branch of the domestic tanning industry, but this country has a surplus of lighter hides which it exports in considerable volume.

<sup>2</sup> These figures and most of the statistics given subsequently in this statement on hides and skins, were taken from U. S. Department of Commerce, Leather Raw Materials Bulletins.

TABLE 3.—Cattle hides and kipskins, wet and dry: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

[In thousands of pieces]

| Country                              | 1929   | 1932   | 1936   | 1937   | 1938   |
|--------------------------------------|--------|--------|--------|--------|--------|
| Total, all countries.....            | 7, 166 | 5, 831 | 7, 986 | 7, 907 | 7, 493 |
| Germany.....                         | 1, 830 | 2, 638 | 1, 699 | 2, 112 | 1, 751 |
| UNITED STATES.....                   | 2, 769 | 759    | 1, 946 | 1, 344 | 976    |
| United Kingdom.....                  | 202    | 586    | 963    | 1, 007 | 709    |
| Italy.....                           | 459    | 448    | 250    | 449    | 704    |
| Belgium.....                         | 611    | 391    | 566    | 699    | 611    |
| Scandinavia.....                     | 225    | 284    | 515    | 503    | 610    |
| Netherlands.....                     | 13     | 197    | 338    | 313    | 240    |
| France.....                          | 181    | 87     | 240    | 177    | 111    |
| Spain.....                           | 312    | 380    | 120    | .....  | .....  |
| All other.....                       | 524    | 61     | 1, 367 | 1, 303 | 1, 781 |
| Percentage to the United States..... | 38. 6  | 13. 0  | 24. 4  | 17. 0  | 13. 0  |

Source: Trade Survey Bureau, Tanner's Council of America, 1939.

Brazil ranks next to Argentina as a Latin American producer of cattle hides. In the 9 years, 1928-36,<sup>3</sup> the average annual production of bovine hides and skins in Brazil (consisting largely of cattle hides) amounted to about 3.6 million pieces, and exports averaged more than 2.5 million. The United States usually ranked second to Germany as a market for Brazilian exports (except in 1938).<sup>4</sup> In 1936, exports of bovine hides and skins from Brazil amounted to 2.6 million pieces, of which Germany accounted for 1.1 million and the United States, for 487,000. In 1938, total Brazilian exports of bovine hides and skins were nearly 2.6 million pieces, and of this amount 986,000 went to Germany, 215,000 to Czechoslovakia, 205,000 to the Netherlands, 184,000 to the United States, and 180,000 to Belgium. Other important European markets were the United Kingdom, Italy, and France. (See table 4.)

Uruguay ranks third in importance in Latin America as a producer of cattle hides. In the decade 1929-38, the average annual production in Uruguay of bovine hides and skins (consisting principally of cattle hides) amounted to about 1.8 million pieces, and exports averaged about 1.5 million pieces. Germany was the largest market for bovine hides and skins exported from Uruguay.<sup>5</sup> Other important markets were the Scandinavian countries, the United Kingdom, Poland, the Netherlands, Belgium, Italy, Czechoslovakia, and the United States. In 1936, exports of cattle hides from Uruguay amounted to 1 million pieces, of which 285,000 went to Germany, 193,000 to the United Kingdom, 86,000 to the United States, 79,000 to Sweden, and 70,000 to Belgium. Japan, formerly a comparatively minor market, ranked fourth in 1936 as a purchaser of Uruguayan hides and skins, taking 95,000 pieces. In 1938, total exports amounted to 1.3 million pieces; of this amount, 530,000 went to Germany, 144,000 to Sweden, 76,000 to the United Kingdom, and 74,000 to Poland. The United States ranked eleventh among Uruguayan export markets, in 1938 accounting for only 27,000 hides.

<sup>3</sup> The latest available year. Brazilian statistics do not segregate cattle hides and calf and kip skins.

<sup>4</sup> Brazil has usually ranked third as a source of United States imports of cattle hides, but that country is a minor supplier of calf and kip skins.

<sup>5</sup> Uruguay has been a relatively unimportant source of United States imports of cattle hides, and a negligible source of imports of calf and kip skins.

TABLE 4.—Cattle hides: Exports from BRAZIL to principal countries, in specified years, 1929 to 1938

| Country  | 1929    | 1932   | 1936    | 1937    | 1938    |
|--|---------|--------|---------|---------|---------|
| Quantity (1,000 pieces)                        |         |        |         |         |         |
| Total, all countries.....                      | 2,584   | 1,650  | 2,609   | 3,127   | 2,552   |
| Germany.....                                   | 1,023   | (1)    | 1,100   | 1,191   | 986     |
| Czechoslovakia.....                            |         |        | 213     | 315     | 215     |
| Netherlands.....                               | 36      |        | 108     | 288     | 205     |
| Belgium.....                                   | 133     |        | 33      | 140     | 180     |
| UNITED STATES.....                             | 355     |        | 487     | 494     | 184     |
| United Kingdom.....                            | 48      |        | 226     | 235     | 162     |
| Italy.....                                     | 100     |        | 97      | 41      | 173     |
| Uruguay.....                                   | 232     |        | 141     | 154     | 119     |
| France.....                                    | 144     |        | 39      | 124     | 95      |
| Poland.....                                    |         |        | 49      | 21      | 48      |
| Argentina.....                                 | 11      |        | 16      | 14      | 11      |
| All other.....                                 | * 422   |        | 100     | 110     | 174     |
| Percentage to the United States.....           | 13.7    |        | (1)     | 18.7    | 15.8    |
| Value (1,000 milreis)                          |         |        |         |         |         |
| Total, all countries.....                      | 118,672 | 48,431 | 142,999 | 220,711 | 160,338 |
| Value (1,000 U. S. dollars)                    |         |        |         |         |         |
| Total, all countries.....                      | 14,015  | 3,448  | 9,348   | 15,066  | 9,300   |
| Germany.....                                   | 5,350   | (1)    | 4,178   | 6,094   | 4,144   |
| Czechoslovakia.....                            |         |        | 747     | 1,302   | 759     |
| Netherlands.....                               | 176     |        | 375     | 1,393   | 712     |
| Belgium.....                                   | 1,130   |        | 94      | 735     | 622     |
| UNITED STATES.....                             | 1,576   |        | 1,712   | 2,380   | 576     |
| United Kingdom.....                            | 250     |        | 663     | 868     | 458     |
| Italy.....                                     | 498     |        | 314     | 193     | 457     |
| Uruguay.....                                   | 1,486   |        | 575     | 881     | 449     |
| France.....                                    | 758     |        | 135     | 514     | 309     |
| Poland.....                                    |         |        | 168     | 96      | 166     |
| Argentina.....                                 | 51      |        | 83      | 71      | 31      |
| All other.....                                 | * 2,740 |        | 304     | 541     | 617     |
| Percentage to the United States.....           | 11.2    |        | (1)     | 18.3    | 15.8    |
| Unit value of total exports <sup>1</sup> ..... | \$5.42  | \$2.09 | \$3.58  | \$4.82  | \$3.64  |

<sup>1</sup> Not available.

<sup>2</sup> Includes exports to the Soviet Union of 334,000 hides, valued at \$2,033,000, in 1929; exports for other years are negligible.

<sup>3</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=0.04 salted hide; 1 kilo=0.088184 dried hide; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0680.

TABLE 5.—Cattle hides: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929   | 1932   | 1936   | 1937   | 1938   |
|--|--------|--------|--------|--------|--------|
| Quantity (1,000 pieces)                        |        |        |        |        |        |
| Total, all countries.....                      | 1,428. | 1,151  | 996    | 1,505  | 1,262  |
| Germany.....                                   | 403    | 477    | 285    | 557    | 530    |
| Sweden.....                                    | 190    | 55     | 79     | 98     | 144    |
| Poland.....                                    |        |        | 5      | 23     | 74     |
| United Kingdom.....                            | 32     | 84     | 193    | 151    | 76     |
| Netherlands.....                               | 22     | 16     | 16     | 38     | 61     |
| Belgium.....                                   | 69     | 67     | 70     | 121    | 64     |
| Italy.....                                     | 93     | 121    | 19     | 103    | 67     |
| Czechoslovakia.....                            |        |        | 28     | 13     | 44     |
| UNITED STATES.....                             | 291    | 29     | 86     | 133    | 27     |
| Denmark.....                                   |        | 1      | 19     | 23     | 32     |
| Norway.....                                    |        | 22     | 11     | 27     | 36     |
| France.....                                    | 5      | 52     | 29     | 36     | 23     |
| All other <sup>1</sup> .....                   | 323    | 227    | 156    | 182    | 84     |
| Percentage to the United States.....           | 20.4   | 2.6    | 8.6    | 8.8    | 2.2    |
| Value (1,000 pesos)                            |        |        |        |        |        |
| Total, all countries.....                      | 8,533  | 6,415  | 6,243  | 9,714  | 7,650  |
| Value (1,000 U. S. dollars)                    |        |        |        |        |        |
| Total, all countries.....                      | 8,416  | 2,548  | 3,270  | 5,435  | 4,358  |
| Germany.....                                   | 2,391  | 1,062  | 958    | 2,231  | 2,118  |
| Sweden.....                                    | 887    | 109    | 289    | 333    | 432    |
| Poland.....                                    |        |        | 12     | 90     | 282    |
| United Kingdom.....                            | 149    | 202    | 583    | 542    | 229    |
| Netherlands.....                               | 107    | 44     | 47     | 167    | 197    |
| Belgium.....                                   | 427    | 128    | 155    | 401    | 195    |
| Italy.....                                     | 472    | 182    | 55     | 305    | 190    |
| Czechoslovakia.....                            |        |        | 93     | 56     | 138    |
| UNITED STATES.....                             | 2,099  | 97     | 371    | 477    | 115    |
| Denmark.....                                   |        | 1      | 70     | 100    | 99     |
| Norway.....                                    |        | 37     | 39     | 96     | 97     |
| France.....                                    | 21     | 117    | 90     | 120    | 86     |
| All other <sup>1</sup> .....                   | 1,863  | 599    | 508    | 517    | 250    |
| Percentage to the United States.....           | 24.9   | 3.8    | 11.3   | 8.8    | 2.6    |
| Unit value of total exports <sup>2</sup> ..... | \$5.89 | \$2.21 | \$3.28 | \$3.61 | \$3.45 |

<sup>1</sup> 1929: Soviet Union, 284,000 hides, valued at \$1,713,000.

1932: Soviet Union, 136,000 hides, valued at \$368,000.

1936: Japan, 95,000 hides, valued at \$334,000.

Argentina, 29,000 hides, valued at \$84,000.

1937: Japan, 87,000 hides, valued at \$158,000.

Argentina, 26,000 hides, valued at \$97,000.

<sup>2</sup> See footnote 3, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 dried skin=8.5 kilos; 1 salted skin=12 kilos; 1 salted frozen skin=22 kilos; 1 peso=1929, \$0.9663; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

*Sheep and lamb skins.*—Argentina, Uruguay, Chile, and Brazil are the principal Latin American producers and exporters of sheep and lamb skins. Other important producing countries are the United States, Australia, New Zealand, and the Union of South Africa. Australia ranks first. Production in the United States is insufficient to satisfy domestic requirements; consequently, this country is a large importer.

Argentina is by far the leading Latin American producer. In the 10-year period, 1929-38, the average exports of sheep and lamb skins from Argentina amounted to more than 40 million pounds.<sup>6</sup> (See table 6.) Exports in this period went to a large number of countries, but two countries—France and the United States—took 75 percent of the total; other important markets were the United Kingdom and Germany. In 1938, Argentine exports of sheep and lamb skins amounted to 40 million pounds, of which 24 million went to France, 9 million to the United States, 3 million to the United Kingdom, and one-half million to Germany.

Uruguay ranks next to Argentina as a producer of sheep and lamb skins. In the 10-year period 1928-37, that country exported an average of about 13 million pounds of sheep and lamb skins annually. Of Uruguayan exports of sheep and lamb skins during the decade 1929-38, approximately 75 percent went to France and about 15 percent to the United States; the remainder went to various markets, the most important of which were the United Kingdom and Germany. In 1938 exports of sheep and lamb skins from Uruguay amounted to 12 million pounds, of which 9.9 million went to France, 514,000 to the United States, 465,000 to Germany, and 348,000 to the United Kingdom. Uruguay is a comparatively minor source of United States imports of sheep and lamb skins.

Chile has usually ranked third as a Latin American producer of sheep and lamb skins. During the decade 1929-38, the average annual exports from that country amounted to about 8 million pounds, of which approximately one-half went to the United Kingdom, about one-third to the United States, and most of the remainder to Germany and France. In 1938, exports of sheep and lamb skins from Chile amounted to 6.5 million pounds, of which 3.9 million went to Germany and 2.5 million to the United Kingdom; exports to the United States in that year were very small. The only class of sheep and lamb skins with respect to which Chile is an important supplier of United States imports is "Wooled (wool on) dry and green salted." On a quantity basis, Chile has ranked from first to third as a source of United States imports of this class of skins. Wooled dry and green salted sheep and lamb skins have accounted for 4 to 14 percent (in terms of quantity) of the total United States imports of all classes of sheep and lamb skins in recent years.

Brazil has generally ranked fourth as a Latin American producer of sheep and lamb skins. In the 10-year period, 1928-37,<sup>7</sup> Brazilian exports of these skins averaged about 3 million pounds a year. It is estimated that during this decade approximately 85 percent of the Brazilian exports went to the United States. Other markets were Uruguay (largely for reexport), France, and Germany. In 1937, exports of sheep and lamb skins from Brazil amounted to 2.3 million pounds, of which 1.9 million went to the United States, 172,000 to Germany, and 123,000 to France.

<sup>6</sup> Exports of sheep and lamb skins from Latin American countries are reported in kilograms. Because of marked variations in the weight of such skins it has seemed impractical to convert the statistics, expressed in terms of weight, into the number of skins exported.

<sup>7</sup> Data for 1938 are not available.

TABLE 6.—*Sheep and lamb skins: Total exports from ARGENTINA, URUGUAY, CHILE, and BRAZIL, in specified years, 1929 to 1938*

| Country                                    | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                    |         |         |         |         |         |
| Argentina.....                             | 44,420  | 44,646  | 40,073  | 37,319  | 40,137  |
| Uruguay.....                               | 17,192  | 16,037  | 12,081  | 9,354   | 12,070  |
| Chile.....                                 | 8,000   | 7,304   | 6,102   | 11,500  | 6,508   |
| Brazil.....                                | 4,309   | 2,927   | 2,137   | 2,276   | (1)     |
| Value (thousands—foreign currency)         |         |         |         |         |         |
| Argentina (paper pesos) <sup>2</sup> ..... | 17,495  | 7,978   | 16,784  | 17,456  | 11,935  |
| Uruguay (pesos).....                       | 3,022   | 1,766   | 2,964   | 2,722   | 2,652   |
| Chile (gold pesos).....                    | 16,098  | 2,286   | 6,843   | 15,415  | 6,458   |
| Brazil (milreis).....                      | 15,652  | 9,865   | 9,935   | 12,636  | (1)     |
| Value (1,000 U. S. dollars)                |         |         |         |         |         |
| Argentina.....                             | 7,323   | 2,051   | 4,896   | 5,387   | 3,548   |
| Uruguay.....                               | 2,981   | 831     | 1,552   | 1,523   | 1,511   |
| Chile.....                                 | 1,959   | 278     | 1,410   | 3,176   | 1,330   |
| Brazil.....                                | 1,848   | 702     | 649     | 863     | (1)     |
| Unit value per pound <sup>3</sup>          |         |         |         |         |         |
| Argentina.....                             | \$0.165 | \$0.046 | \$0.122 | \$0.144 | \$0.088 |
| Uruguay.....                               | .173    | .052    | .128    | .163    | .125    |
| Chile.....                                 | .245    | .038    | .231    | .276    | .204    |
| Brazil.....                                | .429    | .240    | .304    | .379    | (1)     |

<sup>1</sup> Not available.

<sup>2</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>3</sup> See footnote 3, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of the specified countries. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 pounds. Exchange rates are as follows:

| Country                     | 1929     | 1932     | 1936     | 1937     | 1938     |
|-----------------------------|----------|----------|----------|----------|----------|
| Argentina (paper peso)..... | \$0.4186 | \$0.2571 | \$0.2918 | \$0.3086 | \$0.2973 |
| Uruguay (peso).....         | .9863    | .4706    | .5237    | .5595    | .5697    |
| Chile (gold peso).....      | .1217    | .1217    | .2060    | .2060    | .2060    |
| Brazil (milreis).....       | .1181    | .0712    | .06537   | .06826   | .0580    |

*Goat and kid skins.*—Brazil, Argentina, and Peru are the leading Latin American producers of goat and kid skins. Other important producers are British India, China, Nigeria, the Union of South Africa, and Algeria. The United States is a small producer and a very large consumer; it is therefore a very large importing country.

Accurate statistics of production of such skins in the Latin American countries are not available but, inasmuch as most of the skins produced are exported, export statistics may be assumed to represent a fairly accurate approximation of production. (See table 7.) During the decade 1928-37,<sup>4</sup> Brazilian exports of goat and kid skins averaged more than 5 million pounds; about 95 percent of the Brazilian exports went to the United States. During the 10 years, 1929-38, Argentine exports of goat and kid skins also averaged more than 5 million pounds annually; approximately 80 percent of these skins went to the United

<sup>4</sup> Statistics of exports of goat and kid skins from Latin American countries are reported in kilograms which have been converted into pounds. Brazilian statistics for 1938 are not available.

States, although most of the kidskins (probably over 70 percent) went to France. Peruvian exports, in the period 1929-38, have averaged 1.3 million pounds; more than 90 percent of such exports went to the United States in 1938.

TABLE 7.—Goat and kid skins: Total exports from BRAZIL, ARGENTINA, and PERU, in specified years, 1929 to 1938

| Country                                    | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                    |         |         |         |         |         |
| Brazil.....                                | 5,200   | 4,945   | 5,479   | 5,207   | (1)     |
| Argentina.....                             | 6,795   | 3,151   | 6,299   | 5,701   | 4,949   |
| Peru.....                                  | 1,191   | 907     | 1,550   | 1,802   | 1,305   |
| Value (thousands—foreign currency)         |         |         |         |         |         |
| Brazil (milreis).....                      | 24,997  | 21,002  | 34,777  | 38,224  | (1)     |
| Argentina (paper pesos) <sup>2</sup> ..... | 4,515   | 963     | 4,670   | 5,610   | 3,107   |
| Peru (soles).....                          | 1,351   | 528     | 810     | 911     | 725     |
| Value (1,000 U. S. dollars)                |         |         |         |         |         |
| Brazil.....                                | 2,952   | 1,485   | 2,273   | 2,609   | (1)     |
| Argentina.....                             | 1,890   | 248     | 1,363   | 1,731   | 924     |
| Peru.....                                  | 641     | 112     | 202     | 230     | 162     |
| Unit value per pound <sup>3</sup>          |         |         |         |         |         |
| Brazil.....                                | \$0.568 | \$0.302 | \$0.415 | \$0.501 | (1)     |
| Argentina.....                             | .278    | .079    | .216    | .304    | \$0.187 |
| Peru.....                                  | .454    | .124    | .130    | .127    | .124    |

<sup>1</sup> Not available.

<sup>2</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>3</sup> See footnote 3, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of the specified countries. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 pounds. Exchange rates are as follows:

| Country                     | 1929     | 1932     | 1936      | 1937      | 1938     |
|-----------------------------|----------|----------|-----------|-----------|----------|
| Brazil (milreis).....       | \$0.1181 | \$0.0712 | \$0.06537 | \$0.06826 | \$0.0580 |
| Argentina (paper peso)..... | .4188    | .2571    | .2918     | .3085     | .2973    |
| Peru (sol).....             | .4000    | .2130    | .2490     | .2520     | .2242    |

*Wild pig and hog skins.*—Wild pig and hog skins (usually known in the trade as peccaries and carpinchos) are used in the United States principally in the manufacture of glove leather. Wild pig and hog skins are not produced in the United States and the domestic tanning industry is entirely dependent upon imports for its requirements. Practically all of the wild pig and hog skins imported into the United States come from Latin American countries. Statistics of production in Latin American countries are not available, but it is believed that the major part of the world's supply of these skins is produced in those countries. The principal Latin American producers are Brazil, Argentina, Peru, Uruguay, and Mexico.

Statistics of exports of wild pig and hog skins are available for only two Latin American countries—Brazil and Argentina (see table 8). Exports from Brazil amounted to 561,000 pounds in 1936, and to

812,000 pounds in 1937.<sup>9</sup> The United States purchased more than 90 percent of the total exports in 1937.

Exports of wild pig and hog skins from Argentina amounted to 123,000 pounds in 1936, 237,000 pounds in 1937, and to 92,000 pounds in 1938 (see table 8). In the latter year, exports to the United Kingdom amounted to 87,000 pounds and exports to the United States, 5,000 pounds.

TABLE 8.—*Wild pig and hog skins: Total exports from BRAZIL and ARGENTINA, in specified years, 1929 to 1938*

| Country                                    | 1929             | 1932             | 1936    | 1937    | 1938             |
|--|------------------|------------------|---------|---------|------------------|
| Quantity (1,000 pounds)                    |                  |                  |         |         |                  |
| Brazil.....                                | 19               | 361              | 561     | 812     | ( <sup>1</sup> ) |
| Argentina.....                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 123     | 237     | 92               |
| Value (thousands—foreign currency)         |                  |                  |         |         |                  |
| Brazil (milreis).....                      | 66               | 1,632            | 4,710   | 8,195   | ( <sup>1</sup> ) |
| Argentina (paper pesos) <sup>2</sup> ..... | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 10      | 25      | 9                |
| Value (1,000 U. S. dollars)                |                  |                  |         |         |                  |
| Brazil.....                                | 8                | 116              | 308     | 559     | ( <sup>1</sup> ) |
| Argentina.....                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 3       | 8       | 3                |
| Unit value per pound <sup>4</sup>          |                  |                  |         |         |                  |
| Brazil.....                                | \$0.411          | \$0.321          | \$0.549 | \$0.689 | ( <sup>1</sup> ) |
| Argentina.....                             | ( <sup>1</sup> ) | ( <sup>1</sup> ) | .024    | .033    | .028             |

<sup>1</sup> Not available.

<sup>2</sup> Not shown separately.

<sup>3</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>4</sup> See footnote 3, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil and Argentina. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 pounds. Exchange rates are as follows:

| Country                     | 1929     | 1932     | 1936      | 1937      | 1938    |
|-----------------------------|----------|----------|-----------|-----------|---------|
| Brazil (milreis).....       | \$0.1181 | \$0.0712 | \$0.06537 | \$0.06826 | \$0.058 |
| Argentina (paper peso)..... | .4186    | .2571    | .2918     | .3086     | .2973   |

#### Trade barriers, competitive conditions, and prices.

For many years prior to the passage of the Tariff Act of 1930, all hides and skins were admitted into the United States free of duty. Under the act of 1930, bovine hides and skins (except hides and skins of the India water buffalo imported to be used in the manufacture of rawhide articles) were made dutiable at 10 percent ad valorem.<sup>10</sup> This rate was reduced to 5 percent ad valorem in the trade agreement with Argentina, effective November 15, 1941. All other raw hides and skins were continued on the free list.<sup>11</sup> With the exception of the United States, no other important hide-consuming country had im-

<sup>9</sup> Exports of wild pig and hog skins from Latin American countries are reported in kilograms, which have been converted into pounds. Brazilian export statistics for 1938 are not available.

<sup>10</sup> Tariff Act of 1930, par. 1530 (a).

<sup>11</sup> Tariff Act of 1930, pars. 1691 and 1765.



posed (prior to September 1, 1939) duties or other special restrictions on the imports of rawhides and skins. Since the outbreak of the war, however, a number of countries have taken steps to regulate both the importation and the exportation of hides and skins.

United States production of raw hides and skins is customarily inadequate to meet domestic requirements, making it necessary to import large quantities of these products. The United States imports 10 to 15 percent of its annual requirements of cattle hides, 20 to 25 percent of its requirements of calf and kip skins, 50 percent of its requirements of sheep and lamb skins, 95 percent of its requirements of goat and kid skins, and all of its requirements of wild pig and hog skins.

The United States takes large quantities of practically all kinds of hides and skins produced in Latin American countries. In 1938, for example, Latin America supplied 56 percent of United States imports of cattle hides, 31 percent of the imports of sheep and lamb skins, 27 percent of the imports of goat and kid skins, and practically all of the imports of wild pig and hog skins. The United States, however, obtains practically no calfskins from Latin America, and only negligible quantities of kipskins. Aside from Latin America, Canada supplies most of the United States imports of cattle hides; New Zealand, the Union of South Africa, and Australia those of sheep and lamb skins; and British India, China, Nigeria, the Union of South Africa, and Algeria those of goat and kid skins. United States imports of calf and kip skins come principally from France, New Zealand, Australia, Canada, and Sweden.

The prices of hides and skins in the United States have been influenced markedly by the degree of economic activity in this country, and as a result they have followed closely general price trends. Index numbers of the wholesale prices of hides and skins in the United States show that prices were high in 1929 and low in 1932. After 1932 they recovered, reaching a peak in 1937 which exceeded their 1929 level. Prices declined sharply in 1938 and advanced somewhat in 1939. Following the outbreak of war in Europe in September 1939, prices of hides and skins in the United States rose rapidly, reaching in October 1939 the level attained 10 years earlier. Since October, prices have declined, although in May 1940 they were appreciably above the level of August 1939 (see table 9).

TABLE 9.—Hides and skins: Index numbers of wholesale prices in the United States, annually, 1929-39, and by months, August 1939-May 1940

[1926=100]

| Year      | Index number | Month          | Index number |
|-----------|--------------|----------------|--------------|
| 1929..... | 112.7        | 1939:          |              |
| 1930..... | 91.0         | August.....    | 77.2         |
| 1931..... | 60.2         | September..... | 97.4         |
| 1932..... | 42.1         | October.....   | 112.4        |
| 1933..... | 67.1         | November.....  | 104.3        |
| 1934..... | 68.6         | December.....  | 106.2        |
| 1935..... | 80.8         | 1940:          |              |
| 1936..... | 94.6         | January.....   | 102.6        |
| 1937..... | 113.5        | February.....  | 97.0         |
| 1938..... | 73.6         | March.....     | 94.3         |
| 1939..... | 84.6         | April.....     | 94.8         |
|           |              | May.....       | 92.2         |

Source: U. S. Bureau of Labor Statistics.

The average annual price of heavy packer steer hides at Chicago has followed the general price trend for hides and skins. The average price declined from 17 cents per pound in 1929 to 6.1 cents in 1932; thereafter the price increased, reaching its 1929 level in 1937. The price declined to 11.6 cents per pound in 1938 and was 12.2 cents per pound in 1939. The prices of Buenos Aires frigorífico hides at New York followed a similar trend, although fluctuations in the prices of the Argentine product were greater than in those of comparable domestic hides.

Following the outbreak of war in Europe, the price of heavy packer steer hides in Chicago rose from 11.3 cents per pound in August 1939 to 16.1 cents in October. Thereafter the price declined, reaching 12.5 cents in March 1940. The price of Buenos Aires frigorífico hides at New York also increased after the outbreak of war, though not so sharply and, after a slight decline in November 1939, resumed the upward trend, reaching 14.7 cents per pound in March 1940. In that month the price of Buenos Aires frigorífico hides was nearly 18 percent greater than the price of the comparable United States product. Indeed, the Buenos Aires price exceeded that in the United States during the entire first quarter of 1940, a relationship which has not prevailed since the years 1929-32 and 1934 (see table 10).

TABLE 10.—Cattle hides: Average annual prices 1929-39, and average monthly prices, August 1939-March 1940

| Year or month  | Heavy packer<br>steer hides<br>at Chicago <sup>1</sup> | Buenos Aires<br>frigorífico<br>hides, C.<br>and F. at<br>New York <sup>2</sup> | Ratio of<br>prices at<br>Buenos Aires<br>to prices at<br>Chicago |
|----------------|--|--|--|
|                | Cents per<br>pound                                     | Cents per<br>pound   | Percent  |
| 1929.....      | 17.0   | 18.5   | 108.8  |
| 1930.....      | 13.8   | 14.6   | 105.8  |
| 1931.....      | 9.1  | 10.7   | 117.6  |
| 1932.....      | 6.1  | 6.3  | 103.3  |
| 1933.....      | 9.7  | 9.0  | 92.8   |
| 1934.....      | 10.0   | 10.4   | 104.0  |
| 1935.....      | 13.0   | 11.4   | 87.7   |
| 1936.....      | 13.8   | 13.0   | 94.2   |
| 1937.....      | 17.8   | 16.2   | 95.3   |
| 1938.....      | 11.6   | 11.6   | 100.0  |
| 1939.....      | 12.2   | 11.9   | 97.5   |
| August.....    | 11.3   | 10.5   | 92.9   |
| September..... | 15.0   | 12.2   | 81.3   |
| October.....   | 16.1   | 14.1   | 87.6   |
| November.....  | 14.5   | 13.3   | 91.7   |
| December.....  | 14.4   | 14.1   | 97.9   |
| 1940.....      |  |  |  |
| January.....   | 14.9   | 14.4   | 102.9  |
| February.....  | 12.9   | 14.6   | 113.2  |
| March.....     | 12.5   | 14.7   | 117.6  |

<sup>1</sup> Tanners' Council of America (1929-39 statistics); *Hide and Leather and Shoes* (monthly prices, 1940).

<sup>2</sup> Pratt Bros. Co., Inc.; prices of frigorífico hides are cost and freight, ex duty New York.

The price of sheepskins (packers') at Chicago has also followed a trend similar to that for hides and skins in general. The price of sheepskins, however, was lower in 1934 than in 1932 and did not attain in 1937 the high level of prices in 1929. From August to November 1939 the price of sheepskins advanced sharply. Thereafter it declined, although in June 1940 it was approximately 50 percent above the level in August 1939. (See table 11.)

There has been somewhat less variation in the price of goatskins (Brazil) at New York than in the prices of most other principal types of hides and skins. The high points were attained in 1929, 1930, and 1937 and the low point in 1932. After 1937 the price declined sharply. Following the outbreak of war the prices advanced, reaching a peak in January 1940. Since then they have declined, and in June 1940 they were at approximately the same level as in August 1939. (See table 11.)

TABLE 11.—Goat and sheep skins: Average annual wholesale prices, 1929–39, and average monthly prices, August 1939–March 1940

| Period    | Sheepskins,<br>packers',<br>at Chicago | Goatskins,<br>Brazil, at<br>New York | Period         | Sheepskins,<br>packers',<br>at Chicago | Goatskins,<br>Brazil, at<br>New York |
|-----------|--|--------------------------------------|----------------|--|--------------------------------------|
|           | <i>Per pelt</i>                        | <i>Per pound</i>                     |                | <i>Per pelt</i>                        | <i>Per pound</i>                     |
| 1929..... | \$2.275                                | \$0.741                              | 1939:          |  |                                      |
| 1930..... | 1.380                                  | .771                                 | August.....    | \$0.845                                | \$0.414                              |
| 1931..... | .661                                   | .578                                 | September..... | 1.063                                  | .470                                 |
| 1932..... | .647                                   | .399                                 | October.....   | 1.480                                  | .566                                 |
| 1933..... | 1.289                                  | .514                                 | November.....  | 1.500                                  | .553                                 |
| 1934..... | .566                                   | .559                                 | December.....  | 1.475                                  | .551                                 |
| 1935..... | .710                                   | .567                                 | 1940:          |  |                                      |
| 1936..... | 1.107                                  | .628                                 | January.....   | 1.380                                  | .549                                 |
| 1937..... | 1.295                                  | .718                                 | February.....  | 1.350                                  | .539                                 |
| 1938..... | .630                                   | .468                                 | March.....     | 1.350                                  | .501                                 |
| 1939..... | .975                                   | .470                                 | April.....     | 1.350                                  | .488                                 |
|           |  |                                      | May.....       | 1.338                                  | .450                                 |
|           |  |                                      | June.....      | 1.263                                  | .417                                 |

<sup>1</sup> Partly interpolated.

Source: U. S. Bureau of Labor Statistics.

#### Effects of the war.

As a result of the war, the United States has been unable to obtain its customary supplies of hides and skins from European and British Empire sources; this country therefore has imported larger quantities from Latin American countries. In general, United States imports of hides and skins from Latin America increased during the World War (1914–18). Latin America is also likely to supply any future increase in the demand of the United States for hides and skins.

Germany, France, Italy, and most other western European countries have been important markets for Latin American hides and skins. As long as the blockade of European ports is maintained, however, consumption in European countries will be sharply curtailed. Should the conflict continue for any considerable period of time, the need for imported hides and skins in the United Kingdom will be almost certain to increase, and it is unlikely that the United Kingdom will be able to supply all of its requirements from Empire sources.<sup>12</sup> The increase in the demand for hides and skins in the United States and the United Kingdom has offset to Latin American exporters the losses in continental European markets.

<sup>12</sup> It is reported that the United Kingdom has been negotiating for the purchase of substantial quantities of hides and skins in Argentina.

## IRON ORE

Largely because of the vast armament programs in Europe, Asia, and the United States a great demand for iron and steel has prevailed in recent years. This demand has resulted in a greatly increased production of iron ore, the principal raw material of the iron and steel industries. Several important steel-producing countries, notably Germany,<sup>1</sup> Belgium-Luxemburg, the United Kingdom, and Japan, are deficient in iron ore and find it necessary to import large quantities to supplement the domestic output, which is usually of lower grade. To supply the increasing demand, ore deposits in many parts of the world are being exploited to an increasing extent. The reserves of Latin America have thus been assuming greater importance than before. It is possible that the present war and, especially, the armament program in the United States, will give further impetus to their development.

### Position of Latin America in world production.

The principal producers of iron ore, named in the order of their importance, are the United States, the Soviet Union, Sweden, the United Kingdom, and Germany. In 1938 each of these countries produced more than 10 million tons, and together they accounted for approximately 75 percent of total world production. The United States alone customarily mines from 25 to 35 percent of total world output. In relation to production in this country, that in Latin America is small; in recent years, it has amounted to about 1.4 percent of world production. The relative position of Latin America in the production of iron ore may be gaged by comparing the figures in table 1 with those for total world production and United States production. In 1937, world production amounted to 210 million long tons; in that year the United States mined 72 million long tons, and Latin American countries mined about 3 million long tons.

According to one leading authority, the high-grade iron-ore reserves of Latin America amount to about 12 billion tons, or over one-fifth of the total reserves of the world. About 58 percent of the Latin American reserves are in Brazil and 26 percent in Cuba. The distribution of iron-ore deposits in Latin America, by countries, is shown in table 2.

Iron-ore deposits in Chile and Cuba have been developed and mined by United States steel interests, practically all of the ore being exported to plants along the eastern seaboard of the United States (see tables 3 and 5). In recent years, production has been increasing in Brazil, but it is still very small in comparison with the huge tonnages available there. A number of the Latin American deposits have been used locally in small quantities for many years, but no large-scale iron and steel industries have been established, chiefly because of the scarcity of fuel of the proper grade for smelting, the absence of a large-scale local demand for iron and steel, and the cost of transportation from mines to consuming centers.

<sup>1</sup> Since the recent acquisition by Germany of the large French ore deposits in Alsace-Lorraine, that country is much less deficient in iron ore than formerly.

TABLE 1.—Iron ore: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1938

| Country  | 1929    | 1932   | 1936             | 1937    | 1938             |
|--|---------|--------|------------------|---------|------------------|
| Quantity (1,000 long tons)                                     |         |        |                  |         |                  |
| Chile <sup>1</sup> .....                                       | 1,784   | 170    | 1,327            | 1,466   | 1,583            |
| Cuba <sup>2</sup> .....  | 671     | 81     | 450              | 483     | 152              |
| Brazil <sup>3</sup> .....                                      | 130     | 30     | 109              | 206     | 353              |
| Mexico.....  | 111     | 27     | 121              | 134     | 116              |
| Total production of Latin American countries listed above..... | 2,596   | 307    | 2,007            | 2,995   | 2,205            |
| UNITED STATES.....   | 73,028  | 9,847  | 48,789           | 73,094  | 28,447           |
| France.....  | 49,930  | 27,163 | 32,776           | 37,241  | 32,614           |
| Soviet Union.....  | 7,725   | 12,007 | 27,477           | 25,589  | 26,101           |
| Sweden.....  | 11,286  | 3,247  | 11,072           | 14,715  | 13,708           |
| United Kingdom.....  | 13,216  | 7,328  | 12,701           | 14,215  | 11,859           |
| Germany.....   | 6,093   | 1,298  | 7,224            | 9,424   | 10,766           |
| Luxemburg.....   | 7,452   | 3,162  | 4,819            | 7,644   | 6,059            |
| British India.....   | 2,429   | 1,761  | 2,627            | 2,871   | 2,744            |
| Algeria.....   | 2,161   | 460    | 1,855            | 2,380   | 3,056            |
| South Australia.....   | 848     | 538    | 1,887            | 1,966   | 2,245            |
| Austria.....   | 1,862   | 302    | 1,008            | 1,855   | 2,559            |
| Czechoslovakia.....  | 1,779   | 593    | 1,072            | 1,807   | ( <sup>4</sup> ) |
| Unfederated Malay States.....                                  | 810     | 688    | 1,655            | 1,650   | 1,581            |
| Newfoundland.....  | 1,517   | 148    | 893              | 1,610   | 1,680            |
| Spanish Morocco.....   | 1,045   | 168    | 1,036            | 1,398   | 1,320            |
| Norway.....  | 734     | 368    | 833              | 992     | 1,403            |
| Spain.....   | 6,443   | 1,733  | ( <sup>5</sup> ) | 974     | 2,474            |
| All other <sup>6</sup> .....                                   | 7,057   | 3,878  | 10,932           | 9,684   | 15,178           |
| Total world production.....                                    | 198,010 | 74,997 | 170,563          | 210,325 | 165,000          |
| Percent of total world production                              |         |        |                  |         |                  |
| Latin American countries listed above.....                     | 1.3     | 0.4    | 1.2              | 1.4     | 1.3              |

<sup>1</sup> Production of Tofo mines, practically all of which is exported to the United States; other production is probably small.

<sup>2</sup> Shipments.

<sup>3</sup> Approximate production.

<sup>4</sup> Exports.

<sup>5</sup> Estimate included in total.

<sup>6</sup> Shipments from Wabana mines.

<sup>7</sup> Includes all countries having an annual output of less than 1 million tons in 1937 or 1938.

<sup>8</sup> Source: British Imperial Institute.

Source: U. S. Bureau of Mines, except as noted.

TABLE 2.—Iron ore: Estimated reserves<sup>1</sup> of Latin American countries, the United States, and the world.

[In millions of long tons]

| Country        | Estimated reserves | Country   | Estimated reserves |
|----------------|--------------------|---|--------------------|
| Brazil.....    | 7,000              | Venezuela.....                                  | 15                 |
| Cuba.....      | 3,159              | Total <sup>2</sup> .....                        | 12,170             |
| Peru.....      | 564                | UNITED STATES.....                              | 10,452             |
| Chile.....     | 441                | All other.....                                  | 35,190             |
| Mexico.....    | 290                | Total world reserves.....                       | 67,812             |
| Uruguay.....   | 80                 | Percent of total reserves in Latin America..... | 21                 |
| Haiti.....     | 41                 |   |                    |
| Nicaragua..... | 25                 |   |                    |
| Panama.....    | 25                 |   |                    |

<sup>1</sup> Estimates restricted to reserves the development of which is believed to be a commercial possibility under present conditions.

<sup>2</sup> Includes Puerto Rican ore reserves amounting to 430 million tons and reserves in Dutch Guiana amounting to 100 million tons.

Source: *Engineering and Mining Journal*, July 17, 1926.

The deposits in Chile and Cuba have been actively exploited for many years, because large tonnages of high-grade ore are available fairly close to the seaboard, where they can be shipped to market by low-cost water transportation. The Brazilian deposits are of high grade and are easily mined, but they are located in the interior and have been developed to only a limited degree. About one-half of the deposits in Brazil, averaging 63 to 70 percent iron, are in the State of Minas Geraes. Most of the remainder, which is also high-grade ore, is in the States of Bahia and Matto Grosso. The deposits in Minas Geraes are served by three railroads, but because of steep mountain grades only small tonnages of ore can be carried. Harbor facilities are also inadequate. Recent attempts have been made to obtain capital for a new railroad to transport the ores to the port of Santa Cruz, some 300 miles away. Although production of iron ore in Brazil is not reported regularly, the average annual output in the 3-year period 1933-35 was estimated at 30,000 tons. Production data for later years are not available. The output must have increased markedly, however, since exports alone amounted to 109,000 long tons in 1936, 183,000 long tons in 1937, and 363,000 long tons in 1938. According to recent reports,<sup>2</sup> the United States and Brazilian Governments are exploring the possibilities of developing the iron-ore resources of the State of Minas Geraes and of establishing in Brazil an integrated steel plant and rolling mills to supply various South American markets.

The reserves of iron ore and coking coal in Mexico are sufficient to support a production much greater than that of recent years. Deposits of iron ore are widely scattered, but the largest are near the west coast. The iron content ranges from 60 to 65 percent. Mexico has iron and steel plants at Monterrey and Mexico City. The Monterrey plant is the largest and has the only large blast furnace in the country. Most of the output of iron ore is consumed in Mexico, but because of the location of the large western deposits, it is possible that the export trade will develop more rapidly than domestic consumption.

There has been little development of the other iron-ore deposits of Latin America. A large deposit (500 million tons) exists in Peru near the coast at Marcona in the Department of Ica; this ore is reported to be a pure hematite, containing 60 to 65 percent iron. Because of the short distance (about 6 miles) from seaboard, there is a possibility that this deposit will be developed. Under a law of 1932, the Government has legal authority to exploit the Ica deposit, but no action as yet has been taken. Information relative to other Peruvian deposits is meager.

Deposits of iron ore in Uruguay, Nicaragua, Panama, and Haiti offer little prospect of development in the immediate future. A United States steel company has purchased one of the deposits in Venezuela. It is high-grade ore averaging over 65 percent iron and is within a reasonable distance of the seacoast.

#### Latin American exports.

A very large part of the iron ore mined in many of the producing countries of the world is consumed in those countries, but about 25 percent of world production moves in international trade. World exports aggregated 46 million long tons in 1938; of this amount France and Algeria supplied 39 percent and Sweden 27 percent. Latin

<sup>2</sup> *Journal of Commerce*, June 26 1940.

American countries exported 2 million long tons, or 4.4 percent of the world total. (See table 3.)

Chile, Brazil, and Cuba are the principal exporters of iron ore in Latin America. Exports of iron ore from Chile in 1937-39 were about 1½ million long tons, and went entirely to the United States (table 4). Exports from Brazil in 1938, which amounted to 363,000 long tons, were more than triple those for 1936. In 1936 and 1937 the principal markets for Brazilian iron ore were the United Kingdom, Canada, and the Netherlands; in 1937 the United Kingdom took more than 55 percent of the total exports. Small quantities were shipped to France, Belgium, and Germany. In 1938, however, the principal markets, in order of importance, were the Netherlands, Danzig, Germany, Poland, and the United Kingdom. (See table 5.) Exports from Cuba go almost exclusively to the United States; in 1937 they amounted to 374,000 long tons and in 1938, to 98,000 long tons (table 6).

TABLE 3.—Iron ore: Exports of principal countries of Latin America and of the world, in specified years, 1929 to 1938

| Country  | 1929                           | 1932             | 1936   | 1937   | 1938   |
|--|--------------------------------|------------------|--------|--------|--------|
|  | Quantity (1,000 long tons)     |                  |        |        |        |
| Chile.....                                       | 1,787                          | 196              | 1,328  | 1,449  | 1,546  |
| Brazil.....                                      | ( <sup>1</sup> )               | ( <sup>1</sup> ) | 109    | 183    | 363    |
| Cuba.....  | 74                             | 35               | 340    | 374    | 98     |
| Mexico.....                                      | ( <sup>2</sup> )               | ( <sup>2</sup> ) | 2      | 26     | 9      |
| Total Latin American countries listed above..... | 1,861                          | 231              | 1,780  | 2,032  | 2,016  |
| France.....                                      | 16,148                         | 9,902            | 17,954 | 19,016 | 15,268 |
| Sweden.....                                      | 10,727                         | 2,184            | 11,021 | 13,744 | 12,485 |
| Algeria.....                                     | 2,108                          | 482              | 2,139  | 2,516  | 2,711  |
| Belgium and Luxembourg.....                      | 805                            | 354              | 921    | 2,247  | 2,015  |
| All other.....                                   | 14,147                         | 4,494            | 10,005 | 12,278 | 11,431 |
| Total world exports <sup>3</sup> .....           | 45,793                         | 17,647           | 43,829 | 51,834 | 45,925 |
|  | Percent of total world exports |                  |        |        |        |
| Latin American countries listed above.....       | 4.1                            | 1.3              | 4.1    | 3.9    | 4.4    |

<sup>1</sup> Not available.

<sup>2</sup> Not over 500.

<sup>3</sup> Approximately 40 countries represented.

Source: Compiled by the United States Tariff Commission from official trade statistics of Latin American countries, and *The Mineral Industry of the British Empire and Foreign Countries*.

TABLE 4.—Iron ore: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929      | 1932    | 1936      | 1937      | 1938      |
|--|-----------|---------|-----------|-----------|-----------|
| Quantity (long tons)                                   |           |         |           |           |           |
| Total, all countries <sup>1</sup> .....                | 1,787,258 | 195,855 | 1,328,351 | 1,449,461 | 1,546,072 |
| Value (1,000 pesos)                                    |           |         |           |           |           |
| Total, all countries.....                              | 15,430    | 3,877   | 11,592    | 12,636    | 13,478    |
| Value (1,000 U. S. dollars)                            |           |         |           |           |           |
| Total, all countries.....                              | 1,878     | 472     | 2,388     | 2,603     | 2,776     |
| Unit value per ton of total exports <sup>2</sup> ..... | \$1.05    | \$2.41  | \$1.80    | \$1.80    | \$1.80    |

<sup>1</sup> All exports are shipped to the United States.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=0.984196 long ton; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936-38, \$0.2060.

TABLE 5.—Iron ore: Exports from BRAZIL to principal markets, 1936, 1937 and 1938<sup>1</sup>

| Country  | 1936             | 1937             | 1938    |
|--|------------------|------------------|---------|
| Quantity (long tons)                                   |                  |                  |         |
| Total, all countries.....                              | 109,243          | 182,706          | 362,686 |
| Netherlands.....                                       | 7,631            | 29,269           | 115,645 |
| Danzig.....  |                  |                  | 66,164  |
| Germany.....   |                  | 29               | 59,856  |
| United Kingdom.....                                    | 61,506           | 102,660          | 30,672  |
| Poland.....  |                  |                  | 32,148  |
| Canada.....  | 32,311           | 41,728           | 22,849  |
| France.....  |                  | 6,000            | 13,803  |
| Belgium.....   | 7,783            | 3,000            | 12,000  |
| UNITED STATES.....                                     | 2                |                  | 9,650   |
| Percentage to the United States.....                   | ( <sup>2</sup> ) |                  | 2.7     |
| Value (1,000 milreis)                                  |                  |                  |         |
| Total, all countries.....                              | 4,560            | 7,886            | 19,821  |
| Value (1,000 U. S. dollars)                            |                  |                  |         |
| Total, all countries.....                              | 298              | 538              | 1,150   |
| Netherlands.....                                       | 20               | 87               | 856     |
| Danzig.....  |                  |                  | 266     |
| Germany.....   |                  | ( <sup>3</sup> ) | 152     |
| United Kingdom.....                                    | 164              | 801              | 108     |
| Poland.....  |                  |                  | 97      |
| Canada.....  | 71               | 120              | 67      |
| France.....  |                  | 21               | 41      |
| Belgium.....   | 43               | 9                | 37      |
| UNITED STATES.....                                     | ( <sup>3</sup> ) |                  | 48      |
| Unit value per ton of total exports <sup>4</sup> ..... | \$2.73           | \$2.95           | \$3.17  |
| Percentage to the United States.....                   | ( <sup>2</sup> ) |                  | 2.7     |

<sup>1</sup> Data for 1929 and 1932 are not available.

<sup>2</sup> Less than one-tenth of 1 percent.

<sup>3</sup> Not over \$500.

<sup>4</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil, and Special Commerce Reports Nos. 99 and 110, March 25 and May 7, 1938, and No. 97, June 2, 1939. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=0.984196 long ton; 1 paper milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.0626; 1938, \$0.0586.



TABLE 6.—*Iron ore: Exports from CUBA to principal markets, in specified years, 1929 to 1938*

| Country   | 1929                                      | 1932   | 1936    | 1937    | 1938   |
|---|---|--------|---------|---------|--------|
|   | Quantity (long tons)                      |        |         |         |        |
| Total, all countries <sup>1</sup> .....                     | 73,962                                    | 35,039 | 340,040 | 374,467 | 97,854 |
|   | Value (1,000 U. S. dollars <sup>2</sup> ) |        |         |         |        |
| Total, all countries.....                                   | 343                                       | 65     | 822     | 914     | 239    |
| Unit value per long ton total of exports <sup>3</sup> ..... | \$4.64                                    | \$1.87 | \$2.42  | \$2.44  | \$2.44 |

<sup>1</sup> All exports were shipped to the United States except 2 tons exported to Colombia in 1932.

<sup>2</sup> One Cuban peso=1 U. S. dollar (all years).

See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to U. S. weights by applying the following factor: 1 metric ton=0.984196 long ton.

### Trade barriers.

Practically all countries which import iron ore in significant quantities admit this material free of duty.<sup>3</sup> Until recently, export restrictions on iron ore, except low export duties for revenue, have been rare. For the purposes of conservation, Sweden, one of the world's largest exporters, has imposed since 1927 certain quantitative restrictions upon exports, but the limitations did not become seriously restrictive until 1937. In 1935 Italy placed an embargo on exports of iron ore, and Germany subjected such exports to licenses. These measures were followed in 1936 by an export-licensing system in France and Algeria, which were then supplying nearly one-half of world exports. At the end of 1937, most of the important exporting countries of Europe and North Africa were limiting exports of ore in some manner. Countries wholly without restrictions at the close of 1937 supplied less than a fifth of world exports in 1936.<sup>4</sup>

No export duties on iron ore are levied by Mexico and Cuba. Chile, however, imposes an export duty based on quotations in the United States,<sup>5</sup> and the Brazilian State of Minas Geraes levies a small tax on exports.

### Prices and competitive conditions.

Published prices of United States iron ore fail to show seasonal fluctuations; the reported price for the first sale after the opening of the shipping season on the Great Lakes has usually become the published or quoted price for the remainder of the season. The nominal price remained unchanged from 1929 through 1936. United States prices for iron ore, however, are subject to fluctuations from year to year and within a given year, inasmuch as concessions in the form of reductions from published prices are frequently granted on large or long-term contracts. Sales of United States iron ore in the open

<sup>3</sup> Iron ore enters the United States free of duty (Tariff Act of 1930, par. 1700).

<sup>4</sup> For an extended discussion of the treatment of iron ore exports, see United States Tariff Commission, *Iron and Steel*, Report No. 128, 1938, pp. 424-426.

<sup>5</sup> When the quotation per unit of 20 pounds in the United States is less than, or is equal to, \$0.09, the export duty per gross metric ton is peso 0.60. Converted to U. S. dollars, using the average export draft rate for August 1939, this rate was then \$0.0960. For each one-tenth-cent increase in the quotation per unit of 20 pounds, the export duty is increased peso 0.18 (\$0.0288 per metric ton).

market are relatively small; only about 15 percent of the total output is disposed of in this manner, the remainder being consumed by the organizations which own or control the mining properties.

The published price for United States iron ore (Mesabi non-Bessemer) with an iron content of 51.5 percent was \$4.50 per long ton from 1929 through 1936. In 1937, with the increased activity in the iron-and-steel industry, the price rose to \$4.95 per long ton and remained at that figure through March 1940. When the 1940 shipping season opened, however, the price declined to \$4.45 per long ton. (See table 7.) Prices in the United Kingdom for a somewhat higher grade have been subject to greater apparent fluctuations. From 1929-30 annual average prices declined to a low point in 1932, and recovered gradually thereafter until 1937-38 when they rose sharply. In 1938 the average price of iron ore in the United Kingdom was \$5.64 per long ton, and in that year was higher than the published price for ore in the United States. The sharp rise may be attributed principally to the armament program and to increased industrial activity in the United Kingdom.

The consumption of iron ore in Latin American countries is relatively small, and market prices are not available. Moreover, it is not possible to obtain unit values from United States import statistics that are significant of values in these countries. Mexico and Brazil ship little iron to the United States, and imports into this country from Chile and Cuba come from mines owned by United States corporations which transport the ore in their own vessels to their plants located along the Atlantic seaboard.

TABLE 7.—Iron ore: Published prices in the United States and the United Kingdom, 1929-38, and by months, August 1939-March 1940

[Per long ton]

| Year and month | United States: Mesabi non-Bessemer delivered lower Lake ports <sup>1</sup> | United Kingdom: West coast hematite <sup>2</sup> | Year and month           | United States: Mesabi non-Bessemer delivered lower Lake ports <sup>1</sup> | United Kingdom: West coast hematite <sup>2</sup> |
|----------------|--|--|--------------------------|--|--|
| 1929.....      | \$4.50   | \$4.17   | 1939:                    | \$4.95   | (?)  |
| 1930.....      |  | 4.19   | August.....              |  |  |
| 1931.....      |  | 2.67   | September.....           |  |  |
| 1932.....      |  | 2.66   | October.....             |  |  |
| 1933.....      |  | 2.98   | November.....            |  |  |
| 1934.....      |  | 2.36   | December.....            |  |  |
| 1935.....      |  | 3.29   | 1940:                    |  |  |
| 1936.....      | 3.56   | January.....                                     |                          |  |  |
| 1937.....      | 4.95   | 4.78   | February.....            |  |  |
| 1938.....      |  | 5.64   | March <sup>4</sup> ..... |  |  |
| 1939.....      |  | (?)  |                          |  |  |

<sup>1</sup> Published prices at date of buying movement. Based on ore containing 51.5 percent iron.

<sup>2</sup> Nonphosphoric ore, containing 52 to 64 percent iron, f. o. b. mine. Prices have been converted from pounds sterling by employing the appropriate annual average exchange rates published by the Board of Governors of the Federal Reserve System.

<sup>3</sup> Not available.

<sup>4</sup> At date of 1940 buying movement, the price declined to \$4.45.

Source: Lake Superior Iron Ore Association, and annual reports of the Secretary for Mines (London).

**Effects of the war.**

The blockade of European ports, high freight and insurance costs, and a possible shortage of ocean shipping as a result of the present war may restrict Brazilian exports of iron ore to Europe. Chile and Cuba have sold little or no iron ore in Europe. If activity in steel mills in the United States should be increased or continued at its present rate for any considerable period of time, iron ore from Brazil might find a new market in mills located on the Atlantic coast of the United States. The enlarged armament program in the United States may also stimulate exports of iron ore to this country from Chile, Cuba, and Mexico.

## MANGANESE ORE

The most important use of manganese is in the production of ordinary steel, where it is essential for the removal of oxygen and sulfur. Less important uses are in the production of special alloy steels and in the manufacture of dry batteries. There is no substitute for manganese.

### Position of Latin America in world production.

During the period 1929-38, world production of manganese ore ranged from 1,314,000 (1932) to 5,767,000 long tons (1937), and production in Latin America from 30,000 to 392,000 long tons. (See table 1.) In 1929 Latin America accounted for 9 percent of world production; in 1932, 2 percent; and in 1938, 6.5 percent. Since 1937, the Soviet Union, British India, the Union of South Africa, the Gold Coast, and Brazil (in the order named) have been the important world producers. Other than Brazil, Cuba is the only substantial producer of manganese in Latin America; Chile and Mexico produce only small quantities.

TABLE 1.—Manganese ore: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1938

| Country   | 1929                                    | 1932         | 1936         | 1937         | 1938         | Grade—<br>percent of<br>manganese |
|---|---|--------------|--------------|--------------|--------------|-----------------------------------|
|   | Quantity (1,000 long tons—gross weight) |              |              |              |              |                                   |
| <b>Latin America:</b>   |   |              |              |              |              |                                   |
| Brazil.....   | 311                                     | 20           | 154          | 250          | 218          | 38-60                             |
| Cuba.....   | 1                                       | 10           | 48           | 129          | 122          | 30-60                             |
| Chile.....  | 3                                       | (1)          | 5            | 13           | 11           |                                   |
| Mexico.....   | 1                                       | (1)          | 3            | (1)          | (1)          |                                   |
| <b>Total production of Latin American countries listed above.....</b> | <b>316</b>                              | <b>30</b>    | <b>210</b>   | <b>402</b>   | <b>351</b>   |                                   |
| <b>Other countries:</b>   |   |              |              |              |              |                                   |
| Soviet Union.....   | 1,165                                   | 901          | 2,955        | 2,657        | 2,854        | 41-48                             |
| British India.....  | 994                                     | 213          | 813          | 993          | 887          | 47-62                             |
| Union of South Africa.....  | 9                                       | 3            | 258          | 621          | 655          | 30-51                             |
| Gold Coast.....   | 468                                     | 51           | 411          | 527          | 357          | 50+                               |
| Egypt.....  | 188                                     | (1)          | 133          | 183          | 170          | 30+                               |
| UNITED STATES.....  | 63                                      | 21           | 35           | 43           | 26           | 35+                               |
| All other.....  | 207                                     | 95           | 281          | 341          | 183          |                                   |
| <b>Total world production.....</b>                                    | <b>3,400</b>                            | <b>1,314</b> | <b>6,096</b> | <b>5,767</b> | <b>5,383</b> |                                   |
|   | Percent of total world production       |              |              |              |              |                                   |
| <b>Latin American countries listed above..</b>                        | <b>9.3</b>                              | <b>2.3</b>   | <b>4.1</b>   | <b>7.0</b>   | <b>6.5</b>   |                                   |

<sup>1</sup> Less than 500 tons.

<sup>2</sup> Approximate.

Source: U. S. Bureau of Mines, and *The Mineral Industry of the British Empire and Foreign Countries*.

Brazil's output of manganese ore prior to 1914 was less than 200,000 long tons a year; production rose to more than 500,000 long tons annually during the World War of 1914-18 because of the large demand in the United States, which had formerly received its supplies chiefly

from India and the Soviet Union. Since 1920, Brazilian production has fluctuated widely, influenced by the changing activity of the steel industry in the United States, by increased Soviet production, and by new production in the Union of South Africa and the Gold Coast. In recent years production in Brazil has averaged approximately 200,000 long tons a year. Cuban production of manganese ore has increased in the last 3 years because of the success of a new process for concentrating the ore; in 1937 and 1938, production averaged 125,000 long tons annually.

#### Latin American exports.

The principal countries exporting manganese have been British India, the Soviet Union, the Gold Coast, and the Union of South Africa; Brazil and Cuba rank next. Inasmuch as these two Latin American countries export practically their entire production, they account for a larger proportion of world trade than of world production of manganese. In 1929 they shipped 11 percent of all the manganese ore entering international trade; in 1932 their share declined to 4.5 percent, but in 1938 it increased to 12.2 percent. Brazil's exports ranged from 20,000 (1932) to 243,000 long tons (1937), and those from Cuba rose from 8,000 long tons in 1929 to 132,000 in 1937. Exports from these countries, however, were lower in 1938; those from Brazil declined to 135,000 long tons, and those from Cuba to 120,000. (See table 2.)

TABLE 2.—Manganese ore: Exports of principal countries of Latin America and of the world, in specified years, 1929 to 1938

| Country   | 1929                              | 1932    | 1936      | 1937      | 1938      |
|---|-----------------------------------|---------|-----------|-----------|-----------|
|   | Quantity (long tons—gross weight) |         |           |           |           |
| Brazil.....                                       | 288,683                           | 20,555  | 163,840   | 243,210   | 134,680   |
| Cuba.....   | 8,400                             | 18,874  | 36,053    | 131,934   | 119,998   |
| Total, Latin American countries listed above..... | 297,083                           | 39,429  | 199,893   | 375,144   | 254,678   |
| British India.....                                | 964,489                           | 301,252 | 742,347   | 1,151,834 | 648,740   |
| Soviet Union <sup>1</sup> .....                   | 885,755                           | 409,045 | 596,166   | 984,999   | 353,654   |
| Gold Coast.....                                   | 408,224                           | 50,689  | 411,024   | 527,036   | 324,207   |
| All other.....                                    | 133,125                           | 85,143  | 389,064   | 752,781   | 509,982   |
| Total <sup>2</sup> .....                          | 2,688,676                         | 885,558 | 2,338,494 | 3,791,794 | 2,091,161 |
|   | Percent of world exports          |         |           |           |           |
| Latin American countries listed above.....        | 11.0                              | 4.5     | 8.5       | 9.9       | 12.2      |

<sup>1</sup> 1929 is for year ended Sept. 30. Statistics for 1938 cover January–November only.

<sup>2</sup> Approximately 30 countries.

Source: Compiled from official trade statistics of the Latin American countries and from *The Mineral Industry of the British Empire and Foreign Countries*.

The United States has customarily been the most important market for Brazilian manganese ore, but the proportion taken has varied considerably. In 1937, nearly two-thirds of total Brazilian exports went to the United States; in 1938 less than one-third was shipped to this market. Other important customers for Brazilian manganese ore in recent years have been France, Belgium-Luxemburg, the Netherlands, and Germany. Exports to France and Belgium-Luxemburg declined in 1938 as compared with 1937, whereas those to Germany and the

Netherlands increased sharply (see table 3). All of the exports from Cuba are shipped to the United States (see table 4).<sup>1</sup>

TABLE 3.—*Manganese ore: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938*

| Country                                       | 1929    | 1932   | 1936    | 1937    | 1938    |
|---|---------|--------|---------|---------|---------|
| Quantity (long tons—gross weight)             |         |        |         |         |         |
| Total, all countries.....                     | 288,683 | 20,555 | 163,840 | 243,210 | 134,680 |
| UNITED STATES.....                            | 238,090 | 8,759  | 73,266  | 146,354 | 44,198  |
| Netherlands.....                              |         |        | 19,316  | 15,900  | 36,064  |
| Belgium-Luxemburg.....                        | 30,631  | 11,796 | 14,106  | 27,933  | 19,036  |
| Germany.....                                  |         |        |         | 1,432   | 17,549  |
| France.....                                   | 29,962  |        | 47,303  | 40,361  | 11,543  |
| All other.....                                |         |        | 9,829   | 11,299  | 6,800   |
| Percentage to the United States.....          | 79.0    | 42.6   | 44.7    | 60.2    | 32.8    |
| Value (1,000 milreis)                         |         |        |         |         |         |
| Total, all countries.....                     | 28,579  | 1,309  | 16,342  | 44,730  | 16,313  |
| Value (1,000 U. S. dollars)                   |         |        |         |         |         |
| Total, all countries.....                     | 3,375   | 93     | 1,068   | 3,033   | 946     |
| UNITED STATES.....                            | 2,657   | 44     | 467     | 1,762   | 305     |
| Netherlands.....                              |         |        | 131     | 180     | 293     |
| Belgium-Luxemburg.....                        | 358     | 49     | 96      | 374     | 122     |
| Germany.....                                  |         |        |         | 18      | 102     |
| France.....                                   | 360     |        | 306     | 547     | 78      |
| All other.....                                |         |        | 66      | 172     | 46      |
| Percentage to the United States.....          | 78.7    | 47.0   | 43.8    | 57.7    | 32.2    |
| Unit value per long ton of total exports..... | \$11.69 | \$4.53 | \$6.52  | \$12.55 | \$7.03  |

<sup>1</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=0.964196 long ton; 1 milreis=1929, \$0.1161; 1932, \$0.0712; 1936, \$0.0653; 1937, \$0.06826; 1938, \$0.0580.

TABLE 4.—*Manganese ore: Exports from CUBA to principal markets, in specified years, 1929 to 1938*

| Country                                       | 1929   | 1932   | 1936    | 1937    | 1938    |
|---|--------|--------|---------|---------|---------|
| Quantity (long tons—gross weight)             |        |        |         |         |         |
| Total, all countries <sup>1</sup> .....       | 8,400  | 18,874 | 26,053  | 121,934 | 119,968 |
| Value (1,000 U. S. dollars) <sup>2</sup>      |        |        |         |         |         |
| Total, all countries.....                     | 55     | 121    | 515     | 2,390   | 2,255   |
| Unit value per long ton of total exports..... | \$6.59 | \$6.39 | \$14.29 | \$19.12 | \$18.79 |

<sup>1</sup> All exports shipped to the United States except 10 tons, valued at \$73, exported to Puerto Rico in 1938.

<sup>2</sup> One Cuban peso=1 U. S. dollar (all years).

<sup>3</sup> See footnote 1, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to United States weights by applying the following factor: 1 kilo=0.00110499 long ton.

<sup>1</sup> Manganese ore from Cuba was accorded entry into the United States free of duty under the commercial convention concluded between the United States and Cuba on December 11, 1902. The free-entry status was continued by the trade agreement of August 24, 1934. Inasmuch as the United States duty on manganese ore imported from all other foreign countries (except Germany) is one-half cent per pound, the Cuban product receives a tariff preference in this market of \$10 per short ton. Cuban producers, therefore, may market their ore in the United States at prices higher than those that can be obtained elsewhere.

**Trade barriers, competitive conditions, and prices.**

Manganese ore enters the principal European markets free of duty, but in some countries, notably France, is subject upon importation to certain revenue taxes. Although free of duty, imports of manganese into many European countries have been subject to licenses and strict government regulation since the outbreak of the war in Europe. Manganese ore from Cuba enters the United States free of duty<sup>2</sup> and has the advantage of low transportation costs. Imports into the United States from other countries pay a duty of one-half cent a pound (\$11.20 per long ton) on manganese content.<sup>3</sup>

The market for manganese ore shows considerable variation from year to year. This is due principally to variation in the rate of steel production. But the practice followed by the consuming companies of maintaining stocks sufficient to cover operations for several months operates to check, at least for a time, the effectiveness of an increased demand when steel production is increasing, and may curtail demand almost entirely when steel production declines.

Published prices for manganese ore are probably higher, in most cases, than those actually paid, inasmuch as large consumers customarily buy on term contracts. In general, the price of manganese ore has fluctuated with activity in the steel mills, rising when production increased and falling when it declined. Prices were high in 1929 and low in 1931-33; they improved in 1934-35, declined in 1936, and were higher in 1937 than they had been in 1929. After 1937, prices again declined until the war began in September 1939; at that time they advanced sharply, and then were stable at the new level in the first three months of 1940. (See table 5.)

Prices of imported ore, ex duty, in the United States have been closely comparable to those in the United Kingdom during the decade 1929-38, although United States prices have generally been somewhat higher because of additional freight charges.<sup>4</sup> Prices of imported ore, metallurgical grade, duty-paid, in the United States have been appreciably higher than the prices of domestic ore of metallurgical grade at the mines. The duty on imported ore (one-half cent a pound, manganese content) in recent years has amounted to approximately 50 percent of the foreign invoice value. Domestic ore is subject to high freight charges because of the long distances from mines to mills.<sup>5</sup> These charges usually exceed the transportation costs for imported ore, but do not exceed the total of such costs and the United States duty (\$11.20 per long ton, manganese content).

<sup>1</sup> The commercial convention concluded between the United States and Cuba on December 11, 1902, and trade agreement of August 24, 1934.

<sup>2</sup> Tariff Act of 1930, par. 302(a), as modified by the trade agreement with Brazil, effective January 1, 1936. In this agreement the duty was reduced from 1 cent a pound.

<sup>3</sup> Freight charges on cargoes from South Africa, India, and the Soviet Union to the United States are higher than on cargoes from these countries to the United Kingdom.

<sup>4</sup> Freight charges from mines in Montana to mills in the Pittsburgh area amounted to \$11 per long ton on July 1, 1940.

TABLE 5.—Manganese ore: Prices of 50-percent ore, metallurgical grade, 1929-39 and January-March 1940<sup>1</sup>

[In U. S. dollars per long ton]

| Year           | Duty-paid at United States port | Ex duty United States port from South Africa, Brazil, India, and U. S. S. R. | In the United Kingdom <sup>2</sup> | Domestic at mines |
|----------------|---------------------------------|--|------------------------------------|-------------------|
| 1929.....      | 27                              | 16-18  | 14                                 | 22                |
| 1930.....      | 25                              | 14-16  | 13                                 | 18                |
| 1931.....      | 24                              | 11-15  | 10                                 | 13                |
| 1932.....      | 22                              | 11-12  | 7                                  | 12                |
| 1933.....      | 21                              | 9-11   | 8                                  | 17                |
| 1934.....      | 23                              | 11-12  | 11                                 | 18                |
| 1935.....      | 24                              | 13   | 11                                 | 15                |
| 1936.....      | 19                              | 12-13  | 13                                 | 16                |
| 1937.....      | 26                              | 22   | 22                                 | 23                |
| 1938.....      | 26                              | 19-21  | 21                                 | 22                |
| 1939.....      | 23                              | 16-19  | 15                                 | ( <sup>3</sup> )  |
| August.....    | ( <sup>4</sup> )                | 12-14  | 14                                 |                   |
| September..... |                                 | ( <sup>5</sup> )   | ( <sup>6</sup> )                   |                   |
| October.....   | 29                              | 16-25  | 14                                 |                   |
| November.....  | 29                              | 22-25  | 14                                 |                   |
| December.....  | 29                              | 22-25  | 16                                 | ( <sup>7</sup> )  |
| 1940:          |                                 |  |                                    |                   |
| January.....   | ( <sup>4</sup> )                | 22-24  | 13                                 |                   |
| February.....  |                                 | 23-24  | 12                                 |                   |
| March.....     |                                 | 23-24  | 11                                 |                   |

<sup>1</sup> Published prices are probably higher than those actually paid for much of the ore, inasmuch as large consumers customarily buy on term contracts.

<sup>2</sup> Since the declaration of war (September 1939), prices in the United Kingdom have been controlled by the Government.

<sup>3</sup> Not available.

<sup>4</sup> Not compiled monthly.

<sup>5</sup> Not quoted.

Source: *Engineering and Mining Journal*.

#### Effects of the war.

Since about 14 pounds of manganese are required to produce each ton of ordinary steel, the increased production of steel arising out of the war and the armament program in the United States will greatly increase the demand for manganese ore in this country. The United States imports most of its supplies of manganese.<sup>6</sup> With supplies from some of its principal customary sources diminished by war conditions and by difficulties of transport, and with its consumption increased by enlarged steel output, the United States will require increased quantities of manganese from other sources; these will doubtless include Brazil and Cuba, and deposits in the United States.

<sup>6</sup> United States imports of manganese ore in 1939 amounted to 319,000 long tons, of which Latin American countries supplied 71,000 long tons, or 22 percent. The principal sources of United States imports in 1939 were the Gold Coast (123,000 long tons), the Soviet Union (69,000), Cuba (52,000), British India (45,000), Brazil (19,000), and the Union of South Africa (11,000).



## MEATS

### Position of Latin America in world production.

Latin America is a large producer of beef and also an important producer of mutton, lamb, and pork. In most of the countries the meat produced is all or nearly all consumed within the country, a large part of it as unrefrigerated fresh meats or as jerked (salted and dried) beef and cured pork. Three of the countries, however, are large exporters of meats (predominantly frozen or chilled beef). By far the greatest production of beef and pork occurs in Argentina, Uruguay, and Brazil. Lamb and mutton are produced principally in these three countries and in Chile. The Argentine production of all types of meat, however, is larger than that of the other three countries combined.

*Beef.*—Beef is by far the most important type of meat produced in Latin America. In all Latin American countries together there are about 125 million head of cattle, or about 18 percent of the world total of approximately 700 million. Argentina, Uruguay, and Brazil have about 83 million head, or 66 percent of the Latin American total, and about 12 percent of the world total.

Most countries of the world either are importers of beef or are barely self-sufficient in beef because of a number of factors; these include (1) large populations relative to numbers of cattle; (2) the high cost of beef production in relation to that of many other foods; (3) the slaughter of cattle at advanced ages (often because of large numbers of oxen raised for work stock); and (4) small annual additions to the herds by reason of low-calving percentage<sup>1</sup>—a result of inefficient production methods. In addition, some countries, such as India, China, and to a lesser extent Brazil, have large numbers of water buffalo, which are included in reported or estimated cattle numbers, but which are unimportant in beef production.

In the United States, the largest producer and consumer of beef, and in the United Kingdom, the largest importing country, the average slaughter age of cattle (exclusive of calves), is about 2 to 2½ years. In Argentina, the chief exporting country, and in New Zealand, the average age ranges from 2¼ to 2½ years, as compared with about 3 years in Uruguay, Brazil, and Australia, the other important exporting countries.

Argentina, Brazil, and Uruguay together customarily account for about one-fourth of total world production of beef and veal. In 1936 the slaughter of cattle (exclusive of calves) in the principal producing countries of the world totaled about 48 million head, not including the farm and ranch kill which in many of them is known to be large. About 27.5 percent of this estimated total occurred in Argentina, Brazil, and Uruguay; 30.5 percent took place in the United States, and less than 6 percent in Australia and New Zealand (see table 1). In 1937 the three Latin American countries produced 28 percent of the total, and the United States accounted for 27 percent. Other

<sup>1</sup> The number of calves raised per 100 cows.

important producing countries have been Germany, France, the United Kingdom, and Australia. Among the producing countries of the world, Argentina ranks second, and Brazil fourth. The three Latin American countries and Australia,<sup>2</sup> however, are the leading exporters of beef and veal. The other countries named above consume almost all of the beef they produce, and some are substantial importers.

TABLE 1.—*Beef and veal: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1937*

| Country  | 1929                               | 1932   | 1936   | 1937   |
|--|------------------------------------|--------|--------|--------|
|  | Quantity (million pounds)          |        |        |        |
| Argentina.....   | 3,560                              | 3,293  | 3,821  | 4,130  |
| Brazil <sup>1</sup> .....                                      | 2,400                              | 1,920  | 2,520  | 2,340  |
| Uruguay.....   | 571                                | 394    | 444    | 486    |
| Total production of Latin American countries listed above..... | 6,531                              | 5,607  | 6,785  | 6,956  |
| UNITED STATES.....   | 5,871                              | 5,760  | 7,438  | 6,769  |
| Germany <sup>1</sup> .....                                     | 3,668                              | 3,616  | 3,234  | 3,726  |
| France.....  | 2,002                              | 1,803  | 2,014  | 1,915  |
| United Kingdom.....  | 1,489                              | 1,271  | 1,557  | 1,517  |
| Australia.....   | 833                                | 775    | 1,098  | 1,235  |
| Canada.....  | 694                                | 592    | 671    | 658    |
| Italy.....   | 723                                | 653    | 650    | 650    |
| New Zealand.....   | 231                                | 255    | 329    | 380    |
| Union of South Africa.....                                     | 411                                | 294    | 308    | 321    |
| Belgium.....   | 262                                | 283    | 302    | 280    |
| Netherlands.....   | 328                                | 291    | 305    | 252    |
| Total production of all countries listed above.....            | 23,063                             | 21,140 | 24,691 | 24,659 |
|  | Percent of total production sh own |        |        |        |
| Latin American countries listed above.....                     | 28.3                               | 26.5   | 27.5   | 28.2   |

<sup>1</sup> Based on total slaughter and estimated average carcass weight of 600 pounds.

<sup>2</sup> Including Poland, Czechoslovakia, and Austria.

Source: Imperial Economic Committee, *Meat, 1936-38*; United States data from U. S. Department of Agriculture, *Marketing Statistics and Related Data*.

*Mutton and lamb.*—The sheep and lambs in Latin America number about 100 million, or about 15 percent of the estimated world total of 685 million. Argentina has about 40 percent of the Latin American total, and approximately the same percentage is distributed between Uruguay, Brazil, Peru, and Chile, in the order named. Except for four countries—Argentina, Uruguay, Chile, and Brazil—practically the entire Latin American production of lamb and mutton is consumed in the producing countries. Imports into the central and northern regions of Chile offset in part exports from the southern area. As producers of mutton and lamb, Argentina, Chile, and Uruguay accounted for 12 percent of the world total in 1937. The most important producing countries in that year were the United States, Australia, New Zealand, and the United Kingdom; Argentina ranked fifth (see table 2).

<sup>3</sup> Argentina, Uruguay, and Brazil dominate the world export trade in beef, being much more important than Australia.

TABLE 2.—Mutton and lamb: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1937

| Country  | 1929  | 1932  | 1936  | 1937  |
|--|-------|-------|-------|-------|
| Quantity (million pounds)                                      |       |       |       |       |
| Argentina.....   | 263   | 272   | 269   | 268   |
| Chile <sup>1</sup> .....                                       | 108   | 103   | 99    | 101   |
| Uruguay <sup>1</sup> .....                                     | 90    | 34    | 39    | 45    |
| Total production of Latin American countries listed above..... | 461   | 409   | 407   | 412   |
| UNITED STATES.....   | 682   | 884   | 866   | 864   |
| Australia.....   | 696   | 688   | 675   | 697   |
| New Zealand.....   | 462   | 599   | 545   | 595   |
| United Kingdom.....  | 587   | 624   | 578   | 567   |
| France.....  | 219   | 215   | 212   | 225   |
| Canada.....  | 66    | 73    | 66    | 67    |
| Total production of all countries listed above.....            | 3,082 | 3,492 | 3,349 | 3,427 |
| Percent of total production shown                              |       |       |       |       |
| Latin American countries listed above.....                     | 15.0  | 11.7  | 12.2  | 12.0  |

<sup>1</sup> Estimated on basis of approximate relationship between reported slaughter in Argentina, Uruguay, and Chile, and production in Argentina.

Source: Imperial Economic Committee, *Meat*, 1936-38; United States data from *Marketing Statistics and Related Data*.

*Pork*.—The Latin American countries have about 40 million head of hogs, or about 14 percent of an estimated world total of about 295 million. Despite this substantial percentage, Latin American countries in relation to the world total are not important producers of pork, because of the size of their hogs and the age at which such hogs are slaughtered. In 1937 and 1938, Brazil and Argentina accounted for only 3 percent of world production. Approximately 60 percent of the hogs in Latin America are in Brazil and about 10 percent in Argentina. Nearly all the other Latin American countries consume more pork than they produce. Principal producing countries have been Germany,<sup>3</sup> the United States, France, the United Kingdom, Canada, and Denmark (see table 3).

TABLE 3.—Pork: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1937

| Country   | 1929   | 1932   | 1936   | 1937   |
|---|--------|--------|--------|--------|
| Quantity (million pounds)                           |        |        |        |        |
| Brazil <sup>1</sup> .....                           | 315    | 267    | 415    | 420    |
| Argentina <sup>1</sup> .....                        | 140    | 150    | 215    | 241    |
| Total, above Latin American countries.....          | 455    | 437    | 630    | 661    |
| Germany <sup>2</sup> .....                          | 7,596  | 7,644  | 8,781  | 8,725  |
| UNITED STATES.....                                  | 8,833  | 8,915  | 7,535  | 6,937  |
| France.....   | 1,176  | 1,392  | 1,525  | 1,492  |
| United Kingdom.....                                 | 722    | 787    | 956    | 915    |
| Canada.....   | 816    | 943    | 941    | 898    |
| Denmark.....  | 727    | 1,200  | 667    | 699    |
| Belgium.....  | 275    | 338    | 358    | 358    |
| Australia.....                                      | 110    | 122    | 149    | 169    |
| Sweden.....   | 81     | 100    | 133    | 145    |
| New Zealand.....                                    | 58     | 61     | 107    | 98     |
| Total production of all countries listed above..... | 20,849 | 21,939 | 21,782 | 21,097 |
| Percent of total production shown                   |        |        |        |        |
| Latin American countries listed above.....          | 2.3    | 2.0    | 2.9    | 3.1    |

<sup>1</sup> Based on number slaughtered and estimated average dressed weight of 150 pounds.

<sup>2</sup> Partially estimated. Including Austria, Czechoslovakia, and Poland.

Source: Imperial Economic Committee, *Meat*, 1936-38; United States data from *Marketing Statistics and Related Data*.

<sup>3</sup> Including Austria, Czechoslovakia, and Poland.

**Latin American exports.**

*Beef.*—Beef in its various forms predominates in both production and exports of meats in the Latin American countries. Exports in the form of live cattle, principally of stockers and feeders from Mexico to the United States, have attained a considerable volume in recent years. There is an appreciable movement of slaughter stock from Paraguay into Bolivia, and from Argentina to Bolivia and Chile. Some interchange of slaughter stock takes place between Argentina and Uruguay, and between Uruguay and Brazil.

For Latin America as a whole, however, the export trade in beef consists chiefly of chilled, frozen, and canned beef. Argentina, Uruguay, and Brazil dominate the world export trade in these products; other principal exporting countries are Australia and New Zealand. The United States was formerly important in this trade, but its exports are now insignificant. In 1929, the three Latin American countries supplied about 86 percent of all the chilled and frozen beef entering international trade from the five principal exporting countries; Argentina alone supplied 65 percent, Uruguay 11 percent, and Brazil 10 percent, as compared with 12 percent from Australia and 2 percent from New Zealand; the total in that year was about 1,610 million pounds. In 1938, total shipments from the five principal exporting countries amounted to approximately 1,620 million pounds. Exports from Argentina and Uruguay in 1938 were slightly smaller, and those from Brazil were considerably smaller, than in 1929. The proportions of the total supplied by these countries in that year declined to about 61 percent for Argentina, 9 percent for Uruguay, and 6 percent for Brazil. Because of British import restrictions imposed in the interest of Empire producers, the movement from Australia and New Zealand increased in 1938 to about 18 percent and 6 percent, respectively, of the larger five-country total. Exports of frozen and chilled beef from the principal exporting countries are shown in table 4; exports from Argentina, Uruguay, and Brazil to principal markets, in specified years, 1929 to 1938, are shown in tables 9 to 13 at the end of this section.<sup>4</sup>

TABLE 4.—*Beef, chilled and frozen: Exports from principal exporting countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country   | 1929  | 1932  | 1936  | 1937  | 1938  |
|---|-------|-------|-------|-------|-------|
| Quantity (million pounds)                                   |       |       |       |       |       |
| Argentina.....  | 1,058 | 898   | 876   | 974   | 981   |
| Brazil.....   | 158   | 88    | 118   | 140   | 100   |
| Uruguay.....  | 169   | 144   | 91    | 137   | 146   |
| Total exports of Latin American countries listed above..... | 1,385 | 1,130 | 1,085 | 1,251 | 1,227 |
| Australia <sup>1</sup> .....                                | 189   | 166   | 197   | 234   | 204   |
| New Zealand.....  | 37    | 50    | 82    | 95    | 101   |
| Total exports of above countries.....                       | 1,611 | 1,346 | 1,364 | 1,580 | 1,532 |
| Percent of total exports shown                              |       |       |       |       |       |
| Latin American countries listed above.....                  | 86.0  | 84.0  | 79.5  | 79.2  | 75.6  |

<sup>1</sup> Total of all meats, frozen or chilled, principally beef.

<sup>2</sup> Fiscal years ended June 30. Statistics exclude veal.

Source: Compiled by the United States Tariff Commission from official trade statistics of the respective countries.

<sup>4</sup> Exports of veal are not shown separately in the statistics of most Latin American countries. Such exports, however, are known to be small and are probably included in the statistics of exports of beef.

*Mutton and lamb.*—Only eight countries in the world customarily export as much as 1 million pounds of mutton and lamb a year. Of total world exports amounting to approximately 700 million pounds, more than 80 percent is supplied by Australia and New Zealand, where there are twice as many sheep as in Argentina, Uruguay, and Brazil. The three latter countries supply about 18 percent of the world total. About 16 percent is supplied by Argentina alone; exports from Brazil are very small. Exports of mutton from the principal exporting countries are shown in table 5; exports from Argentina and Uruguay to principal markets, in specified years, 1929 to 1938, are shown in tables 14 and 15.

*Pork.*—Among the Latin American countries, only Argentina exports significant quantities of pork products. In 1938, shipments of all pork products and lard from Argentina amounted to more than 3 percent of the total from 13 principal exporting countries. In Brazil, where there are many more hogs and also a much larger population than in Argentina, exports were less than 1 percent of this total, and in Uruguay very much less than 1 percent. The exports from Argentina, Brazil, and Uruguay move chiefly to Great Britain, but in the last few years a part has come to the United States. Exports of hog products from the principal exporting countries are shown in table 6; exports of pork, frozen and chilled, from Argentina to principal markets, in specified years, 1929 to 1938, are shown in table 16.

TABLE 5.—*Mutton and lamb, chilled and frozen: Exports from principal exporting countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country   | 1929 | 1932 | 1936 | 1937 | 1938 |
|---|------|------|------|------|------|
| Quantity (million pounds)                                   |      |      |      |      |      |
| Argentina.....  | 178  | 157  | 110  | 114  | 105  |
| Uruguay.....  | 49   | 14   | 15   | 18   | 19   |
| Total exports of Latin American countries listed above..... | 227  | 171  | 125  | 132  | 124  |
| New Zealand.....  | 306  | 431  | 391  | 408  | 407  |
| Australia <sup>1</sup> .....                                | 85   | 165  | 178  | 208  | 202  |
| Total exports of above countries.....                       | 618  | 767  | 694  | 748  | 733  |
| Percent of total exports shown                              |      |      |      |      |      |
| Latin American countries listed above.....                  | 36.7 | 22.3 | 18.0 | 17.6 | 16.9 |

<sup>1</sup> Fiscal years ended June 30.

Source: Compiled by the United States Tariff Commission from official trade statistics of the respective countries.

*Canned beef.*—Argentina, Uruguay, Brazil, Australia, and New Zealand supply nearly all the canned meats (other than relatively high-priced meat specialties) which enter the world export trade.<sup>6</sup> Throughout the period 1929-38, the three Latin American countries accounted for more than 90 percent of total exports from the five countries. In 1937, total exports from these five countries amounted to about 315 million pounds, as compared with 241 million pounds in 1929, 158 million pounds in 1932, and 285 million pounds in 1938. Nearly all the increase in 1937-38 was accounted for by the South

<sup>6</sup> The United States is not included since the exports of canned meats from this country consist chiefly of osanad pork.

American countries. In 1929, approximately 63 percent of the total was exported from Argentina, about 30 percent from Uruguay, and 3 percent from Brazil, as compared with 4 percent from Australasia. Despite an increase in exports from Argentina and Uruguay, the relative importance of exports from Argentina declined in 1938 to 58 percent, and from Uruguay to 17 percent. In the same period exports from Brazil increased over sixfold and amounted in 1938 to 19 percent of the five-country total. In that year, Australasia supplied about 6 percent of the total from the five principal beef-producing countries. Exports of canned meat from the principal exporting countries are shown in table 7; exports from Argentina, Brazil, and Uruguay to principal markets, in specified years, 1929 to 1938, are shown in tables 17 to 19.

TABLE 6.—*Hog products: Exports from principal exporting countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country   | 1929  | 1932             | 1936  | 1937  | 1938  |
|---|-------|------------------|-------|-------|-------|
| Quantity (million pounds)                                   |       |                  |       |       |       |
| Argentina.....  | 13    | 25               | 66    | 76    | 48    |
| Brazil.....   | 2     | ( <sup>1</sup> ) | 20    | 3     | 4     |
| Total exports of Latin American countries listed above..... | 15    | 25               | 86    | 79    | 52    |
| Denmark.....  | 596   | 923              | 421   | 436   | 423   |
| UNITED STATES.....  | 1,208 | 679              | 187   | 206   | 308   |
| Canada.....   | 41    | 51               | 204   | 249   | 195   |
| Poland.....   | 22    | 138              | 109   | 131   | 131   |
| Netherlands.....  | 203   | 238              | 93    | 94    | 77    |
| Ireland.....  | 96    | 61               | 82    | 73    | 77    |
| New Zealand.....  | 20    | 16               | 70    | 69    | 61    |
| Hungary.....  | 14    | 8                | 71    | 54    | 53    |
| Australia <sup>2</sup> .....                                | 3     | 12               | 28    | 33    | 40    |
| Yugoslavia.....   | 12    | 11               | 39    | 41    | 34    |
| Sweden.....   | 45    | 50               | 30    | 32    | 31    |
| Total exports of countries listed above.....                | 2,275 | 2,232            | 1,420 | 1,497 | 1,482 |
| Percent of total exports shown                              |       |                  |       |       |       |
| Latin American countries listed above.....                  | 0.7   | 1.1              | 6.1   | 5.3   | 3.5   |

<sup>1</sup> Comprise pork, fresh, canned, pickled, smoked, bacon, Cumberland sides, Wiltshire sides, hams, and shoulders, lard, lard compound, neutral lard, hog casings, lard oil, heads, and feet.

<sup>2</sup> Less than 500,000 pounds.

<sup>3</sup> Fiscal year ended June 30.

Source: U. S. Department of Agriculture, *Agricultural Statistics*.

TABLE 7.—*Canned meats: Exports from principal exporting countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country   | 1929 | 1932 | 1936 | 1937 | 1938 |
|---|------|------|------|------|------|
| Quantity (1,000 pounds)                                     |      |      |      |      |      |
| Argentina.....  | 152  | 97   | 160  | 168  | 164  |
| Uruguay.....  | 72   | 45   | 70   | 76   | 49   |
| Brazil.....   | 8    | 7    | 44   | 54   | 54   |
| Total exports of Latin American countries listed above..... | 232  | 149  | 274  | 298  | 267  |
| Australia <sup>1</sup> .....                                | 5    | 5    | 6    | 9    | 12   |
| New Zealand.....  | 4    | 4    | 10   | 8    | 6    |
| Total exports of countries listed above.....                | 241  | 158  | 290  | 315  | 285  |
| Percent of total exports shown                              |      |      |      |      |      |
| Latin American countries listed above.....                  | 96.3 | 94.3 | 94.5 | 94.6 | 93.7 |

<sup>1</sup> Fiscal years ended June 30.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina, Brazil, and Uruguay.

**Trade barriers, competitive conditions, and prices.**

After 1918 the livestock in western Europe, depleted by the war, was increased and restrictions on imports of meats into the meat-deficit countries of western Europe (except the United Kingdom) were increased also. A sanitary embargo against entries from South America of other than cured meats was imposed by the United States, effective January 1, 1927, as a protection against the hoof-and-mouth disease; this embargo is still in effect. Soon after the depression began in 1929, high duties were levied by important importing countries of western Europe, and quotas, special taxes, import licensing systems, and exchange controls were imposed. In January 1933, the United Kingdom, by far the principal market, imposed quotas which brought about a considerable reduction in exports from South America of chilled and frozen beef, of frozen mutton and lamb, and, to a lesser extent, of frozen and cured pork products. These restrictions were followed by the imposition of a duty of three-fourths pence per pound on entries of chilled beef from non-Empire sources, of two-thirds pence on frozen beef,<sup>6</sup> and of 20 percent on most canned beef, and by the payment of subsidies to producers of livestock in the United Kingdom. The duty on fresh and frozen beef was raised from 3 to 6 cents a pound by the United States, effective June 18, 1930,<sup>7</sup> but because of the sanitary embargo this increase did not affect imports from South America. The rate on canned beef was also increased to 6 cents per pound but not less than 20 percent ad valorem.<sup>8</sup> This rate was reduced to 3 cents a pound but not less than 20 percent ad valorem in the trade agreement with Argentina, effective November 15, 1941.

In and subsequent to 1936, import restrictions of certain European countries were relaxed somewhat, and barter arrangements were made by Argentina, Uruguay, and Brazil with several European countries. These arrangements eased the export situation for the meat-exporting countries; conditions showed a marked improvement in 1937, and again in 1939, after some decline in 1938. The war in Europe then brought new export problems.

In the period 1929-39, prices of beef, lamb, and pork were affected by the changing economic conditions throughout the world, and by the increased severity of trade restrictions. In general, prices declined during the years 1929-32 and recovered somewhat thereafter. (See table 4.) In the United States, prices (except for those in 1929-30) were highest in the years affected by drought. Prices for beef and lamb reached a peak in 1937, and those for pork in the years 1935-37; after 1937 they declined. With the outbreak of war in Europe in September 1939, prices of meat in the United States rose sharply, but declined in subsequent months to levels below those of the previous year. In the first quarter of 1940 prices were relatively stable, except for the price of lamb which rose from 15.7 cents per pound in January to 18.4 cents in March. (See table 8.)

Except for beef in the form of live cattle entered from Mexico, the United States, as a result of the sanitary embargo, has ceased to be a market for other than cured or canned Latin American meats since January 1, 1927. Entries into the United States from South America in recent years, therefore, have consisted largely of canned

<sup>6</sup> In terms of U. S. currency, these duties are equivalent to about 0.6 cent.

<sup>7</sup> Tariff Act of 1930, par. 701.

<sup>8</sup> Tariff Act of 1930, par. 706.

beef, imports of which in 1936-38 averaged about 85 million pounds a year. There has been no commercial production of similar canned beef in this country since 1927 and civilian consumption in the United States has been supplied by imports, practically all of which come from Argentina, Uruguay, and Brazil.

TABLE 8.—Beef, lamb, and pork: United Kingdom and United States wholesale prices, 1929-39, and August 1939-March 1940  
[In cents per pound]

| Year or month  | Beef                        |                         |                            | Lamb                        |                            | Pork                        |                                      |
|----------------|-----------------------------|-------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|--------------------------------------|
|                | United Kingdom <sup>1</sup> |                         | United States <sup>2</sup> | United Kingdom <sup>1</sup> | United States <sup>2</sup> | United Kingdom <sup>1</sup> | United States <sup>2</sup>           |
|                | Argentine <sup>3</sup>      | Australian <sup>4</sup> | Good steer beef, sides     | New Zealand first quality   | Carcasses, good            | Fresh, first quality        | Composite price of cuts <sup>5</sup> |
| 1929.....      | 12.5                        | 10.5                    | 21.6                       | 17.8                        | 27.3                       | 24.0                        | 22.6                                 |
| 1930.....      | 12.2                        | 10.4                    | 18.2                       | 16.2                        | 20.8                       | 24.8                        | 22.1                                 |
| 1931.....      | 9.4                         | 6.8                     | 14.0                       | 12.3                        | 16.9                       | 17.9                        | 17.2                                 |
| 1932.....      | 7.2                         | 5.3                     | 12.1                       | 8.5                         | 14.2                       | 11.0                        | 11.3                                 |
| 1933.....      | 8.5                         | 5.7                     | 9.0                        | 10.8                        | 13.4                       | 14.9                        | 10.8                                 |
| 1934.....      | 10.1                        | 6.7                     | 11.5                       | 14.5                        | 15.3                       | 13.7                        | 14.7                                 |
| 1935.....      | 9.4                         | 6.9                     | 16.5                       | 13.9                        | 16.8                       | 16.7                        | 22.4                                 |
| 1936.....      | 9.5                         | 7.0                     | 13.8                       | 14.7                        | 18.0                       | 17.6                        | 21.0                                 |
| 1937.....      | 11.1                        | 8.4                     | 18.2                       | 14.8                        | 18.8                       | 18.7                        | 21.4                                 |
| 1938.....      | 11.2                        | 8.4                     | 15.3                       | 14.7                        | 17.1                       | 19.2                        | 18.6                                 |
| 1939.....      | 12.7                        | (?)                     | 15.9                       | (?)                         | 17.9                       | 15.7                        | 16.1                                 |
| 1939-40:       |                             |                         |                            |                             |                            |                             |                                      |
| August.....    | 12.7                        | (?)                     | 15.8                       | (?)                         | 17.2                       | 14.6                        | 15.5                                 |
| September..... | 11.9                        |                         | 16.6                       |                             | 18.6                       | 14.2                        | 18.6                                 |
| October.....   |                             |                         | 15.4                       |                             | 16.3                       | (?)                         | 16.4                                 |
| November.....  |                             |                         | 15.1                       |                             | 16.6                       |                             | 14.8                                 |
| December.....  |                             |                         | 14.6                       |                             | 15.6                       |                             | 13.6                                 |
| January.....   |                             |                         | 15.1                       |                             | 15.7                       |                             | 13.5                                 |
| February.....  |                             |                         | 14.8                       |                             | 16.9                       |                             | 13.6                                 |
| March.....     |                             |                         | 15.1                       |                             | 18.4                       |                             | 13.1                                 |

<sup>1</sup> At London, Birmingham, Manchester, and Leeds.

<sup>2</sup> At New York.

<sup>3</sup> Chilled beef, sides, first quality.

<sup>4</sup> Frozen beef, sides, first quality.

<sup>5</sup> Composite price of smoked ham, picnics, bacon, fresh loins and lard, combined in proportion to yield 100 pounds, live weight.

<sup>6</sup> Eight months.

<sup>7</sup> Not available.

Source: Imperial Economic Committee, *Meat* (1929-37), Ministry of Agriculture and Fisheries, and *Agricultural Statistics* (1938), both series being from Agricultural Marketing Report. These data are not available for 1939-40, when prices (not entirely comparable) are from *The Statist*. United States meat prices from *Market Statistics and Related Data* (Bureau of Agricultural Economics), U. S. Department of Agriculture, and current data.

Imports of fresh, chilled, or frozen beef (principally from Canada) into the United States have been unimportant in recent years, but entries of live cattle at reduced duties, subject to tariff quotas, have increased.<sup>9</sup> The carcass beef equivalent of entries of live cattle (other

<sup>9</sup> United States tariff rates on live cattle were reduced in both the first and second trade agreements with Canada, effective January 1, 1936, and January 1, 1939, respectively. The reduced rates under the 1939 agreement are restricted to imports entering under tariff quotas as follows:

| Classification                                 | Rates           |                 | Tariff quota in any calendar year |
|--|-----------------|-----------------|-----------------------------------|
|  | Act of 1930     | Agreement       |                                   |
|  | Cents per pound | Cents per pound |                                   |
| Cattle weighing less than 200 pounds each..... | 2½              | 1½              | 100,000 head.                     |
| Cattle weighing 700 pounds or more each:       |                 |                 |                                   |
| Cows imported for dairy purposes.....          | 3               | 1½              | No quota.                         |
| Other.....                                     | 3               | 1½              | 225,000 head.                     |



than veal calves and dairy cows) in 1936-38 averaged about 124 million pounds a year. Of this, approximately 60 percent came from Canada and 40 percent from Mexico; none came from South America. The domestic production of carcass beef in 1936-38 averaged 7,023 million pounds. United States imports of lamb and pork from all countries were small even when the domestic production was greatly reduced as a result of the droughts of 1934 and 1936. Imports of pork specialties from Europe, which have entered in considerable quantities during the last few years, have been practically eliminated as a result of the war.

#### **Effects of the war.**

Prior to the outbreak of war (September 1939) less than 10 percent of the meat consumed in Europe originated in the Western Hemisphere. The United Kingdom was the only country which depended on imports for a substantial proportion of its supplies—55 percent. Germany imported less than 5 percent of its requirements and France, about 2 percent. In 1937, 22 percent of the United Kingdom's supply came from the Western Hemisphere, Germany obtained 2 percent of its consumption from this area, and France 1 percent. The United Kingdom, Germany, and France are the principal meat-importing, producing, and consuming countries of Europe. Other European countries as a whole produce substantially as much meat as they consume.

The war has thus far stimulated somewhat the movement of meats from the exporting countries of Latin America, despite the closing of the German market. Considerably before hostilities began, an order for about 45 million pounds of canned beef had been placed by the United Kingdom with Argentina, Uruguay, and Brazil, to provide a military reserve in case of war. Further large orders were placed to maintain that reserve. In October 1939, an agreement was reached between the British and Argentine Governments for the purchase by the United Kingdom of 170,000 tons of beef and 30,000 tons of mutton, delivery to be effected within 16 weeks after the signing of the agreement.

The increased consumption of meat by the armed forces of the United Nations is likely to stimulate heavier exports from Latin America than occurred in 1936-38, provided such exports are not restricted by a shortage of shipping. A much larger proportion of the exports of beef, however, will probably be sent as canned or frozen rather than chilled beef to conserve shipping and storage space and to permit the accumulation of substantial stocks.

TABLE 9.—*Beef, chilled: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929     | 1932     | 1936     | 1937     | 1938     |
|--|----------|----------|----------|----------|----------|
| Quantity (1,000 pounds)                                  |          |          |          |          |          |
| Total, all countries.....                                | 789, 159 | 817, 100 | 788, 085 | 770, 466 | 754, 912 |
| United Kingdom.....                                      | 788, 231 | 816, 165 | 787, 402 | 769, 584 | 754, 707 |
| All other.....   | 928      | 935      | 683      | 882      | 205      |
| Value (1,000 paper pesos)                                |          |          |          |          |          |
| Total, all countries.....                                | 159, 360 | 125, 651 | 169, 464 | 170, 419 | 166, 693 |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |          |          |          |          |          |
| Total, all countries.....                                | 66, 704  | 32, 309  | 49, 449  | 52, 591  | 49, 558  |
| United Kingdom.....                                      | 66, 625  | 32, 273  | 49, 408  | 52, 534  | 49, 543  |
| All other.....   | 79       | 36       | 41       | 57       | 15       |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.085  | \$0.040  | \$0.063  | \$0.068  | \$0.096  |

<sup>1</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 10.—*Beef, frozen: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929     | 1932    | 1936    | 1937     | 1938     |
|--|----------|---------|---------|----------|----------|
| Quantity (1,000 pounds)                                  |          |         |         |          |          |
| Total, all countries.....                                | 268, 324 | 80, 821 | 87, 415 | 203, 072 | 226, 481 |
| Germany.....   | 58, 894  | 1, 825  | 43, 499 | 102, 578 | 108, 332 |
| Italy.....   | 16, 939  | 4, 359  | 5, 335  | 32, 106  | 30, 838  |
| United Kingdom.....                                      | 146, 147 | 49, 379 | 19, 180 | 19, 409  | 27, 002  |
| Spain.....   | (1)      | 529     | 573     | 7, 271   | 20, 697  |
| France.....  | 4, 563   | 16, 601 | 8, 033  | 13, 902  | 16, 993  |
| Belgium.....   | 22, 344  | 2, 048  | 4, 632  | 12, 943  | 7, 937   |
| Netherlands.....   | 9, 134   | 4, 727  | 1, 030  | 5, 304   | 2, 729   |
| All other.....   | 10, 253  | 1, 343  | 5, 133  | 9, 559   | 11, 933  |
| Value (1,000 paper pesos)                                |          |         |         |          |          |
| Total, all countries.....                                | 47, 917  | 11, 319 | 9, 366  | 28, 683  | 33, 301  |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |          |         |         |          |          |
| Total, all countries.....                                | 20, 057  | 2, 910  | 2, 733  | 8, 852   | 9, 900   |
| Germany.....   | 4, 398   | 67      | 1, 375  | 4, 440   | 4, 729   |
| Italy.....   | 1, 271   | 155     | 165     | 1, 468   | 1, 353   |
| United Kingdom.....                                      | 10, 925  | 1, 788  | 395     | 817      | 1, 173   |
| Spain.....   | (1)      | 18      | 18      | 342      | 913      |
| France.....  | 343      | 591     | 247     | 572      | 743      |
| Belgium.....   | 1, 668   | 74      | 142     | 352      | 347      |
| Netherlands.....   | 685      | 170     | 32      | 241      | 119      |
| All other.....   | 767      | 47      | 159     | 420      | 523      |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.075  | \$0.036 | \$0.031 | \$0.044  | \$0.044  |

<sup>1</sup> Not reported separately.

<sup>2</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>3</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 11.—Beef, chilled: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 81,848  | 58,605  | 67,487  | 69,989  | 55,858  |
| United Kingdom.....                                      | 81,204  | 58,095  | 57,117  | 69,989  | 55,858  |
| All other.....   | 644     | 510     | 370     |         |         |
| Value (1,000 pesos)                                      |         |         |         |         |         |
| Total, all countries.....                                | 6,294   | 4,592   | 4,297   | 5,260   | 5,174   |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 6,207   | 2,161   | 2,251   | 2,943   | 2,948   |
| United Kingdom.....                                      | 6,158   | 2,142   | 2,237   | 2,943   | 2,948   |
| All other.....   | 49      | 19      | 14      |         |         |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.076 | \$0.037 | \$0.039 | \$0.042 | \$0.053 |

<sup>1</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso =1928, \$0.8863; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

TABLE 12.—Beef, frozen: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 87,299  | 85,796  | 33,873  | 67,171  | 89,596  |
| Germany.....   | 8,932   | 263     | 12,059  | 20,992  | 29,791  |
| France.....  | 30,395  | 33,233  | 5,720   | 10,549  | 23,675  |
| United Kingdom.....                                      | 16,642  | 20,978  | 8,014   | 14,493  | 14,534  |
| Italy.....   | 20,242  | 20,795  | 354     | 10,390  | 12,035  |
| Belgium.....   | 4,486   | 1,830   | 4,456   | 6,384   | 4,711   |
| Spain.....   | 560     | 459     | 121     | 1,905   | 2,783   |
| All other.....   | 6,042   | 8,240   | 3,149   | 2,558   | 2,087   |
| Value (1,000 pesos)                                      |         |         |         |         |         |
| Total, all countries.....                                | 6,524   | 5,996   | 2,015   | 3,975   | 6,535   |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 6,435   | 2,822   | 1,056   | 2,224   | 3,723   |
| Germany.....   | 650     | 10      | 354     | 745     | 1,324   |
| France.....  | 2,274   | 1,069   | 165     | 339     | 880     |
| United Kingdom.....                                      | 1,206   | 715     | 299     | 492     | 718     |
| Italy.....   | 1,493   | 656     | 15      | 286     | 428     |
| Belgium.....   | 327     | 57      | 131     | 219     | 181     |
| Spain.....   | 43      | 13      | 4       | 48      | 102     |
| All other.....   | 442     | 302     | 88      | 95      | 90      |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.074 | \$0.033 | \$0.031 | \$0.033 | \$0.042 |

<sup>1</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso =1 1929, \$0.9663; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

TABLE 13.—Meats, frozen and chilled:<sup>1</sup> Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937 <sup>2</sup>   | 1938 <sup>3</sup> |
|--|---------|---------|---------|---------------------|-------------------|
| Quantity (1,000 pounds)                                  |         |         |         |                     |                   |
| Total, all countries.....                                | 174,916 | 101,378 | 131,989 | 155,647             | 99,571            |
| United Kingdom.....                                      | 51,528  | 60,994  | 63,138  | 55,734              | }                 |
| France.....  | 11,804  | 3,270   | 4,396   | 15,083              |                   |
| Italy.....   | 33,816  | 14,070  | 43,009  | 10,114              |                   |
| Uruguay.....   | 36,114  | 18,909  | 12,731  | 9,943               |                   |
| Belgium.....   | 19,021  | 2,930   | 4,738   | 5,467               |                   |
| Germany.....   | 14,386  | 62      | 3,192   | 678                 |                   |
| All other.....   | 8,247   | 1,143   | 785     | <sup>4</sup> 42,756 |                   |
| Value (1,000 paper milreis)                              |         |         |         |                     |                   |
| Total, all countries.....                                | 111,343 | 61,046  | 77,374  | 92,747              | 88,094            |
| Value (1,000 U. S. dollars)                              |         |         |         |                     |                   |
| Total, all countries.....                                | 13,150  | 4,346   | 6,038   | 7,266               | 5,109             |
| United Kingdom.....                                      | 4,145   | 2,529   | 2,433   | 2,592               | }                 |
| France.....  | 905     | 133     | 169     | 631                 |                   |
| Italy.....   | 2,594   | 593     | 1,618   | 461                 |                   |
| Uruguay.....   | 2,470   | 938     | 486     | 438                 |                   |
| Belgium.....   | 1,400   | 108     | 183     | 246                 |                   |
| Germany.....   | 1,010   | 3       | 137     | 38                  |                   |
| All other.....   | 626     | 42      | 32      | <sup>5</sup> 1,925  |                   |
| Unit value per pound of total exports <sup>6</sup> ..... | \$0.075 | \$0.043 | \$0.038 | \$0.045             |                   |

<sup>1</sup> Includes mutton, beef, pork, tongues, etc. (principally beef).

<sup>2</sup> Detail by markets in 1937 represents exports of frozen and chilled beef only, the total of which amounted to 139,775,000 pounds valued at \$6,331,000. Data by markets not available for frozen and chilled meats.

<sup>3</sup> Probably excludes frozen tongues, hearts, etc.

<sup>4</sup> Not separately reported.

<sup>5</sup> Principally to Spain.

<sup>6</sup> See footnote 2, table 9.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo = 2.2046 pounds; 1 paper milreis = 1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0580.

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TABLE 14.—Mutton, frozen and chilled: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1933

| Country  | 1929                                     | 1932     | 1936     | 1937     | 1938     |
|--|--|----------|----------|----------|----------|
|  | Quantity (1,000 pounds)                  |          |          |          |          |
| Total, all countries.....                                | 177, 576                                 | 156, 494 | 110, 307 | 113, 892 | 104, 990 |
| United Kingdom.....                                      | 160, 825                                 | 148, 103 | 102, 360 | 101, 156 | 95, 541  |
| France.....  | 6, 530                                   | 6, 819   | 5, 566   | 9, 081   | 6, 316   |
| Germany.....   | 6, 224                                   | 143      | 505      | 811      | 280      |
| All other.....   | 3, 997                                   | 1, 429   | 1, 856   | 2, 844   | 2, 853   |
|  | Value (1,000 paper pesos)                |          |          |          |          |
| Total, all countries.....                                | 32, 022                                  | 23, 220  | 34, 235  | 36, 069  | 33, 812  |
|  | Value (1,000 U. S. dollars) <sup>1</sup> |          |          |          |          |
| Total, all countries.....                                | 13, 404                                  | 5, 971   | 9, 990   | 11, 137  | 10, 052  |
| United Kingdom.....                                      | 12, 142                                  | 5, 647   | 9, 465   | 10, 252  | 9, 412   |
| France.....  | 491                                      | 265      | 353      | 568      | 396      |
| Germany.....   | 470                                      | 5        | 34       | 58       | 19       |
| All other.....   | 301                                      | 54       | 138      | 239      | 226      |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.075                                  | \$0.038  | \$0.091  | \$0.098  | \$0.096  |

<sup>1</sup> For 1929-32, the United States dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>2</sup> See footnote 2, table 9.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton = 2,204.6 pounds; 1 peso = 1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3066; 1938, \$0.2973

TABLE 15.—*Mutton, frozen: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938*

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 49,145  | 13,616  | 14,788  | 17,947  | 18,919  |
| United Kingdom.....                                      | 43,402  | 12,040  | 13,219  | 16,189  | 17,667  |
| France.....  | 3,616   | 771     | 1,299   | 602     | 578     |
| Germany.....   | 364     | 11      | 31      | 27      | 336     |
| All other.....   | 1,763   | 794     | 239     | 1,129   | 338     |
| Value (1,000 pesos)                                      |         |         |         |         |         |
| Total, all countries.....                                | 4,700   | 1,330   | 1,162   | 1,543   | 1,858   |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 4,635   | 626     | 608     | 863     | 1,058   |
| United Kingdom.....                                      | 4,115   | 551     | 571     | 814     | 1,005   |
| France.....  | 336     | 37      | 30      | 18      | 22      |
| Germany.....   | 30      | 1       | 1       | 2       | 14      |
| All other.....   | 154     | 37      | 6       | 29      | 17      |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.094 | \$0.046 | \$0.041 | \$0.048 | \$0.056 |

<sup>1</sup> See footnote 2, table 9.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo = 2.2046 pounds; 1 peso = 1929, \$0.9863; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

TABLE 16.—*Pork, frozen and chilled: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 10,772  | 14,369  | 19,645  | 21,246  | 18,497  |
| United Kingdom.....                                      | 8,078   | 12,084  | 18,702  | 15,514  | 17,158  |
| Italy.....   | 2,043   | 1,189   | 20      | 4,105   | 238     |
| France.....  | 63      | 795     | 93      | 340     | 179     |
| Germany.....   | 136     | 122     | 117     | 370     | 157     |
| All other.....   | 452     | 179     | 713     | 917     | 765     |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 2,582   | 3,038   | 5,006   | 5,474   | 4,327   |
| Value (1,000 U. S. dollars) <sup>2</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 1,081   | 781     | 1,461   | 1,689   | 1,287   |
| United Kingdom.....                                      | 806     | 641     | 1,389   | 1,228   | 1,189   |
| Italy.....   | 208     | 68      | 1       | 331     | 18      |
| France.....  | 6       | 55      | 7       | 25      | 14      |
| Germany.....   | 14      | 5       | 9       | 29      | 11      |
| All other.....   | 47      | 12      | 55      | 76      | 55      |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.100 | \$0.054 | \$0.074 | \$0.080 | \$0.070 |

<sup>1</sup> Includes 59,524 pounds, valued at \$5,921, for which the markets are not separately recorded.

<sup>2</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>3</sup> See footnote 2, table 9.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 kilo = 2.2046 pounds; 1 metric ton = 2,046.6 pounds; 1 peso = 1929, \$0.4166; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 17.—Meats, canned: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 152,276 | 97,368  | 159,851 | 168,193 | 163,700 |
| United Kingdom.....                                      | 63,067  | 65,774  | 81,112  | 86,773  | 96,017  |
| UNITED STATES.....                                       | 56,883  | 10,617  | 48,014  | 45,430  | 41,237  |
| Canada.....  | 6,561   | 3,419   | 8,752   | 8,322   | 4,793   |
| Union of South Africa.....                               | 1,702   | 1,043   | 2,820   | 3,367   | 2,705   |
| Belgium.....   | 2,645   | 3,902   | 3,560   | 1,221   | 1,036   |
| Netherlands.....   | 3,728   | 1,671   | 3,078   | 3,415   | 796     |
| Germany.....   | 6,407   | 1,667   | 2,723   | 1,069   | 448     |
| All other.....   | 11,193  | 9,295   | 9,792   | 18,596  | 16,668  |
| Percentage to the United States.....                     | 37.4    | 10.9    | 30.0    | 27.0    | 25.2    |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 37,483  | 10,647  | 22,016  | 34,045  | 44,787  |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 15,669  | 2,736   | 6,424   | 10,506  | 13,309  |
| United Kingdom.....                                      | 6,473   | 1,845   | 3,258   | 5,400   | 7,818   |
| UNITED STATES.....                                       | 5,875   | 298     | 1,932   | 2,772   | 3,342   |
| Canada.....  | 680     | 97      | 351     | 531     | 392     |
| Union of South Africa.....                               | 174     | 30      | 114     | 194     | 220     |
| Belgium.....   | 275     | 111     | 143     | 73      | 84      |
| Netherlands.....   | 383     | 46      | 124     | 209     | 66      |
| Germany.....   | 672     | 47      | 109     | 60      | 37      |
| All other.....   | 1,157   | 264     | 393     | 1,177   | 1,350   |
| Percentage to the United States.....                     | 37.4    | 10.9    | 30.1    | 26.4    | 25.1    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.103 | \$0.028 | \$0.040 | \$0.062 | \$0.081 |

<sup>1</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>2</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2916; 1937, \$0.3086; 1938, \$0.2973.

TABLE 18.—Meats, canned: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 8,052   | 7,161   | 43,661  | 54,026  | 53,748  |
| Uruguay.....   | 7,543   | 5,274   | 24,846  | 25,006  | (1)     |
| UNITED STATES.....                                       | 436     | 21      | 1,831   | 14,941  |         |
| United Kingdom.....                                      | 66      | 1,752   | 9,841   | 3,533   |         |
| All other.....   | 7       | 114     | 7,143   | *10,546 |         |
| Percentage to the United States.....                     | 5.4     | 0.3     | 4.2     | 27.7    |         |
| Value (1,000 paper milreis)                              |         |         |         |         |         |
| Total, all countries.....                                | 9,045   | 9,259   | 55,101  | 50,808  | 62,931  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 1,098   | 659     | 3,602   | 3,469   | 3,650   |
| Uruguay.....   | 978     | 477     | 2,123   | 1,287   | (1)     |
| UNITED STATES.....                                       | 79      | 2       | 149     | 1,146   |         |
| United Kingdom.....                                      | 10      | 169     | 734     | 221     |         |
| All other.....   | 1       | 11      | 596     | *814    |         |
| Percentage to the United States.....                     | 7.4     | 0.3     | 4.1     | 33.0    |         |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.133 | \$0.092 | \$0.082 | \$0.064 | \$0.068 |

<sup>1</sup> Not available.

<sup>2</sup> Includes 2,659,000 pounds, valued at \$241,000, exported to Spain. Exports to Spain were negligible in other years.

<sup>3</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 paper milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06337; 1937, \$0.06826; 1938, \$0.0580.

TABLE 15.—*Mutton, frozen: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938*

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 49, 145 | 13, 616 | 14, 788 | 17, 947 | 18, 919 |
| United Kingdom.....                                      | 43, 402 | 12, 040 | 13, 219 | 16, 189 | 17, 667 |
| France.....  | 3, 616  | 771     | 1, 299  | 602     | 678     |
| Germany.....   | 364     | 11      | 31      | 27      | 336     |
| All other.....   | 1, 763  | 794     | 239     | 1, 129  | 338     |
| Value (1,000 pesos)                                      |         |         |         |         |         |
| Total, all countries.....                                | 4, 700  | 1, 330  | 1, 162  | 1, 543  | 1, 858  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 4, 635  | 626     | 608     | 863     | 1, 058  |
| United Kingdom.....                                      | 4, 115  | 551     | 571     | 814     | 1, 005  |
| France.....  | 338     | 37      | 30      | 18      | 22      |
| Germany.....   | 30      | 1       | 1       | 2       | 14      |
| All other.....   | 154     | 37      | 6       | 29      | 17      |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.094 | \$0.046 | \$0.041 | \$0.048 | \$0.056 |

<sup>1</sup> See footnote 2, table 9.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo = 2.2046 pounds; 1 peso = 1929, \$0.9863; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

TABLE 16.—*Pork, frozen and chilled: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 10, 772 | 14, 369 | 19, 645 | 21, 246 | 18, 497 |
| United Kingdom.....                                      | 8, 078  | 12, 084 | 18, 702 | 15, 514 | 17, 158 |
| Italy.....   | 2, 043  | 1, 189  | 20      | 4, 105  | 238     |
| France.....  | 63      | 795     | 93      | 340     | 179     |
| Germany.....   | 136     | 122     | 117     | 370     | 157     |
| All other.....   | 452     | 179     | 713     | 917     | 765     |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 2, 582  | 3, 038  | 5, 006  | 5, 474  | 4, 327  |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 1, 081  | 781     | 1, 461  | 1, 689  | 1, 287  |
| United Kingdom.....                                      | 806     | 641     | 1, 389  | 1, 228  | 1, 189  |
| Italy.....   | 208     | 68      | 1       | 331     | 18      |
| France.....  | 6       | 55      | 7       | 25      | 14      |
| Germany.....   | 14      | 5       | 9       | 29      | 11      |
| All other.....   | 47      | 12      | 55      | 76      | 55      |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.100 | \$0.054 | \$0.074 | \$0.080 | \$0.070 |

<sup>1</sup> Includes 59,524 pounds, valued at \$5,921, for which the markets are not separately recorded.

<sup>2</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.27227 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5644.

<sup>3</sup> See footnote 2, table 9.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 kilo = 2.2046 pounds; 1 metric ton = 2,046.6 pounds; 1 peso = 1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3066; 1938, \$0.2973.



TABLE 17.—Meats, canned: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 152,276 | 97,388  | 159,851 | 168,193 | 163,700 |
| United Kingdom.....                                      | 63,067  | 65,774  | 81,112  | 86,773  | 96,017  |
| UNITED STATES.....                                       | 56,883  | 10,617  | 48,014  | 45,430  | 41,237  |
| Canada.....  | 6,561   | 3,419   | 8,752   | 8,322   | 4,793   |
| Union of South Africa.....                               | 1,702   | 1,043   | 2,820   | 3,367   | 2,705   |
| Belgium.....   | 2,645   | 3,902   | 3,560   | 1,221   | 1,036   |
| Netherlands.....   | 3,728   | 1,671   | 3,078   | 3,415   | 796     |
| Germany.....   | 6,497   | 1,667   | 2,723   | 1,069   | 448     |
| All other.....   | 11,193  | 9,295   | 9,792   | 18,596  | 16,668  |
| Percentage to the United States.....                     | 37.4    | 10.9    | 30.0    | 27.0    | 25.2    |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 37,483  | 10,647  | 22,016  | 34,045  | 44,767  |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 15,689  | 2,738   | 6,424   | 10,506  | 13,300  |
| United Kingdom.....                                      | 6,473   | 1,845   | 3,258   | 5,490   | 7,818   |
| UNITED STATES.....                                       | 5,875   | 298     | 1,932   | 2,772   | 3,342   |
| Canada.....  | 680     | 97      | 351     | 531     | 392     |
| Union of South Africa.....                               | 174     | 30      | 114     | 194     | 220     |
| Belgium.....   | 275     | 111     | 143     | 73      | 84      |
| Netherlands.....   | 383     | 46      | 124     | 209     | 66      |
| Germany.....   | 672     | 47      | 109     | 60      | 37      |
| All other.....   | 1,157   | 264     | 393     | 1,177   | 1,350   |
| Percentage to the United States.....                     | 37.4    | 10.9    | 30.1    | 26.4    | 25.1    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.103 | \$0.028 | \$0.040 | \$0.052 | \$0.031 |

<sup>1</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>2</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 18.—Meats, canned: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 8,052   | 7,161   | 43,861  | 54,026  | 53,748  |
| Uruguay.....   | 7,543   | 5,274   | 24,846  | 25,006  | (1)     |
| UNITED STATES.....                                       | 436     | 21      | 1,831   | 14,941  |         |
| United Kingdom.....                                      | 66      | 1,752   | 9,841   | 3,543   |         |
| All other.....   | 7       | 114     | 7,143   | 10,546  |         |
| Percentage to the United States.....                     | 5.4     | 0.3     | 4.2     | 27.7    |         |
| Value (1,000 paper milreis)                              |         |         |         |         |         |
| Total, all countries.....                                | 9,045   | 9,259   | 55,101  | 50,808  | 62,931  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 1,098   | 659     | 3,602   | 3,468   | 3,650   |
| Uruguay.....   | 978     | 477     | 2,123   | 1,287   | (1)     |
| UNITED STATES.....                                       | 79      | 2       | 149     | 1,146   |         |
| United Kingdom.....                                      | 10      | 169     | 734     | 221     |         |
| All other.....   | 1       | 11      | 596     | 814     |         |
| Percentage to the United States.....                     | 7.4     | 0.3     | 4.1     | 33.0    |         |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.133 | \$0.092 | \$0.082 | \$0.094 | \$0.098 |

<sup>1</sup> Not available.

<sup>2</sup> Includes 2,656,000 pounds, valued at \$241,000, exported to Spain. Exports to Spain were negligible in other years.

<sup>3</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 paper milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.0637; 1937, \$0.0626; 1938, \$0.0580.

TABLE 19.—Meats, canned: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 71,895  | 44,418  | 69,897  | 75,510  | 49,040  |
| UNITED STATES.....                                       | 32,126  | 14,500  | 29,176  | 30,371  | 15,176  |
| United Kingdom.....                                      | 26,391  | 26,310  | 24,398  | 30,351  | 24,818  |
| Germany.....   | 4,448   | 693     | 1,130   | 2,041   | 306     |
| Belgium.....   | 3,920   | 833     | 1,650   | 1,127   | 182     |
| France.....  | 1,452   | 932     | 2,696   | 2,144   | 1,937   |
| All other.....   | 3,558   | 1,120   | 10,847  | 110,476 | 16,601  |
| Percentage to the United States.....                     | 44.7    | 32.6    | 41.7    | 40.2    | 30.9    |
| Value (1,000 pesos)                                      |         |         |         |         |         |
| Total, all countries.....                                | 6,522   | 4,030   | 5,352   | 6,300   | 5,375   |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 6,433   | 1,896   | 2,803   | 3,525   | 3,062   |
| UNITED STATES.....                                       | 2,875   | 619     | 1,163   | 1,252   | 895     |
| United Kingdom.....                                      | 2,361   | 1,124   | 1,025   | 1,683   | 1,663   |
| Germany.....   | 398     | 30      | 38      | 76      | 15      |
| Belgium.....   | 351     | 35      | 53      | 5       | 10      |
| France.....  | 130     | 40      | 137     | 68      | 94      |
| All other.....   | 318     | 48      | 387     | 1,441   | 1,385   |
| Percentage to the United States.....                     | 44.7    | 32.6    | 41.5    | 35.5    | 29.2    |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.089 | \$0.043 | \$0.040 | \$0.047 | \$0.062 |

<sup>1</sup> Includes 4,272,000 pounds, valued at \$167,000, in 1937, and 2,342,000 pounds, valued at \$129,000, in 1938, exported to Canada. Negligible in other years.

<sup>2</sup> See footnote 2, table 9.

Source: Compiled by the United States Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1929, \$0.9863; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

## SODIUM NITRATE

Natural sodium nitrate is used as a fertilizer to supply nitrogen to the soil. It may be used by itself or in mixed fertilizers with other compounds which supply the phosphorus and potassium. Prior to the large-scale development in Germany of synthetic ammonia during the World War of 1914-18 and in other countries during the post-war years, sodium nitrate was also used as a raw material in the manufacture of nitric acid. This acid has many industrial uses but is of particular importance in the manufacture of explosives.

There is no important source of natural sodium nitrate other than Chile. In the general field of nitrogen compounds, besides the synthetic ammonia already mentioned, alternative sources of supply (of particular importance for nitrogen fertilizers) are synthetic calcium cyanamid, and byproduct ammonia produced in the manufacture of coke.

### Latin American production and exports.

For many years the Chilean nitrate industry was developed jointly by the Government and foreign capital (originally British and Spanish); in 1933, however, it was made a state monopoly. The nitrate fields of Chile are located in the northern section of the country; they extend along the western side of the desert which lies between the coastal range and the western slopes of the Andes and cover an irregular belt from 5 to 40 miles wide extending some 400 miles in length from north to south. The deposits now being worked are at elevations ranging from 4,000 to 7,500 feet, and deposits are known to exist at elevations as high as 9,000 feet.

In recent years the production of sodium nitrate in Chile has been much less than it was in the years prior to 1930, principally because of the increased consumption of synthetic nitrogen. In 1929 production amounted to 3.6 million short tons; by 1932 it had declined to one-third of that total. Subsequently production increased considerably, but in 1939 the output of 1.6 million tons was only about 45 percent of that in 1929. (See table 1.)

TABLE 1.—Sodium nitrate: Production in CHILE, in specified years, 1929 to 1939

| Year ended June 30 | Quantity                | Year ended June 30 | Quantity                |
|--------------------|-------------------------|--------------------|-------------------------|
|                    | <i>1,000 short tons</i> |                    | <i>1,000 short tons</i> |
| 1929.....          | 3,616                   | 1937.....          | 1,422                   |
| 1932.....          | 1,176                   | 1938.....          | 1,566                   |
| 1936.....          | 1,341                   | 1939.....          | 1,574                   |

Source: Annual reports of the Chilean Nitrate and Iodine Sales Corporation.

Practically all of the Chilean production of sodium nitrate is exported. Chilean exports of sodium nitrate to principal markets, in specified years, 1929 to 1938, are shown in table 2. Exports fell off

rapidly after 1929 not only because of the depression, but also because of the increasing competitive impact of the new synthetic-nitrogen industry. In 1913 Chilean nitrate supplied 55 percent of the world production of nitrogen; in 1929, 23 percent; in 1931, 11 percent; in 1933, 4 percent; in 1934, 7 percent; and in 1938, 8 percent. Since the record low of 1932 exports have increased markedly. In 1929 exports amounted to 2,851,000 long tons, in 1932 to only 240,000 long tons, and in 1938 to 1,548,000 long tons, or about 54 percent of the quantity exported in 1929.

The recent rise in exports of sodium nitrate from Chile has been made possible by the very drastic reorganization of the Chilean industry resulting in much lower costs and prices, the elimination of the Chilean export tax, and the new compensation agreements between Chile and a number of other countries, including Germany, France, Belgium, Italy, and Spain. These agreements provided that a part or all of the proceeds of nitrate sales be blocked for the purpose of liquidating credits in Chile of the nationals of the other contracting countries.

TABLE 2.—Sodium nitrate: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country                                       | 1929      | 1932    | 1936 <sup>1</sup> | 1937 <sup>1</sup> | 1938 <sup>1</sup> |     |     |         |
|---|-----------|---------|-------------------|-------------------|-------------------|-----|-----|---------|
| Quantity (long tons)                          |           |         |                   |                   |                   |     |     |         |
| Total, all countries.....                     | 2,851,164 | 239,545 | 1,181,036         | 1,476,295         | 1,547,968         |     |     |         |
| UNITED STATES.....                            | 204,168   | 27,320  | 641,308           | 573,787           | (2)               |     |     |         |
| Egypt.....                                    | 86,186    | 33,845  | 88,578            | 236,207           |                   |     |     |         |
| Germany.....                                  | 75,352    | 79,168  | 108,262           | 127,946           |                   |     |     |         |
| United Kingdom.....                           | 78,372    | 3,238   | 34,447            | 44,289            |                   |     |     |         |
| Japan.....                                    | 34,486    |         | (2)               | 42,320            |                   |     |     |         |
| Netherlands.....                              | 28,152    | 23,805  | (2)               | 61,020            |                   |     |     |         |
| France.....                                   | 26,442    | 8,000   | 54,131            | 83,557            |                   |     |     |         |
| Belgium.....                                  | 1,150     | 15,261  | (2)               | 59,052            |                   |     |     |         |
| Italy.....                                    | 14,841    | 6,520   | (2)               | 98,420            |                   |     |     |         |
| All other.....                                | 68,305    | 34,639  | 354,310           | 149,597           |                   |     |     |         |
| On order.....                                 | 2,233,710 | 7,749   | (2)               | (2)               |                   |     |     |         |
| Percentage to the United States.....          | (4)       | 11.4    | 45.8              | 38.9              |                   | (2) |     |         |
| Value (1,000 pesos)                           |           |         |                   |                   |                   |     |     |         |
| Total, all countries.....                     | 965,860   | 44,051  | (2)               | (2)               | 141,554           |     |     |         |
| Value (1,000 U. S. dollars)                   |           |         |                   |                   |                   |     |     |         |
| Total, all countries.....                     | 117,545   | 5,361   | (2)               | (2)               | 29,160            |     |     |         |
| UNITED STATES.....                            | 8,315     | 611     | (2)               | (2)               | (2)               |     |     |         |
| Egypt.....                                    | 3,622     | 757     |                   |                   |                   |     |     |         |
| Germany.....                                  | 3,117     | 1,772   |                   |                   |                   |     |     |         |
| United Kingdom.....                           | 3,258     | 72      |                   |                   |                   |     |     |         |
| Japan.....                                    | 1,412     |         |                   |                   |                   |     |     |         |
| Netherlands.....                              | 1,113     | 533     |                   |                   |                   |     |     |         |
| France.....                                   | 1,084     | 179     |                   |                   |                   |     |     |         |
| Belgium.....                                  | 46        | 342     |                   |                   |                   |     |     |         |
| Italy.....                                    | 603       | 146     |                   |                   |                   |     |     |         |
| All other.....                                | 2,836     | 776     |                   |                   |                   |     |     |         |
| On order.....                                 | 92,139    | 173     |                   |                   |                   |     |     |         |
| Percentage direct to the United States.....   | 7.1       | 11.4    |                   |                   |                   | (2) | (2) | (2)     |
| Unit value per long ton of total exports..... | \$41.23   | \$22.38 |                   |                   |                   | (2) | (2) | \$18.84 |

<sup>1</sup> Unofficial data for fiscal years ended June 30. Official data for calendar year, available for totals only; exports in 1936 amounted to 1,265,972 long tons, valued at \$29,153,120 (unit value per long ton \$23.03), and in 1937, 1,582,588 long tons, valued at \$34,311,978 (unit value per long ton \$21.68).

<sup>2</sup> Not shown separately.

<sup>3</sup> Not available.

<sup>4</sup> Not computed because of the dominance of shipments on order with destination unknown. United States imports from Chile in 1929 amounted to 921,813 long tons.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile, statistics of the Pan American Union, and Great Britain, Department of Overseas Trade. Official totals for 1936 and 1937 are from *Chilean Trade*, December 1938, p. 568. Totals for 1938 are from *Chilean Trade Annual*, 1938. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=0.9841964 long ton; 1 peso=1929 and 1932, \$0.1217; 1936, 1937, and 1938, \$0.2060.

The United States is customarily the best market for Chilean nitrate. In 1937<sup>1</sup> exports to this country amounted to 574,000 long tons, or nearly 40 percent of total exports. In the same year Egypt, Germany, Italy, France, the Netherlands, Belgium, and the United Kingdom (named in the order of their importance) together accounted for nearly 50 percent; and other countries, including Japan (3 percent), accounted for about 10 percent. (See table 2.)

**Trade barriers, competitive conditions, and prices.**

The United States is important to Chile not only because of the quantities of nitrates taken, but also because sales in the United States, although made in competition with nitrogen products produced in this country and imported from Canada and Europe, result in free exchange and are not subject to control by the International Nitrogen Cartel. Moreover, natural sodium nitrate enters the United States free of duty.<sup>2</sup> Most of the other important markets in recent years have been dependent upon the stimulus of compensation agreements. Imports into most of these markets have also been subject to duties and to cartel control.

Although the compensation agreements mentioned above were of great value in facilitating Chile's export of sodium nitrate in recent years, they were not entirely successful in eliminating quota and licensing restrictions in such countries as Germany, Italy, France, Spain, the Netherlands, and Greece. The basic quotas in Germany, France, and Italy, however, were augmented several times prior to the outbreak of war.

Upon renewal of the International Nitrogen Cartel in 1938, Chile's previous sales quota of 1.25 million metric tons in stated markets outside the United States is understood to have been extended for another 3 years. Since the outbreak of hostilities in September 1939 the International Nitrogen Cartel is reported as having ceased to function.

The reorganization of the Chilean nitrate industry in 1933 gave the Government control of production, sales, and prices. Under this system, wages were increased, numerous welfare expenses were incurred, and at the same time certain exchange losses were absorbed from the operation of the compensation accounts. Moreover, in the 5 years before the present war, freight rates to the United States and to Europe were increased.<sup>3</sup> These increases in costs in part offset savings obtained through increased efficiency in the two large modern plants and the reduction in capital and interest charges.

The wholesale price of sodium nitrate at New York declined sharply between 1929 and 1932, as did prices of most other commodities, but did not recover thereafter. (See table 3.) In fact, the price of sodium nitrate was lower during the period 1936-39 than it was in 1932, and so were the unit values of United States imports from Chile. The wholesale price in the United Kingdom, however, was lower in 1932 than in subsequent years. In 1929 and in 1936-39 prices in the United Kingdom were higher than those in the United States; this is probably because the transportation rate to and into the United Kingdom is

<sup>1</sup> The latest year for which exports to principal markets are available. In that year the United States accounted for 38.8 percent, Egypt for 16.0 percent, Germany for 6.7 percent, Italy for 6.7 percent, France for 5.7 percent, the Netherlands for 4.1 percent, Belgium for 4.0 percent, the United Kingdom for 3.0 percent, and Japan for 2.9 percent of total exports.

<sup>2</sup> Tariff Act of 1930, par. 1766.

<sup>3</sup> The reported increases were 30 percent to the United States and 40 percent to Europe.

higher than that to New York and because the product is dutiable in the United Kingdom.<sup>4</sup>

The unit values of United States imports from Chile have been very much lower (especially in recent years) than wholesale prices at New York, even though sodium nitrate is not dutiable in this country. A part of this differential is covered by the freight and handling charges; the remainder represents the mark-up fixed for this market by the Chilean nitrate monopoly. Imports of sodium nitrate from Chile are handled by a single agency of the monopoly in New York; this agency is also in charge of distribution throughout the United States.

TABLE 3.—Sodium nitrate: Prices at New York and in the United Kingdom, and the unit values of United States imports from Chile, in specified years, 1929 to 1939

[Per short ton]

| Year      | Wholesale price at New York <sup>1</sup> | Unit values of United States imports from Chile | Wholesale price in the United Kingdom <sup>2</sup> |
|-----------|--|---|--|
| 1929..... | \$43.37                                  | \$33.38   | \$46.78  |
| 1932..... | 29.90                                    | 25.87   | 28.17  |
| 1936..... | 24.50                                    | 17.29   | 33.84  |
| 1937..... | 26.00                                    | 16.51   | 33.66  |
| 1938..... | 27.00                                    | 16.57   | 34.93  |
| 1939..... | 27.00                                    | 16.56   | ( <sup>3</sup> )                                   |

<sup>1</sup> Wholesale price in bulk.

<sup>2</sup> Price per short ton delivered to buyer's nearest station in the United Kingdom.

<sup>3</sup> Not readily available.

Source: Wholesale prices at New York from *The Potash Journal* of the American Potash Institute, Inc. Wholesale prices in the United Kingdom from annual reports of British Sulphate of Ammonia Federation. Unit values compiled from official statistics of the U. S. Department of Commerce.

#### Effects of the war.

During the World War of 1914-18 production and exports of sodium nitrate increased because of the great demand for nitric acid in the Allied countries and in the United States. Both reached a level in 1917 considerably higher than in any previous year and from two to three times as high as in recent years, although not as high as in 1929. Because of the development of synthetic nitrogen in the important consuming countries, the synthetic product, prior to the outbreak of war, almost completely displaced sodium nitrate as a raw material for nitric acid, and furnished new competition in the market for nitrogen fertilizers. The demand for Chilean nitrates arising out of the present war, however, may be fully as great as that generated by the previous one because of the greatly enlarged demand, especially in the United States.

Prior to 1939 European markets took approximately 50 percent of Chilean exports of sodium nitrate. But for the duration of the war, European countries will become less important consumers of Chilean nitrates, and some of them will be shut off altogether. The United States, however, will take very much larger quantities than formerly because of the sharp increase in its requirements, and because shipments of nitrogen from Europe to the United States have been greatly curtailed. This will be so despite the rapid rise in the production of synthetic nitrogen in the United States.

<sup>4</sup> The duty on sodium nitrate entering the United Kingdom from foreign countries is 4 pounds sterling per long ton. The prices quoted in the United Kingdom include delivery to the buyer's nearest station.

## OATS

Oats rank third in importance among the cereals of the world, being exceeded only by wheat and corn in quantities produced. About 95 percent of total world production is used as feed and seed, chiefly on the farm where it is grown, and about 5 percent is consumed for human food.

### Position of Latin America in world production.

Approximately 60 percent of the world production of 4.5 billion bushels of oats is grown in European countries, which also import practically all the oats (only about 60 million bushels annually) shipped in international commerce. The United States, accounting for about 25 percent of world production, is customarily an exporter of this cereal on a small scale, but in 1934 and 1935, as a result of drought, it imported considerable quantities, principally from Argentina.<sup>1</sup> The Latin American countries produce only about 1.5 percent of the world's crop of oats, but they export from 30 to 60 percent of the total quantity entering international trade. Production in the principal producing countries of Latin America and of the world, in specified years, 1929 to 1938, is shown in table 1.

Argentina and Chile are the principal producing countries in Latin America. Little change in the acreage planted to oats in these countries has occurred during the period 1929-38. Production, however, has fluctuated considerably because of weather conditions. During the period 1932-38, annual production in Argentina ranged from 36 million to 70 million bushels, and in Chile from 3.4 million to more than 10 million bushels.

TABLE 1.—Oats: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1938

| Country  | 1929      | 1932      | 1936      | 1937      | 1938      |
|--|-----------|-----------|-----------|-----------|-----------|
| Quantity (1,000 bushels of 32 pounds)                          |           |           |           |           |           |
| Argentina.....   | 68,293    | 69,583    | 54,564    | 47,468    | 51,670    |
| Chile.....   | 10,400    | 7,093     | 6,890     | 8,476     | 10,196    |
| Total production of Latin American countries listed above..... | 78,693    | 76,666    | 61,454    | 55,944    | 61,866    |
| UNITED STATES.....   | 1,113,050 | 1,250,955 | 785,506   | 1,161,612 | 1,053,839 |
| Soviet Union.....  | 1,084,337 | 774,366   | (1)       | (1)       | (1)       |
| Germany.....   | 508,633   | 458,190   | 387,072   | 407,750   | 438,869   |
| Canada.....  | 300,516   | 416,034   | 288,764   | 285,230   | 304,563   |
| France.....  | 373,142   | 331,936   | 290,352   | 299,453   | 375,416   |
| Poland.....  | 203,450   | 164,713   | 181,886   | 161,410   | 183,014   |
| Sweden.....  | 86,067    | 81,845    | 82,848    | 87,171    | 98,118    |
| Czechoslovakia.....  | 102,927   | 114,627   | 83,938    | 94,547    | 79,906    |
| Denmark.....   | 71,276    | 72,707    | 67,616    | 70,609    | 79,228    |
| Danube Basin <sup>2</sup> .....                                | 155,539   | 91,509    | 108,721   | 84,406    | 79,667    |
| All other.....   | 720,370   | 674,482   | (1)       | (1)       | (1)       |
| Estimated world production.....                                | 4,798,000 | 4,508,000 | 4,039,000 | 4,440,000 | 4,618,000 |
| Percent of total world production                              |           |           |           |           |           |
| Latin American countries listed above.....                     | 1.6       | 1.7       | 1.5       | 1.3       | 1.3       |

<sup>1</sup> Not available.

<sup>2</sup> Includes Hungary, Yugoslavia, Bulgaria, and Rumania.

Source: U. S. Department of Agriculture, *Agricultural Statistics*.

<sup>3</sup> Total United States imports in 1935 amounted to 10 million bushels.

**Latin American exports.**

Argentina and Chile are important exporters of oats; exports from these countries in 1938 amounted to 30 million bushels, or 53 percent of all the oats entering international trade. (See table 2.) In recent years Argentine exports have ranged from 12 to 50 million bushels and Chilean exports from 1 to 4 million bushels. Exports from Argentina and Chile to principal markets, in specified years, 1929 to 1938, are shown in tables 3 and 4. Practically all of the exports from both Argentina and Chile ordinarily go to European countries, but the quantities shipped to the various markets have varied considerably, depending on the size of crops, in both the producing countries and the importing countries. In 1934 and 1935 Argentina exported considerable quantities to the United States. The principal European markets for Argentine oats were Belgium, the Netherlands, Germany, the United Kingdom, Italy, Denmark, and France. Exports of oats from Chile went principally to Germany, Switzerland, Cuba, and Belgium, but the position of these purchasers shifted from year to year.

TABLE 2.—Oats: Exports of principal exporting countries of Latin America and of the world, in specified years, 1929 to 1938

| Country   | 1929    | 1932   | 1936   | 1937   | 1938   |
|---|---------|--------|--------|--------|--------|
| Quantity (1,000 bushels of 32 pounds)                       |         |        |        |        |        |
| Argentina.....  | 29,638  | 49,302 | 12,109 | 27,792 | 26,303 |
| Chile.....  | 3,214   | 874    | 3,317  | 4,171  | 3,620  |
| Total exports of Latin American countries listed above..... | 32,852  | 50,176 | 15,426 | 31,963 | 29,923 |
| UNITED STATES.....  | 6,609   | 3,487  | 517    | 6,727  | 8,517  |
| Canada.....   | 8,161   | 16,402 | 9,018  | 4,776  | 7,317  |
| Czechoslovakia.....   | 4,819   | 8,420  | 1,370  | 2,526  | 2,060  |
| French Morocco.....   | 1,629   | 985    | 720    | 581    | 2,020  |
| Netherlands.....  | 721     | 72     | 2,735  | 2,331  | 1,792  |
| Poland and Danzig.....                                      | 2,592   | 218    | 6,768  | 1,872  | 716    |
| All other.....  | 50,553  | 8,872  | 12,485 | 6,647  | 3,962  |
| Total world exports.....                                    | 107,936 | 88,632 | 49,039 | 57,423 | 56,307 |
| Percent of total world exports                              |         |        |        |        |        |
| Latin American countries listed above.....                  | 30.4    | 56.6   | 31.5   | 55.7   | 53.1   |

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina and Chile, and from *International Yearbook of Agricultural Statistics*. Converted to U. S. measure by applying the following factor: 1 quintal=6.889575 bushels of 32 pounds.



TABLE 3.—Oats: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1932    | 1936             | 1937    | 1938    |
|---|---------|---------|------------------|---------|---------|
| Quantity (1,000 bushels of 32 pounds)                     |         |         |                  |         |         |
| Total, all countries.....                                 | 29,638  | 49,302  | 12,109           | 27,792  | 26,303  |
| Belgium.....  | 11,856  | 13,747  | 3,671            | 10,049  | 8,723   |
| Netherlands.....  | 5,092   | 4,748   | 4,867            | 9,088   | 7,847   |
| Germany.....  | 1,212   | 518     | 1,047            | 1,029   | 4,102   |
| Denmark.....  | 84      | 265     | 374              | 1,984   | 1,664   |
| Sweden.....   | 985     | 1,692   | 28               | 1,463   | 620     |
| Italy.....  | 2,399   | 9,939   | 410              | 917     | 280     |
| France.....   | 779     | 5,546   | 1,190            | 1,897   | 195     |
| United Kingdom.....                                       | 6,919   | 11,858  | ( <sup>1</sup> ) | 60      | 167     |
| Norway.....   | 238     | 736     | -----            | 366     | 104     |
| All other.....  | 74      | 253     | 521              | 939     | 2,601   |
| Value (1,000 paper pesos)                                 |         |         |                  |         |         |
| Total, all countries.....                                 | 31,461  | 36,499  | 9,927            | 24,654  | 22,662  |
| Value (1,000 U. S. dollars)                               |         |         |                  |         |         |
| Total, all countries <sup>2</sup> .....                   | 13,169  | 9,385   | 2,897            | 7,608   | 6,738   |
| Belgium.....  | 5,297   | 2,583   | 882              | 2,732   | 2,217   |
| Netherlands.....  | 2,281   | 893     | 1,151            | 2,475   | 1,960   |
| Germany.....  | 556     | 100     | 259              | 266     | 1,128   |
| Denmark.....  | 34      | 52      | 86               | 648     | 449     |
| Sweden.....   | 438     | 330     | 7                | 412     | 169     |
| Italy.....  | 1,085   | 1,896   | 103              | 255     | 68      |
| France.....   | 356     | 1,060   | 282              | 523     | 51      |
| United Kingdom.....                                       | 2,990   | 2,290   | ( <sup>1</sup> ) | 17      | 46      |
| Norway.....   | 103     | 138     | -----            | 104     | 27      |
| All other.....  | 31      | 48      | 127              | 256     | 623     |
| Unit value per bushel of total exports <sup>3</sup> ..... | \$0.444 | \$0.190 | \$0.239          | \$0.274 | \$0.256 |

<sup>1</sup> Not over 500.<sup>2</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The converted rates for gold pesos are as follows: 1929, \$0.9513; 1932, \$0.5544.<sup>3</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measure and currency by applying the following factors: 1 metric ton=68.59375 bushels of 32 pounds; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 4.—Oats: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 32 pounds)                     |         |         |         |         |         |
| Total, all countries.....                                 | 3,214   | 873     | 3,317   | 4,171   | 3,620   |
| Germany.....  | (1)     | 21      | 1,311   | 2,035   | 1,597   |
| Switzerland.....  |         | 355     | 500     | 893     |         |
| Cuba.....   |         | 8       | 340     | 564     | 476     |
| Belgium.....  |         | 42      | 593     | 922     | 450     |
| United Kingdom.....                                       |         | 744     | 77      | 2       | 7       |
| All other.....  |         | 58      | 641     | 148     | 197     |
| Value (1,000 pesos)                                       |         |         |         |         |         |
| Total, all countries.....                                 | 14,494  | 1,520   | 5,137   | 8,006   | 5,680   |
| Value (1,000 U. S. dollars)                               |         |         |         |         |         |
| Total, all countries.....                                 | 1,764   | 185     | 1,058   | 1,649   | 1,170   |
| Germany.....  | (1)     | 4       | 471     | 921     | 577     |
| Switzerland.....  |         | 94      | 159     | 252     |         |
| Cuba.....   |         | 2       | 112     | 213     | 141     |
| Belgium.....  |         | 9       | 161     | 293     | 105     |
| United Kingdom.....                                       |         | 158     | 21      | 1       | 2       |
| All other.....  |         | 12      | 199     | 62      | 93      |
| Unit value per bushel of total exports <sup>1</sup> ..... | \$0.549 | \$0.212 | \$0.319 | \$0.395 | \$0.323 |

<sup>1</sup> Not available.<sup>2</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. measure and currency by applying the following factors: 1 kilo=0.068894 bushel of 32 pounds; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936-38, \$0.2060.

#### Trade barriers, competitive conditions, and prices.

In the European countries which import oats, this commodity has been subject to a wide range of import duties and quota arrangements. These barriers have been altered frequently, depending on the domestic supply of this cereal. Before the war, oats entering the United Kingdom from foreign countries were dutiable at 3 shillings (approximately 60 cents) per hundredweight (112 pounds), but oats from Empire countries were free of duty; the production of oats within the United Kingdom is subsidized. The United States duty on oats is 8 cents per bushel of 32 pounds.<sup>2</sup>

In the Latin American countries, oats are grown primarily for export. These countries compete for the markets of western and northern Europe with other exporting countries such as Canada, the United States, the Soviet Union, Rumania, and Hungary.

During the period 1929-40, the price of oats at Liverpool was regularly higher than that at Chicago; and the price at Chicago was customarily higher than that at Buenos Aires. The United Kingdom is an importing country, and the high price of oats in that market is attributable to the cost of transportation from North and South America, to internal agricultural policies, and to the United Kingdom duty.<sup>3</sup> The spread in the annual average prices of white oats at

<sup>1</sup> Tariff Act of 1930, par. 726. The duty was reduced from 16 cents per bushel in the second trade agreement with Canada, effective January 1, 1939.

<sup>2</sup> The duty, of course, affects prices only when imports from foreign countries are essential to satisfy domestic requirements; the United Kingdom, however, customarily imports oats from foreign as well as Empire countries.

Chicago and at Buenos Aires has ranged between 1 cent and 22 cents per bushel (32 pounds). Only in 1935 and 1938 did prices at Buenos Aires exceed those at Chicago; in 1935 the price at Chicago was 29 cents per bushel and at Buenos Aires 31 cents per bushel, and in 1938 they were 28 cents and 38 cents per bushel, respectively (see table 5). These deviations in the spread between the two prices may be accounted for principally by crop variations caused by weather conditions.

The price of No. 3 white oats at Chicago averaged 30 cents per bushel in August 1939; following the outbreak of war, it rose sharply and stood at 43 cents in March 1940. During the same period the price of oats at Buenos Aires rose from 19 to 23 cents per bushel. Following the German invasion of Norway, Belgium, and the Netherlands, the price of oats (No. 3 white) at Chicago declined, and on May 15 was quoted at 38 cents per bushel.

TABLE 5.—Oats: Prices in the United States, Argentina, and the United Kingdom, annually for 1929-38, and by months August 1939-March 1940

[Cents per bushel of 32 pounds]

| Year beginning August | U. S. Grade No. 3 white oats at Chicago <sup>1</sup> | White oats at Buenos Aires <sup>2</sup> | English white oats at Liverpool <sup>3</sup> | Ratio of price at—               |                               |
|-----------------------|--|---|--|----------------------------------|-------------------------------|
|                       |  |   |  | Buenos Aires to price at Chicago | Liverpool to price at Chicago |
| 1929.....             | 45   | 32                                      | 50   | 71.1                             | 111.1                         |
| 1930.....             | 36   | 18                                      | 43   | 50.0                             | 119.4                         |
| 1931.....             | 22   | 20                                      | 42   | 90.9                             | 190.9                         |
| 1932.....             | 19   | 18                                      | 33   | 94.7                             | 173.7                         |
| 1933.....             | 36   | 20                                      | 40   | 55.6                             | 111.1                         |
| 1934.....             | 48   | 26                                      | 49   | 54.2                             | 102.1                         |
| 1935.....             | 29   | 31                                      | 46   | 106.9                            | 158.6                         |
| 1936.....             | 43   | 30                                      | 57   | 69.8                             | 132.6                         |
| 1937.....             | 32   | 31                                      | 62   | 96.9                             | 193.7                         |
| 1938.....             | 26   | 38                                      | 43   | 135.7                            | 153.6                         |
| 1939:                 |  |   |  |                                  |                               |
| August.....           | 30   | 19                                      | 43   | 63.3                             | 143.3                         |
| September.....        | 36   | 22                                      | (9)  | 61.1                             | -----                         |
| October.....          | 34   | 23                                      | -----  | 67.6                             | -----                         |
| November.....         | 39   | 23                                      | -----  | 59.0                             | -----                         |
| December.....         | 41   | 22                                      | -----  | 53.7                             | -----                         |
| 1940:                 |  |   |  |                                  |                               |
| January.....          | 42   | 23                                      | -----  | 54.8                             | -----                         |
| February.....         | 43   | 22                                      | -----  | 51.2                             | -----                         |
| March.....            | 43   | 23                                      | -----  | 53.5                             | -----                         |

<sup>1</sup> Data from *Agricultural Statistics and Crops and Markets*.

<sup>2</sup> Data compiled by U. S. Bureau of Agricultural Economics.

<sup>3</sup> Compiled from data published in *Monthly Bulletin of Agricultural Statistics, Canada*.

<sup>4</sup> The Liverpool market has been closed since midnight Sept. 3, 1939, following the declaration of war.

#### Effects of the war.

Before the war, the nations of continental Europe were usually heavy importers of oats. The United Kingdom usually imported from 10 to 20 million bushels of oats annually; in some years a large proportion came from Argentina. France customarily imported oats from Tunisia and Algeria but, in years of short crops in northern Africa, also imported large quantities from Argentina. The German market, which was important for both Argentina and Chile, may be supplied, at least in part, by Czechoslovakia and Poland, now under German domination. In any case, so long as the blockade of European ports remains effective, continental European countries will be lost to Latin American producers. Moreover, the United Kingdom may become less important as a market for Argentine and Chilean oats.

During the World War of 1914-18, exports of oats from North and South America were 172 million bushels annually as compared with 65 million bushels during the period 1909-13. There is little reason to expect that exports will undergo a comparable expansion during the present war.

## OIL-BEARING SEEDS AND NUTS

Latin America is an important source of the world's supply of certain oil-bearing seeds and nuts; these include the flaxseed of Argentina and Uruguay and the castor beans, cottonseed, and babassu-nut kernels of Brazil. Argentina produces approximately half the total world output of flaxseed, which is the source of linseed oil, the principal oil ingredient of most paints and varnishes. Brazil now produces about 40 percent of the world output of castor beans, the entire supply of babassu kernels, and substantial quantities of cottonseed, the production of which in Brazil has quadrupled in the decade 1929-38. The increasing importance of Brazil as a supplier of these three commodities may be gaged by its total exports of oleaginous seeds and nuts, which amounted to 94,000 tons in 1929 and to 230,000 tons in 1938,<sup>1</sup> The supply of oil-bearing seeds and nuts, other than the four mentioned, in Latin American countries is unimportant in relation to the general world supply. With the exception of cottonseed, most of the Latin American production of oil-bearing seeds and nuts is exported; the extraction of vegetable oil in these countries is comparatively unimportant.

### Flaxseed.

The common cultivated flax is thought to be native to southeastern Europe and western Asia. It was introduced into the new world during the colonial period. Between 70 and 80 percent of all flax grown in the world is seed flax. Although most flax is grown principally for seed, there is a considerable production of flax for fiber in the Soviet Union, and for both fiber and seed in north-central European countries. That grown in tropical countries, particularly in India, yields seed with a higher percentage of oil than that produced in countries in the temperate zones. The seed is used almost entirely in the production of linseed oil; small quantities are used for medicinal purposes.

Linseed oil is a valuable drying oil obtained by crushing flaxseed. The seed usually yields about 33 percent of its weight in oil. The most important use of linseed oil is in the preparation of paints and varnishes, but it is also an important ingredient in the manufacture of linoleum and printers' ink. Of the total consumption of linseed oil in the United States for the period 1931-38, about 77 percent was used in paints and varnishes, 16 percent in linoleum and felt-base coverings, 5 percent in printers' ink, and 2 percent in making soap and miscellaneous articles. The byproducts, linseed cake and meal, are valuable cattle feeds and are in general demand by dairy farmers.

*Position of Latin America in world production.*—Argentina is the largest flaxseed-producing country in the world and generally accounts for about one-half of the world total. (See table 1.) The principal producing countries, with percentages of world production for the 3-year period 1934-35 to 1936-37, were: Argentina, 50 percent; the Soviet Union, 20 percent; British India, 12 percent; and the United

<sup>1</sup>Government of Brazil, *Vegetable Oils*, 1939.

States, 6 percent. In the last few years production in Argentina has declined, while that in the United States has increased; production in the other important producing countries has been fairly stable.

The countries of Latin America which produce flaxseed are Argentina and Uruguay. (See table 1.) Flax for fiber is not grown in these countries. Production in Argentina expanded markedly after the World War of 1914-18. In the period 1909-13, that country accounted for 20 percent of world production and in the period 1919-23, for 50 percent. Production in 1928-29 and 1935-36 was, respectively, 54 percent and 46 percent of the world total; in 1936-37, it amounted to 55 percent, and in 1938-39 to 43 percent.

Flax is grown in the Paraná River basin of Argentina. In Uruguay, the flax region is north and northeast of the Rio de la Plata. The growing season for Argentine farm crops is the reverse of that in the United States; flax seeding extends from the first part of May until September, and the harvest takes place in December and January. Soil, climate, and cultural practices in growing flax in Uruguay are similar to those of Argentina. Lack of moisture during the critical period of the growth of flax seriously affects the yield. The weather in Argentina is erratic, and may include heavy rainfall, dry weather at irregular intervals, or even extended droughts. This changeableness in weather conditions is indicated by the wide range of production over a series of years.

TABLE 1.—*Flaxseed: Production in principal producing countries of Latin America and of the world, in specified years, 1928-29 to 1939-40*

| Country  | 1928-29                               | 1931-32 | 1935-36 | 1936-37 | 1937-38 | 1938-39 <sup>1</sup> | 1939-40 <sup>2</sup> |
|--|---------------------------------------|---------|---------|---------|---------|----------------------|----------------------|
|  | Quantity (1,000 bushels)              |         |         |         |         |                      |                      |
| Argentina.....   | 78,377                                | 78,342  | 59,445  | 76,200  | 60,603  | 55,509               | 44,368               |
| Uruguay.....   | 2,030                                 | 4,841   | 3,007   | 3,011   | 3,728   | 4,409                | 4,693                |
| Total production of Latin American countries listed above..... | 80,407                                | 83,183  | 62,452  | 79,211  | 64,331  | 59,918               | 49,061               |
| UNITED STATES.....   | 19,118                                | 11,755  | 14,520  | 5,273   | 7,089   | 8,171                | 20,330               |
| Soviet Union.....  | 23,690                                | 33,217  | 29,133  | 29,528  | 22,211  | 28,746               | (?)                  |
| British India.....   | 15,080                                | 16,640  | 17,920  | 16,640  | 17,800  | 18,280               | 18,800               |
| Canada.....  | 3,614                                 | 2,465   | 1,667   | 1,795   | 775     | 1,389                | 2,169                |
| Poland.....  | 2,413                                 | 1,941   | 2,793   | 2,820   | 2,964   | 2,692                | (?)                  |
| Lithuania.....   | 1,000                                 | 1,003   | 1,487   | 1,444   | 1,401   | 1,161                | 1,255                |
| Estimated world production.....                                | 150,000                               | 165,000 | 135,000 | 144,000 | 130,000 | 138,000              | (?)                  |
|  | Percent of estimated world production |         |         |         |         |                      |                      |
| Latin American countries listed above.....                     | 53.6                                  | 50.4    | 46.3    | 55.0    | 49.5    | 43.4                 | (?)                  |

<sup>1</sup> Preliminary.

<sup>2</sup> Statistics of production not available, estimates based on change in area as compared with 1935.

<sup>3</sup> Not available.

Source: U. S. Bureau of Agricultural Economics.

*Latin American exports.*—Of total world trade in flaxseed, exports from Argentina usually represent about 80 percent, those from British India, 10 percent, and those from Uruguay, 4 percent. The United States and the Soviet Union have not exported flaxseed in recent years. The United States is the principal world market for imported flaxseed, taking about 20 percent of total world imports. The Netherlands, the United Kingdom, France, and Germany are

heavy importers of flaxseed; Belgium, Italy, and Sweden also take significant quantities.

Exports of flaxseed from Argentina and Uruguay to principal markets, in specified years, 1929 to 1938, are shown in tables 2 and 3. Argentina ordinarily exported about 90 percent of its production, principally to European countries and to the United States. During the period 1932-36, the principal markets for Argentine flaxseed and the percentages of average quantities exported to each were as follows: The Netherlands, 28 percent; United States, 17 percent; France, 13 percent; Belgium, 10 percent; and the United Kingdom and Germany, 9 percent each. Exports to the United Kingdom have fluctuated markedly; in 1932 they amounted to 13,291,000 bushels and in 1936, to only 2,305,000 bushels. In 1937, the United States was the principal market for Argentine flaxseed, taking 26,361,000 bushels, or 37 percent of all Argentine exports. In 1938 the United States took 26.8 percent of the Argentine flaxseed exports, by volume, as compared with 27.2 percent taken by the Netherlands, 11.7 percent by France, and 9.5 percent by Belgium. (See table 2.)

TABLE 2.—*Flaxseed: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country                                  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 56 pounds)    |         |         |         |         |         |
| Total, all countries                     | 63,677  | 79,823  | 58,576  | 70,943  | 49,806  |
| Netherlands                              | 14,455  | 24,899  | 15,526  | 13,719  | 13,541  |
| UNITED STATES                            | 21,971  | 7,149   | 14,363  | 26,361  | 13,327  |
| France                                   | 4,232   | 7,650   | 9,133   | 8,669   | 5,830   |
| Belgium                                  | 4,090   | 9,499   | 5,071   | 4,127   | 4,721   |
| Germany                                  | 6,138   | 9,303   | 3,867   | 2,943   | 2,512   |
| Italy                                    | 1,081   | 2,331   | 2,289   | 2,874   | 1,854   |
| Sweden                                   | 1,290   | 1,808   | 837     | 1,523   | 1,702   |
| United Kingdom                           | 6,666   | 13,291  | 2,305   | 3,456   | 1,396   |
| Canada                                   | 841     | 447     | 1,898   | 3,229   | 1,089   |
| All other                                | 2,913   | 3,446   | 3,247   | 4,042   | 3,844   |
| Percentage to the United States          | 34.5    | 9.0     | 24.6    | 37.2    | 26.8    |
| Value (1,000 paper pesos) <sup>1</sup>   |         |         |         |         |         |
| Total, all countries                     | 273,077 | 186,779 | 211,296 | 275,284 | 181,223 |
| Value (1,000 U. S. dollars) <sup>1</sup> |         |         |         |         |         |
| Total, all countries                     | 114,302 | 48,028  | 61,656  | 84,953  | 53,878  |
| Netherlands                              | 26,180  | 14,987  | 16,303  | 16,571  | 14,621  |
| UNITED STATES                            | 40,333  | 4,298   | 15,189  | 31,407  | 14,305  |
| France                                   | 7,407   | 4,592   | 9,629   | 10,432  | 6,350   |
| Belgium                                  | 7,364   | 5,723   | 5,314   | 4,920   | 5,084   |
| Germany                                  | 10,536  | 5,566   | 4,086   | 3,568   | 2,628   |
| Italy                                    | 1,787   | 1,400   | 2,408   | 3,441   | 2,049   |
| Sweden                                   | 2,316   | 1,087   | 891     | 1,813   | 1,871   |
| United Kingdom                           | 11,595  | 8,008   | 2,401   | 3,972   | 1,590   |
| Canada                                   | 1,622   | 272     | 2,017   | 3,985   | 1,182   |
| All other                                | 5,162   | 2,065   | 3,418   | 4,844   | 4,160   |
| Percentage to the United States          | 35.3    | 8.9     | 24.6    | 37.0    | 26.6    |
| Unit value per bushel of total exports   | \$1.80  | \$0.602 | \$1.053 | \$1.197 | \$1.082 |

<sup>1</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measure and currency by applying the following factors: 1 metric ton = 36.767 bushels; 1 gold peso = 1929, \$0.4186; 1932, \$0.2571; 1 paper peso equals 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

Exports of flaxseed from Uruguay go chiefly to Argentine ports, where the seed is transhipped and exported with Argentine seed. Of the total quantity of flaxseed exported by Uruguay in 1938, nearly 75 percent went to Argentina. Other markets have been the United States, France, Portugal, Belgium, and the Netherlands (see table 3).

Some flaxseed is pressed in Argentina and Uruguay, but these two countries export little linseed oil. Uruguay, however, exports small quantities of linseed cake and meal.

TABLE 3.—*Flaxseed: Exports from URUGUAY to principal markets, for specified years, 1929 to 1938*

| Country                                     | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 56 pounds)       |         |         |         |         |         |
| Total, all countries.....                   | 2,201   | 3,082   | 3,028   | 2,951   | 2,849   |
| Argentina.....                              | 1,417   | 1,048   | 1,926   | 1,993   | 2,144   |
| UNITED STATES.....                          | 4       |         |         |         | 328     |
| France.....                                 | 8       |         |         |         | 89      |
| Portugal.....                               |         |         | 64      | 365     | 73      |
| Belgium.....                                | 106     | 943     | 259     | 241     | 44      |
| Netherlands.....                            | 101     | 107     | 389     | 111     | 23      |
| All other.....                              | 489     | 661     | 67      | 10      | 139     |
| On order.....                               | 78      | 323     | 323     | 231     | 9       |
| Percentage to the United States.....        | 0.2     |         |         |         | 11.5    |
| Value (1,000 pesos)                         |         |         |         |         |         |
| Total, all countries.....                   | 3,625   | 3,958   | 5,316   | 4,552   | 5,098   |
| Value (1,000 U. S. dollars)                 |         |         |         |         |         |
| Total, all countries.....                   | 3,575   | 1,863   | 2,784   | 3,547   | 2,904   |
| Argentina.....                              | 2,334   | 645     | 1,749   | 2,576   | 2,181   |
| UNITED STATES.....                          | 6       |         |         |         | 328     |
| France.....                                 | 12      |         |         |         | 86      |
| Portugal.....                               |         |         | 74      | 418     | 73      |
| Belgium.....                                | 166     | 558     | 250     | 223     | 58      |
| Netherlands.....                            | 161     | 62      | 367     | 126     | 23      |
| All other.....                              | 781     | 406     | 64      | 8       | 143     |
| On order.....                               | 115     | 192     | 280     | 196     | 12      |
| Percentage to the United States.....        | 0.2     |         |         |         | 11.3    |
| Unit value per bushel of total exports..... | \$1.624 | \$0.604 | \$0.919 | \$1.202 | \$1.019 |

<sup>1</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Uruguay. Converted to U. S. measure and currency by applying the following factors: 1 metric ton=39.3679 bushels; 1 peso=1929, \$0.9863; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595.

*Trade barriers, competitive conditions, and prices.*—In the United States flax is grown chiefly for seed, practically all of which is crushed for oil. The United States ranks fourth in world production of flaxseed, but because of the large consumption, its imports have also been large. Flaxseed entering the United States is dutiable at the rate of 65 cents a bushel of 56 pounds.<sup>2</sup> Since the World War of 1914–18 the United States has been one of the world's largest importers of flaxseed. In most years, imports exceeded production, and in the period 1926–37 they supplied 57.5 percent of consumption. In 1937, 97.7 percent of United States imports of flaxseed came from Argentina; in 1938, 93.4 percent; and in 1939, 95.3 percent.

<sup>2</sup> Tariff Act of 1930, par. 762.



Within the decade 1929-38, several factors operated to disrupt Argentina's flaxseed markets. Argentina supplied most of United Kingdom imports of flaxseed until in 1932, under the Ottawa Agreements, a duty of 10 percent was imposed on flaxseed entering the United Kingdom from non-Empire sources. Following the imposition of this duty there was a sharp decrease in imports from Argentina and a marked rise in imports from British India. Argentina has been the principal source of imports of flaxseed into France. Since 1934 however, the importation into France of oleaginous seeds has been subject to quota restrictions which require the importer to furnish evidence of the importation of a certain quantity of seeds of French colonial origin. Also, since August 1933 there has been a duty on flaxseed other than from French colonial possessions. In 1934 and after, Germany's policy of curbing imports, and its drive for self-sufficiency in raw materials, has caused a decided drop in flaxseed imports from Argentina.

The United States is the largest producer of linseed oil. Prior to 1923 imports of linseed oil were substantial, but since that year they have been unimportant. Exports of linseed oil have never been significant. The United States, however, is the largest exporter of linseed cake and meal. In recent years exports of linseed cake and meal, mostly with benefit of drawback, have ranged from 36 to 58 percent of production. Imports of linseed cake and meal have been relatively small.

The average price of flaxseed at Minneapolis (No. 1 grade) has followed general price trends. It was high in the crop year 1929-30 (\$3.11 per bushel of 56 pounds) and low in 1932-33 (\$1.18 per bushel). Thereafter the price advanced until 1934-35; it declined in 1935-36, rose in 1936-37, and declined in the next 2 crop years. The price was \$1.84 per bushel in 1938-39.

Prices at Buenos Aires and at Hull, England, followed trends similar to those in the United States. During the period 1929-40, the price at Buenos Aires has been less than that at Minneapolis by more than the amount of the United States duty (except in the years of low prices, 1932-33 and 1935-36, and in the months August to November 1939). This price relationship, however, is a logical one, inasmuch as production in the United States is inadequate to satisfy domestic requirements. Prices in England have also been somewhat higher than those in Argentina because of transportation charges and, since 1932, the 10 percent duty.

Since the outbreak of war in Europe, prices of flaxseed in the United States, the United Kingdom, and Argentina have risen greatly. These prices reached heights exceeding those in any other year since 1929, but in no case did the price equal that of 1929. (See table 4.)

*Effects of the war.*—Before the war, Argentina's principal markets for flaxseed were the United States, the Netherlands, France, Belgium, Germany, Italy, Sweden, and the United Kingdom. About two-thirds of Uruguay's exports went to Argentina for reexport, and most of the remainder to the United States, Belgium, and the Netherlands. The war has seriously restricted the markets for Latin American flaxseed, inasmuch as the major portion of that seed customarily went to continental Europe. The United States has been the only other large market, having taken in recent years from 20 to 40 percent of the total Latin American exports. It is possible that war conditions

in the United States and the United Kingdom may result in appreciably expanding the market for Latin American flaxseed in those countries.

TABLE 4.—*Flaxseed: Average prices at Minneapolis, Buenos Aires, and Hull England, in crop years, 1929-30 to 1938-39, and first quarter, 1940*

[Per bushel of 56 pounds]

| Year beginning August 1 | Minneapolis<br>(No. 1) | Buenos<br>Aires<br>(La Plata) | Excess,<br>Minneapolis over<br>Buenos<br>Aires | Hull, England |        |
|-------------------------|------------------------|-------------------------------|--|---------------|--------|
|                         |                        |                               |  | La Plata      | Bombay |
| 1929-30.....            | \$3.11                 | \$2.02                        | \$0.99   | \$2.49        | \$3.22 |
| 1930-31.....            | 1.76                   | 1.04                          | .72  | 1.27          | 1.41   |
| 1931-32.....            | 1.36                   | .64                           | .72  | .80           | .99    |
| 1932-33.....            | 1.18                   | .70                           | .48  | .83           | .98    |
| 1933-34.....            | 1.87                   | 1.07                          | .80  | 1.25          | 1.43   |
| 1934-35.....            | 1.90                   | 1.02                          | .88  | 1.19          | 1.48   |
| 1935-36.....            | 1.73                   | 1.15                          | .58  | 1.32          | 1.60   |
| 1936-37.....            | 2.14                   | 1.25                          | .89  | 1.51          | 1.82   |
| 1937-38.....            | 2.07                   | 1.30                          | .77  | 1.55          | 1.80   |
| 1938-39.....            | 1.84                   | 1.11                          | .73  | 1.31          | 1.51   |
| 1939:                   |                        |                               |  |               |        |
| August.....             | 1.52                   | 1.12                          | .40  | 1.32          | 1.32   |
| September.....          | 1.78                   | 1.29                          | .49  | (1)           | (1)    |
| October.....            | 1.82                   | 1.24                          | .58  | (1)           | (1)    |
| November.....           | 1.81                   | 1.21                          | .60  | (1)           | (1)    |
| December.....           | 2.06                   | 1.26                          | .80  | 1.59          | 2.17   |
| 1940:                   |                        |                               |  |               |        |
| January.....            | 2.17                   | 1.26                          | .91  | 1.57          | 2.21   |
| February.....           | 2.14                   | 1.22                          | .92  | 1.51          | 2.00   |
| March.....              | 2.08                   | 2.32                          | .76  | 1.60          | 1.86   |
| April.....              | 2.11                   |                               |  |               |        |

<sup>1</sup> No quotation.

Source: United States prices from *Crops and Markets*. Buenos Aires prices from *Review of the River Plate*. Prices at Hull, England, from S. Doc. No. 62, *Flaxseed Prices and the Tariff*, and from *Oil, Paint and Drug Reporter*.

#### Castor beans.

The castor bean is the source of castor oil. This oil is used in the preparation of sulfonated or soluble oils for the textile industry, in the manufacture of synthetic resins, in the preparation of leather, linoleum, paints, varnishes, and lacquers, and for medicinal purposes. The seed of the castor plant, which is a perennial in the tropics and an annual in the temperate zones, is gathered principally by a large number of small producers as a side-line. These producers pick the beans from wild or semicultivated plants growing, for the most part, in out-of-the-way places, on waste land, around houses, on the margins of gardens, fields, and roads, or interplanted with other crops. The plants must be picked over several times as the seeds ripen; women and children customarily perform this labor.

*Position of Latin America in world production.*—Incomplete data indicate that the total world production of castor beans is approximately 330,000 short tons.<sup>3</sup> About 250,000 short tons are produced in Brazil and British India, while Manchuria and the Soviet Union together account for from 50,000 to 60,000 short tons. Small quantities, probably not more than 2,000 short tons, are produced in Argentina. In recent years Brazilian production has exceeded that of India. In 1937, the exports from Brazil of castor beans and of

<sup>3</sup> This amount is somewhat less than 10 percent of the world flaxseed crop. Castor beans, however, yield 42 percent oil, while flaxseed yields about 33 percent.

castor oil in terms of beans amounted to 133,000 short tons; in that year production in India totaled about 113,000 short tons.<sup>4</sup>

*Latin American exports.*—Brazilian exports of castor beans and castor oil have increased sharply during the past decade. Exports of castor oil from Brazil are small in proportion to exports of the beans and form but a small part of total world exports of that oil; they increased irregularly from 76 short tons in 1933 to 433 short tons in 1936, but in 1937 they declined to 224 short tons.<sup>5</sup> Brazil's exports of castor beans to principal markets, in specified years, 1929 to 1938, are shown in table 5. More than one-half of these exports in the last few years have gone to the United States, which in 1937 took 71,000 short tons, or 54 percent of the total. Exports to the United States market have increased since the reduction of the United States duty in the Brazilian trade agreement.<sup>6</sup> They were exceptionally large in 1937—a year affected by drought and increased business activity in the United States—but declined somewhat in 1938.<sup>7</sup> Before the war Belgium took considerable quantities of Brazilian castor beans; other markets were Italy, the United Kingdom, and France. (See table 5.) Exports from Argentina, if any, are not shown separately.

TABLE 5.—Castor beans: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country                                    | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                    |         |         |         |         |         |
| Total, all countries.....                  | 45,995  | 27,222  | 224,993 | 264,367 | 277,502 |
| UNITED STATES.....                         | 9,875   | 15,700  | 128,334 | 142,238 | (1)     |
| Belgium and Luxemburg.....                 | 22,037  | 8,618   | 34,075  | 50,681  |         |
| Italy.....                                 |         | 11      | 13,380  | 23,469  |         |
| France.....                                | 2,882   | 1,571   | 26,429  | 20,132  |         |
| United Kingdom.....                        | 9,780   | 482     | 22,245  | 20,889  |         |
| Germany.....                               | 1,387   | 840     | 466     | (1)     |         |
| All other.....                             | 34      |         | 44      | 6,958   |         |
| Percentage to the United States.....       | 21.5    | 57.7    | 57.0    | 53.8    | (1)     |
| Value (1,000 milreis)                      |         |         |         |         |         |
| Total, all countries.....                  | 12,326  | 5,951   | 73,942  | 91,299  | 79,777  |
| Value (1,000 U. S. dollars)                |         |         |         |         |         |
| Total, all countries.....                  | 1,456   | 424     | 4,834   | 6,232   | 4,627   |
| UNITED STATES.....                         | 336     | 249     | 2,737   | 3,358   | (1)     |
| Belgium and Luxemburg.....                 | 692     | 140     | 744     | 1,183   |         |
| Italy.....                                 |         | (1)     | 315     | 595     |         |
| France.....                                | 96      | 15      | 581     | 465     |         |
| United Kingdom.....                        | 289     | 8       | 446     | 459     |         |
| Germany.....                               | 42      | 12      | 10      | (1)     |         |
| All other.....                             | 1       |         | 1       | 172     |         |
| Percentage to the United States.....       | 23.1    | 58.7    | 56.6    | 53.9    | (1)     |
| Unit value per pound of total exports..... | \$0.032 | \$0.016 | \$0.021 | \$0.024 | \$0.017 |

<sup>1</sup> Not available.

<sup>1</sup> Not over 500.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0580.

<sup>4</sup> Practically all of the exports from Brazil are in the form of beans.

<sup>5</sup> Data for more recent years are not available.

<sup>6</sup> The United States has long been an insignificant producer of castor beans. See section on trade barriers, competitive conditions and prices.

<sup>7</sup> Brazil is practically the sole supplier of United States imports of castor beans.

*Trade barriers, competitive conditions, and prices.*—Castor beans are not grown in the United States in commercial quantities. In the latter part of the nineteenth century, the domestic castor crop was of some importance, but by 1900, as a result of the increasing value of substitute crops, higher labor costs, and the danger of poisoning livestock, production on a commercial scale had practically ceased. The use of castor oil in the United States, however, has not declined; on the contrary, imports of castor beans increased from 26,000 short tons in 1919 to 82,000 in 1936, all of which were crushed for oil; such imports amounted to 73,000 short tons in 1937, to 57,000 in 1938, and to 81,000 in 1939. Exports of castor oil from the United States, which go principally to Canada, the Philippines, and Central and South American countries, are small.

Under the Tariff Act of 1930,<sup>8</sup> castor beans were dutiable at one-half cent a pound. In the trade agreement with Brazil, effective January 1, 1936, the duty was reduced to one-fourth cent a pound. The oil is dutiable at 3 cents per pound.<sup>9</sup> In the United Kingdom the duty on castor beans is 10 percent ad valorem and on the oil, 15 percent; castor beans and oil from Empire countries are free of duty. France and Italy have specific duties on castor beans and very high specific duties on castor oil to protect their crushing industries.<sup>10</sup> All three of these European countries now exercise a rigid control over imports through import-licensing systems.

The average wholesale price of castor oil (medicinal) at New York was 13.2 cents per pound in 1929; it declined to 9.5 cents in 1933, and rose to 10.5 cents in 1936-37. In 1938-39, it was 9.5 cents per pound. With the outbreak of hostilities, the average price rose because of the increased demand for wartime uses—from 8.5 cents per pound in August 1939 to 11 cents in the following October. Thereafter the price continued to rise, reaching a level of 13 cents in the first 4 months of 1940. (See table 6.)

TABLE 6.—*Castor oil, medicinal: Average wholesale price at New York, 1929-39, and by months, August 1939-April 1940*

| Year | Cents per pound | Year and month | Cents per pound |
|------|-----------------|----------------|-----------------|
| 1929 | 13.2            | 1939:          |                 |
| 1930 | 12.0            | August         | 8.5             |
| 1931 | 11.5            | September      | 9.1             |
| 1932 | 9.8             | October        | 11.0            |
| 1933 | 9.5             | November       | 11.4            |
| 1934 | 10.0            | December       | 12.3            |
| 1935 | 10.1            | 1940:          |                 |
| 1936 | 10.5            | January        | 13.0            |
| 1937 | 10.5            | February       | 13.0            |
| 1938 | 9.5             | March          | 13.0            |
| 1939 | 9.5             | April          | 13.0            |

Source: U. S. Bureau of Labor Statistics.

*Effects of the war.*—War conditions in Europe have curtailed the export of castor beans from Latin America, and important European markets have been lost entirely as a result of the blockade of European ports. This loss, however, may be offset in whole or in part by an

<sup>8</sup> Tariff Act of 1930, par. 762.

<sup>9</sup> Tariff Act of 1930, par. 53.

<sup>10</sup> In France the duty on castor beans is 26 francs per 100 gross kilos and on castor oil, 456 francs per 100 gross kilos; in Italy the duties are 80 lire per 100 kilos and 234 lire, respectively. In France castor oil is also subject to an import tax of 9 percent of the duty-paid value. The oil from assimilated colonies is subject to this tax, but both the beans and oil from such colonies are free of duty.

increase in the demand for castor beans in the United Kingdom and the United States.

#### Cottonseed.

In both volume of output and oil equivalent, cottonseed, a by-product of cotton, is the most important of the oil-bearing seeds and nuts. In international trade, however, it is relatively unimportant, most of it being processed within the country where grown.<sup>11</sup>

*Position of Latin America in world production.*—The world output of cottonseed, which usually ranges from 12 to 13 million short tons, increased to about 16 million in 1936-37 and to nearly 19 million in 1937-38; this record production was largely the result of the increased cotton crop in the United States in that year. The United States customarily produces about 35 percent of the total, and from two to three times as much as India, the second largest producer. The output of China and that of the Soviet Union both exceed that of Brazil, which is by far the largest producer in Latin America. Brazil, Peru, and Mexico together produce approximately 10 percent of the total world output. Cottonseed production in Brazil has increased rapidly; it rose from 315,000 short tons in 1929-30 to 1,228,000 short tons in 1937-38.

*Latin American exports.*—Before the war scarcely more than 5 percent of the world output of cottonseed entered international trade in the form of seed, the total annual world imports amounting to between 500,000 and 1 million short tons. The United Kingdom was by far the most important market, taking about 85 percent of the total. Japan was the only other importer of consequence. Egypt supplied about one-half of total world exports. Exports from Brazil—121,000 short tons in 1935, 90,000 in 1936, and 68,000 in 1938—were less than 10 percent of Brazilian production; the decline after 1935 reflected the growth of the oil-milling industry in that country. Peru also reported small exports of cottonseed. Most of the exports from Latin America went to the United Kingdom. Exports of cottonseed from Brazil to principal markets, in specified years, 1929 to 1938, are shown in table 7.

Brazilian exports of cottonseed oil, which amounted to 2,500 short tons in 1934, increased to 25,700 short tons in 1936.<sup>12</sup> Peruvian exports of cottonseed oil are negligible.

In the export trade of Latin America, cottonseed cake and meal play a much more important role than does cottonseed itself. In 1936 Brazil ranked second among world exporters of cottonseed cake and meal, and Peru ranked fourth. Of the total world exports in 1936, amounting to 563,000 short tons, Egypt exported 221,000; Brazil, 185,000;<sup>12</sup> China, 91,000; and Peru, 50,000 short tons. Exports from Brazil reflect the large increase in cotton production and cottonseed-oil extraction which has occurred there in recent years. The comparative lack of intensive livestock feeding in Latin American countries limits domestic demand for concentrated feedstuffs, and thus necessitates the export of most of the oil cake produced. Prior to 1939 the major portion of the exports of Brazil and Peru went to Denmark and

<sup>11</sup> The average yield of a short ton of short-staple cottonseed is about 305 pounds (15 percent) of crude oil, about 900 pounds (45 percent) of cake or meal, about 515 pounds (26 percent) of hulls, and about 145 pounds (7 percent) of linters (cotton fiber). The remainder, averaging about 135 pounds, represents dirt, foreign material, and loss. U. S. Bureau of the Census, *Cotton Production and Distribution*, Bulletin No. 175, p. 47.

<sup>12</sup> Data for more recent years are not available.

the United Kingdom, which together took 80 to 90 percent of the total world exports of cottonseed cake and meal.

TABLE 7.—*Cottonseed: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938*

| Country                                    | 1929    | 1932    | 1936     | 1937     | 1938     |
|--|---------|---------|----------|----------|----------|
| Quantity (1,000 pounds)                    |         |         |          |          |          |
| Total, all countries.....                  | 53, 537 | 1, 834  | 180, 671 | 144, 939 | 135, 825 |
| United Kingdom.....                        | 53, 272 | 1, 834  | 174, 825 | 138, 264 | } (1)    |
| Germany.....                               | 221     |         | 1, 378   | 4, 895   |          |
| Belgium.....                               | 44      |         | 1, 446   | 1, 294   |          |
| All other.....                             |         |         | 3, 022   | 486      |          |
| Value (1,000 milreis)                      |         |         |          |          |          |
| Total, all countries.....                  | 7, 250  | 204     | 18, 856  | 19, 355  | 14, 867  |
| Value (1,000 U. S. dollars)                |         |         |          |          |          |
| Total, all countries.....                  | 856     | 15      | 1, 233   | 1, 321   | 862      |
| United Kingdom.....                        | 852     | 15      | 1, 189   | 1, 265   | } (1)    |
| Germany.....                               | 3       |         | 9        | 38       |          |
| Belgium.....                               | 1       |         | 13       | 12       |          |
| All other.....                             |         |         | 22       | 6        |          |
| Unit value per pound of total exports..... | \$0.016 | \$0.008 | \$0.007  | \$0.009  | \$0.006  |

<sup>1</sup> Not available.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0580.

*Trade barriers, competitive conditions, and prices.*—The United States is the world's largest producer and consumer of cottonseed, but it neither exports nor imports significant quantities of that product in the form of seed. This country usually exports substantial amounts of cottonseed oil, but in several recent years, because of the effects of droughts on the domestic production of other fats and oils, it has imported appreciable quantities of cottonseed.

Cottonseed entering the United States is dutiable at the rate of one-third of 1 cent a pound.<sup>13</sup> Cottonseed oil pays a duty of 3 cents a pound.<sup>14</sup> The United States produces more than one-third of the world output of cottonseed, but consumes practically its entire crop. Imports, which were substantial prior to 1927, have since been very small; in 1937 they amounted to 97,000 short tons, of which 22,500 tons came from Brazil. Exports have been insignificant since 1913. Since 1909 the United States has crushed about 75 percent of its output of cottonseed (the remainder being used for fertilizer or feed), and until 1922 found a ready market in Europe for substantial amounts of the oil.

Cottonseed cake and meal entering the United States is dutiable at three-tenths of 1 cent a pound.<sup>15</sup> Imports of cottonseed cake and meal into the United States have never been important; in 1937 they amounted to 21,000 short tons. Domestic production in the same year totaled over 2 million short tons.

<sup>13</sup> Tariff Act of 1930, par. 762.

<sup>14</sup> Tariff Act of 1930, par. 54.

<sup>15</sup> Tariff Act of 1930, par. 730.

In the United Kingdom, the principal market for exports of Latin American cottonseed and its products (oil, cake, and meal), the duty on cottonseed is 3 percent ad valorem, and, on cottonseed oil and cottonseed cake and meal, 10 percent. Imports of these products from Empire countries (principally from India) are free of duty. Since the outbreak of the war, however, imports of these products into the United Kingdom have been subject to rigid control under a system of import licenses.

The price of cottonseed in the United States followed the general price trend during the period 1929-33; thereafter it was affected by the agricultural program of the United States for cotton. The average price for cottonseed received by farmers in the United States was high in 1929 (\$30.97 per short ton) and low in 1931 (\$8.91 per short ton). After 1931 the price increased slowly until 1934 when, as a result of restricted production, it reached \$33.09 per short ton. The average price remained high in 1935-36 but declined by about one-third during the period 1937-39. Following the outbreak of war in Europe the average price of cottonseed in the United States advanced from \$16.24 per short ton in August 1939 to \$20.56 in September. Thereafter it continued to rise, reaching a peak of \$27.18 in April 1940. Since then the price has declined somewhat; it was \$25.54 in June 1940. (See table 8.)

The average wholesale price of edible cottonseed oil at New York has followed a trend somewhat similar to that of cottonseed. The average price of edible cottonseed oil, however, was lowest in 1932 (3.8 cents per pound) and highest in 1935 (10.4 cents per pound). Thereafter it declined, reaching 6.6 cents per pound in 1939. With the beginning of war in Europe the price of cottonseed oil advanced from 5.5 cents per pound in August 1939 to 7.1 cents in September. Since then the price has averaged about 6.8 cents per pound. (See table 9.)

TABLE 8.—Cottonseed: Prices<sup>1</sup> received by farmers in the United States, 1929-39, and by months, July 1939-June 1940

| [Per short ton]     |               |                 |               |
|---------------------|---------------|-----------------|---------------|
| Year beginning July | Average price | Year and month  | Average price |
| 1929 .....          | \$30.97       | 1939:           |               |
| 1930 .....          | 22.09         | July .....      | \$20.70       |
| 1931 .....          | 8.91          | August .....    | 16.24         |
| 1932 .....          | 10.23         | September ..... | 20.56         |
| 1933 .....          | 12.85         | October .....   | 22.88         |
| 1934 .....          | 33.09         | November .....  | 23.75         |
| 1935 .....          | 30.54         | December .....  | 24.75         |
| 1936 .....          | 33.41         | 1940:           |               |
| 1937 .....          | 19.52         | January .....   | 26.00         |
| 1938 .....          | 21.80         | February .....  | 26.64         |
| 1939 .....          | 21.20         | March .....     | 26.84         |
|                     |               | April .....     | 27.18         |
|                     |               | May .....       | 26.09         |
|                     |               | June .....      | 25.54         |

<sup>1</sup> Annual prices are averages of the prices for the 15th of each month.

Source: U. S. Department of Agriculture, *Crops and Markets*.

TABLE 9.—*Edible cottonseed oil: Average wholesale price at New York, 1929-39, and by months, August 1939-April 1940*

| Year      | Cents per pound | Year and month | Cents per pound |
|-----------|-----------------|----------------|-----------------|
| 1929..... | 9.7             | 1939:          |                 |
| 1930..... | 8.1             | August.....    | 5.5             |
| 1931..... | 6.0             | September..... | 7.1             |
| 1932..... | 3.8             | October.....   | 6.8             |
| 1933..... | 4.5             | November.....  | 6.5             |
| 1934..... | 6.5             | December.....  | 6.9             |
| 1935..... | 10.4            | 1940:          |                 |
| 1936..... | 9.8             | January.....   | 6.9             |
| 1937..... | 9.2             | February.....  | 6.9             |
| 1938..... | 7.9             | March.....     | 6.7             |
| 1939..... | 6.6             | April.....     | 6.8             |

Source: U. S. Bureau of Labor Statistics.

*Effects of the war.*—The war may cause a decline in Latin American exports of cottonseed and, more especially, of cottonseed cake and meal. Latin America's dependence on European markets has been important only for the cake and meal. The United States has imported substantial quantities of cottonseed oil in some recent years, largely as a result of domestic shortages of fats and oils, and may continue to do so because of its inability to obtain oils and fats from customary sources. Latin America will probably find considerable difficulty in maintaining exports of cake and meal, inasmuch as the only large markets for these are in Europe.

#### Babassu-nut kernels.

A Brazilian species of oil palm produces babassu nuts, the kernels of which are imported into the United States in considerable quantities for the production of babassu oil. The kernels yield about 65 percent of oil. This oil is similar in properties and uses to coconut oil. It is used principally in the production of margarine and other edible products, and in the manufacture of soap. The cake is used for livestock feed.

*Brazilian production.*—Brazil is the only important source of babassu nuts. The tree grows wild throughout the tropical regions in that country; more than 95 percent of the exports, however, come from the State of Maranhao. It has been estimated that the total annual yield of the Brazilian babassu forests exceeds 1 million short tons of kernels. As neither highways nor railroads penetrate the forests, collection of the nuts is practicable only in areas adjacent to river transportation. Several unsuccessful attempts at large-scale exploitation of the babassu forests have been made by foreign firms. The failure of these attempts is attributed to the difficulties of gathering and transporting the nuts, and particularly to the unavailability of a satisfactory machine for cracking their thick, hard shell. Most of the nuts are cracked by arduous hand labor and the kernels picked out by women and children, 10 to 20 pounds of kernels representing a day's labor.

*Brazilian exports.*—Accurate data on production of babassu-nut kernels in Brazil are not available. The quantities exported from Brazil, however, approximate production, inasmuch as there is little processing within the country. Exports from Brazil to principal markets, in specified years, 1929 to 1938, are shown in table 10.



Exports of babassu nuts during the period 1922-32 went to Europe, principally to Germany, the Netherlands, and Denmark. Since 1935 the greatly increased exports of these nuts have gone almost entirely to the United States, because United States excise taxes on certain oils and fats derived from imported materials have given a competitive advantage to babassu oil, which remained free of duty and tax in this market.

In recent years small quantities of babassu oil have been exported from Brazil; in 1936 shipments totaled 424 short tons.<sup>16</sup> Official information on the distribution of these exports is not available.<sup>17</sup> Brazil also exports small quantities of babassu-oil cake and meal. Exports averaged about 1,000 short tons annually, and went principally to Germany and the United Kingdom.

TABLE 10.—*Babassu nuts: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938*

| Country                                    | 1929             | 1932    | 1936    | 1937             | 1938             |
|--|------------------|---------|---------|------------------|------------------|
| Quantity (1,000 pounds)                    |                  |         |         |                  |                  |
| Total, all countries.....                  | 19,182           | 19,658  | 67,814  | 48,490           | 66,688           |
| UNITED STATES.....                         | 2                |         | 66,632  | 48,369           |                  |
| Denmark.....                               | 3,334            | 3,236   | 674     |                  |                  |
| Germany.....                               | 12,413           | 6,742   | 314     | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Netherlands.....                           | 1,560            | 5,909   | 111     |                  |                  |
| All other.....                             | 1,873            | 3,771   | 83      | 121              |                  |
| Percentage to the United States.....       | ( <sup>2</sup> ) |         | 98.3    | 99.8             | ( <sup>1</sup> ) |
| Value (1,000 milreis)                      |                  |         |         |                  |                  |
| Total, all countries.....                  | 6,109            | 5,085   | 39,122  | 39,641           | 38,565           |
| Value (1,000 U. S. dollars)                |                  |         |         |                  |                  |
| Total, all countries.....                  | 722              | 362     | 2,557   | 2,706            | 2,237            |
| UNITED STATES.....                         | ( <sup>3</sup> ) |         | 2,523   | 2,699            |                  |
| Denmark.....                               | 123              | 58      | 21      |                  |                  |
| Germany.....                               | 470              | 125     | 8       | ( <sup>1</sup> ) | ( <sup>1</sup> ) |
| Netherlands.....                           | 59               | 110     | 3       |                  |                  |
| All other.....                             | 70               | 69      | 2       | 7                |                  |
| Percentage to the United States.....       | ( <sup>3</sup> ) |         | 98.6    | 99.7             | ( <sup>1</sup> ) |
| Unit value per pound of total exports..... | \$0.038          | \$0.018 | \$0.038 | \$0.056          | \$0.034          |

<sup>1</sup> Not available.

<sup>2</sup> Less than one-tenth of 1 percent.

<sup>3</sup> Not over \$500.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 milreis=1929, \$0.1181; 1912, \$0.0712; 1936, \$0.03337; 1937, \$0.03825; 1938, \$0.0580.

*Trade barriers, competitive conditions, and prices.*—Both babassu kernels and babassu oil were bound by the United States free of duty and of import excise taxes in the trade agreement with Brazil, effective January 1, 1936. In the United States, babassu oil competes directly with coconut oil and palm-kernel oil, which in recent years have been subject to excise taxes in addition to duties.<sup>18</sup> United

<sup>16</sup> Data for more recent years are not available.

<sup>17</sup> Presumably such oil is shipped to the United States.

<sup>18</sup> Coconut oil from the Philippines, the principal source, is free of duty but subject to tariff quotas and to processing taxes.

States statistics show imports of babassu-nut kernels from Brazil in 1938 amounting to 25,000 short tons, valued at \$1,683,915, and in 1939 to 57,000 short tons, valued at \$3,494,674. Although, increasing, the imports of babassu-nut kernels are very small as compared with the imports of copra and coconut oil and of palm-kernel oil and palm kernels.

Prior to 1936 there were no published quotations of the price of babassu oil in the United States. The average price at New York in 1936 was 8 cents per pound; in 1937, it rose to 8.9 cents. Thereafter it declined to 6.4 cents in 1938-39. With the outbreak of war in Europe the price rose from 5.8 cents in August 1939 to 7 cents in September and October. After October the price declined steadily, reaching 6.1 cents in May 1940. (See table 11.)

TABLE 11.—*Babassu oil: Average price per pound at New York, 1936-39, and by months, August 1939-May 1940*

| Year              | Cents per pound | Year and month | Cents per pound | Year and month | Cents per pound |
|-------------------|-----------------|----------------|-----------------|----------------|-----------------|
| 1936 <sup>1</sup> | 8.0             | 1939:          |                 | 1940:          |                 |
| 1937 <sup>2</sup> | 8.9             | August         | 5.8             | January        | 6.5             |
| 1938              | 6.4             | September      | 7.0             | February       | 6.3             |
| 1939              | 6.4             | October        | 7.0             | March          | 6.2             |
|                   |                 | November       | 6.7             | April          | 6.2             |
|                   |                 | December       | 6.6             | May            | 6.1             |

<sup>1</sup> Earliest available year.

<sup>2</sup> Futures.

Source: U. S. Bureau of Agricultural Economics.

*Effects of the war.*—Practically all Brazilian exports of babassu nuts in recent years have gone to the United States, and so long as these nuts and the derived oil remain exempt from import duties and excise taxes in the United States, as they now are under the trade agreement with Brazil, no other market is likely to attract them. Under these circumstances, war conditions are not likely to have an adverse effect on Latin American exports of babassu nuts; indeed it is probable that they will be stimulated.

#### Other oil-bearing seeds and nuts.

A wide variety of oil-bearing seeds and nuts, other than those mentioned above, grows in the Latin American area, but most of them are not yet commercially important. Brazil has the greatest potential resources of oil-bearing seeds and nuts, and, in connection with its program to foster industry, is attempting to build up the domestic oil-extraction industry.

Within the last few years several oil-bearing nuts (other than babassu nuts), grown principally on species of oil palms,<sup>19</sup> have been exported from Brazil to the United States. The more important of these are ouricury nuts, muru muru nuts, tucum nuts, and oiticica seeds.<sup>20</sup> Like the babassu palm, the trees which produce these nuts and seeds grow wild throughout large areas in tropical Brazil. Total exports of the most important of these from Brazil and exports to the United States are shown in table 12.

<sup>19</sup> Not the West African oil palm, the source of the palm fruit which yields palm oil, palm-nut kernels, and palm-kernel oil.

<sup>20</sup> These nuts enter the United States free of duty and excise taxes.

TABLE 12.—Miscellaneous oil-bearing seeds and nuts: Exports from BRAZIL, 1935-38

[In short tons]

| Commodity                    | 1935             | 1936             | 1937             | 1938 |
|------------------------------|------------------|------------------|------------------|------|
| Total exports                |                  |                  |                  |      |
| Ouricury-nut kernels.....    |                  | 1,733            | 3,548            | }    |
| Muru muru-nut kernels.....   | 317              | 1,393            | 2,191            |      |
| Tucum-nut kernels.....       | 1,731            | 2,464            | 4,821            |      |
| Oiticica seeds.....          | 9                | 23               |                  |      |
| Exports to the United States |                  |                  |                  |      |
| Ouricury-nut kernels.....    |                  |                  | 3,398            | }    |
| Muru muru-nut kernels.....   |                  |                  | 2,191            |      |
| Tucum-nut kernels.....       | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 4,683            |      |
| Oiticica seeds.....          |                  |                  | ( <sup>1</sup> ) |      |

<sup>1</sup> Not available.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil.

Ouricury kernels yield an oil similar to coconut oil; the oil of tucum kernels is a hard oil similar to palm oil which is suitable for edible purposes or for soap making. The oil from muru muru kernels is also employed in soap making. Oiticica oil, a high-grade drying oil, is said to have several advantages over linseed oil for paint. The exportation of oiticica seeds from Brazil was prohibited by government decree in November 1938. It is reported that 13 mills for the extraction of oiticica oil have been established in Brazil. The production of oiticica seeds in Brazil in 1936 was 22,000 short tons; in 1937, 16,000 tons; and in 1938, 26,000 tons. Exports of oiticica oil to the United States from Brazil amounted to 1,400 short tons in 1936, to 2,000 tons in 1937, and to 2,700 tons in 1938.

Almost all of Brazil's production of miscellaneous oil-bearing materials is exported, and practically all of the exports in recent years have gone to the United States. The war, therefore, is not likely to have an adverse effect on this trade.

## PETROLEUM AND PRODUCTS

Crude petroleum is the source of many products which, because of their localized origins and their widespread use, form an important part of international trade. These products, including the crude oil, move from about 12 principal producing countries to every inhabited part of the world. Of the principal products derived from petroleum, gasoline, kerosene, gas and fuel oils, and lubricating oil constitute over 90 percent, in terms of both quantity and value.<sup>1</sup>

### Position of Latin America in world production.

The three leading producers of crude petroleum are the United States (by far the largest producer), the Soviet Union, and Venezuela. World production of crude petroleum in 1939 amounted to slightly more than 2 billion barrels; of this amount the United States produced 63 percent, the Soviet Union 10.5 percent, and Venezuela 10 percent. Other important producers in that year were Iran (4 percent), the Netherlands Indies (3 percent), Rumania (2.3 percent), Mexico (2.1 percent), Iraq (1.5 percent), and Colombia (1.1 percent). (See table 1.)

The trend of Latin American petroleum production, like that of the world, has been upward in recent years, and the proportion of the world output accounted for by Latin America as a whole did not change materially in the period 1929-39. The six Latin American countries which are important producers of petroleum supplied about 15 percent of the world production of crude petroleum. In order of importance as producers of petroleum, these countries are Venezuela, Mexico, Colombia, Argentina, Peru, and Ecuador.

The major portion of the increase in Latin American production of petroleum in 1939 over 1929 was accounted for by Venezuela, which during that period supplied about two-thirds of the total Latin American output. Mexican production, which increased steadily from 1932 to 1937 and which was considerably above the 1929 level in the latter year, declined sharply in 1938 and though it increased somewhat in 1939, remained below the 1929 figure.<sup>2</sup> In Colombia, the third most important Latin American producing country, output in 1939 was moderately above that of 1929. Until very recently, Colombian production was limited by the capacity of the pipe-line from the developed petroleum fields to the coast; in October 1939, however, a pipe-line to serve a new Colombian field was completed, thus increasing substantially the capacity of Colombia as an exporter of petroleum. Argentina's production was almost twice as great in 1939 as in 1929 but was only about 6 percent of the total for the six Latin American countries. Peru's production was moderately greater in 1939 than in 1929, and Ecuador's production showed a large relative increase, but in 1939 Peru supplied only about 4 percent and Ecuador less than 1 percent of the total for the six countries.

<sup>1</sup> The ratio expressed in terms of value is higher than that expressed in terms of quantity.

<sup>2</sup> Production in Mexico was affected in 1938-39 by the controversy between the Government and foreign oil companies which have large interests in the Mexican oil industry.

All the important Latin American producing countries except Argentina produce more oil than they consume. Crude oil accounts for nearly 90 percent (in quantity) of the total petroleum exports of the group. Colombia and Ecuador export only crude oils, and most of the crude oil from Venezuela is sent to the nearby Netherlands possessions for processing. Only Peru and Mexico export a significant portion of their petroleum production in the form of refined products.

The development of petroleum production in Latin American countries has been in large part financed and controlled by non-Latin American enterprises.

TABLE 1.—Crude petroleum: Production in principal producing countries of Latin America and of the world, in specified years, 1929 to 1939<sup>1</sup>

| Country                                    | 1929             | 1932             | 1936             | 1937             | 1938             | 1939 <sup>1</sup> |
|--|------------------|------------------|------------------|------------------|------------------|-------------------|
| Quantity (1,000 barrels)                   |                  |                  |                  |                  |                  |                   |
| <b>Latin American countries:</b>           |                  |                  |                  |                  |                  |                   |
| Venezuela.....                             | 137,472          | 116,541          | 154,794          | 185,230          | 188,174          | 205,956           |
| Mexico.....                                | 44,688           | 32,805           | 41,028           | 46,690           | 38,279           | 42,779            |
| Colombia.....                              | 20,385           | 16,414           | 18,756           | 20,599           | 21,582           | 22,037            |
| Argentina.....                             | 9,391            | 13,139           | 15,458           | 16,355           | 17,076           | 18,486            |
| Peru.....                                  | 13,422           | 9,899            | 17,693           | 17,457           | 15,839           | 13,508            |
| Ecuador.....                               | 1,381            | 1,597            | 1,942            | 2,161            | 2,246            | 2,313             |
| <b>Total.....</b>                          | <b>226,739</b>   | <b>190,395</b>   | <b>249,571</b>   | <b>289,492</b>   | <b>283,196</b>   | <b>305,079</b>    |
| <b>Other countries:</b>                    |                  |                  |                  |                  |                  |                   |
| <b>UNITED STATES.....</b>                  | <b>1,007,323</b> | <b>785,159</b>   | <b>1,099,687</b> | <b>1,279,160</b> | <b>1,214,355</b> | <b>1,264,256</b>  |
| Soviet Union <sup>2</sup> .....            | 99,507           | 154,367          | 186,206          | 193,241          | 204,956          | 212,500           |
| Iran.....                                  | 42,145           | 49,471           | 62,718           | 77,804           | 78,372           | 78,151            |
| Netherlands Indies.....                    | 39,279           | 39,001           | 50,025           | 56,724           | 57,319           | 61,580            |
| Rumania.....                               | 34,758           | 53,815           | 63,659           | 52,452           | 46,366           | 45,996            |
| Iraq.....                                  | 798              | 836              | 30,406           | 31,836           | 32,643           | 30,791            |
| All other.....                             | 85,318           | 36,633           | 49,268           | 58,305           | 68,517           | 78,419            |
| <b>Total world production.....</b>         | <b>1,485,867</b> | <b>1,309,677</b> | <b>1,791,540</b> | <b>2,039,014</b> | <b>1,987,723</b> | <b>2,076,772</b>  |
| Percent of total world production          |                  |                  |                  |                  |                  |                   |
| Latin American countries listed above..... | 15.3             | 14.5             | 13.9             | 14.2             | 14.2             | 14.7              |

<sup>1</sup> Preliminary.

<sup>2</sup> Exclusive of Sakhalin.

<sup>3</sup> Year ended Sept. 30.

Source: U. S. Bureau of Mines.

#### Latin American exports.

Considering petroleum and products of petroleum together, the United States and Venezuela are by far the world's largest exporters; other important exporting countries (named in the order of their importance in 1938) were Iran, the Netherlands Indies, Rumania, Iraq, Colombia, Trinidad, Mexico, and Peru. Latin American countries account for nearly 40 percent (in terms of quantity) of total exports from the principal exporting countries, although they produce only 15 percent of the world's output. This situation has occurred because two of the largest producers, the United States and the Soviet Union, consume a very large part of their own production, whereas the Latin American countries, except Argentina and Mexico, export almost all the oil that they produce. In 1938 Venezuela alone accounted for 30 percent of all exports from the principal exporting countries.

Among the Latin American countries, Venezuela, Colombia, Mexico, and Peru are the principal exporters of petroleum and its products. Total exports from Latin America amounted in 1938 to 233 million

barrels, of which Venezuela supplied nearly 80 percent, Colombia 8 percent, Mexico 6 percent, and Peru 5.5 percent.

Outside of the United States and the Soviet Union, which lead in consumption as well as production of petroleum, the leading markets for this product are the United Kingdom, France, Canada, Germany, and Japan. From 80 to 90 percent of the total imports of the United Kingdom and Germany are refined products, whereas France and Canada for the most part process imported crude in local refineries. In spite of its dominant position in petroleum production, the United States ranks second only to the United Kingdom in volume of imports. In the United States the domestic industry has an extensive export business in both crude petroleum and products, and uses some crude and heavy fuel oil from Latin American countries either as raw material for exports or for domestic consumption.

Although international-trade statistics show that the Netherlands West Indies is the largest importer of crude petroleum in the world, most of its imported oil is shipped to consuming countries in the form of refined products. Two very large refineries on the islands operate almost entirely on Venezuelan crude, and receive three-fourths of Venezuela's exports, so that in an economic sense, Venezuela and the Netherlands West Indies form a unit in the producing industry.<sup>3</sup>

The Netherlands West Indies is one of the three largest exporters of petroleum and petroleum products in the world. In 1938 exports from this area amounted to nearly 163 million barrels. Of this amount, fuel oil constituted 60 percent, gasoline 19 percent, and Diesel oil and gas oil 6 percent each; the remaining 9 percent consisted of kerosene, lubricating oil, and crude oil. The principal markets were the United Kingdom, the United States, the Netherlands, and Germany. Exports of heavy fuel oil, the largest single classification in exports from the Netherlands West Indies, aggregated 97.4 million barrels in 1938. These exports went to a large number of countries, among the more important of which were the United States (26.6 percent), the United Kingdom (14.3 percent), Argentina (9.1 percent), Germany (6.7 percent), Italy (5.6 percent), the Netherlands (4.7 percent), French Africa (4 percent), Brazil (3.3 percent), Gibraltar (2.6 percent), Panama Canal Zone (2.4 percent), and France (2.2 percent).<sup>4</sup>

Exports of petroleum and products from the principal producing countries of Latin America, in specified years, 1929 to 1938, are shown in table 2. Exports from these countries to principal markets in specified years, 1929 to 1938, are shown in tables 4 to 23 at the end of this section.

<sup>3</sup> In recent years approximately one-half of the exports of crude petroleum from Colombia has also been sent to the Netherlands West Indies for refining and export. Such Colombian exports amounted to 8.5 million barrels in 1938; exports of crude petroleum from Venezuela to the Netherlands West Indies amounted to 145 million barrels in that year (see tables 6 and 21 at the end of this section).

<sup>4</sup> Apart from heavy fuel oil, the principal petroleum products exported from the Netherlands West Indies have been gasoline, Diesel oil, gas oil, kerosene, lubricating oil, and crude oil. Exports of gasoline from the Netherlands West Indies amounted in 1938 to 31 million barrels, of which the United Kingdom took 59 percent, the Netherlands 11 percent, Germany 5 percent, Brazil 4 percent, and Sweden 3 percent. Exports of Diesel oil in 1938 were 9.8 million barrels; of this amount 24 percent went to the United Kingdom and 10 percent each to Norway and the Netherlands; other markets were Gibraltar, Germany, the Canary Islands, and the Panama Canal Zone. Exports of gas oil, amounting to 9.6 million barrels in 1938, went principally to the United Kingdom (23 percent), the Netherlands (22 percent), Germany (15 percent), and Sweden (12 percent). Kerosene, aggregating 5.2 million barrels in that year, was sold to the United Kingdom (59 percent), the Netherlands (21 percent), the United States (12 percent), and Sweden (8 percent). Lubricating oil (2.3 million barrels in 1938) went to the United States (42 percent), the Netherlands (36 percent), the United Kingdom (14 percent), and Germany (8 percent). Exports of crude oil in 1938 amounted to 7.8 million barrels, of which the Netherlands took 35 percent, France 25 percent, the United States 20 percent, and Italy 14 percent.

TABLE 2.—*Petroleum and products (gasoline, kerosene, gas and fuel oils, and lubricating oil): Exports from principal producing countries of Latin America, and from other producing countries, in specified years, 1929 to 1938*

| Country   | 1929   | 1932                | 1936                | 1937                | 1938    |
|---|--|---------------------|---------------------|---------------------|---------|
|   | Quantity (1,000 barrels)                             |                     |                     |                     |         |
| Venezuela.....  | 129,765  | 138,900             | 157,025             | 174,850             | 185,126 |
| Colombia.....   | 18,479   | 15,855              | 16,437              | 17,743              | 18,453  |
| Mexico.....   | 25,339   | <sup>1</sup> 21,178 | 22,605              | 21,901              | 13,803  |
| Peru.....   | 11,812   | 8,741               | 15,850              | 15,820              | 13,135  |
| Ecuador.....  | 1,185  | 1,464               | 1,281               | 1,889               | 1,686   |
| Argentina.....  | 58   | 433                 | 679                 | 708                 | 541     |
| Total exports from Latin American countries listed above..... | 186,638  | 161,571             | 213,877             | 232,911             | 232,744 |
| UNITED STATES.....  | 205,084  | 97,047              | 123,619             | 164,330             | 185,492 |
| Iran.....   | <sup>2</sup> 38,318                                  | <sup>3</sup> 37,998 | <sup>4</sup> 49,421 | <sup>5</sup> 57,977 | 67,312  |
| Netherlands Indies.....                                       | 26,969   | 29,418              | 39,901              | 44,275              | 45,026  |
| Rumania.....  | 21,518   | 38,750              | 51,887              | 42,825              | 34,424  |
| Iraq.....   |  |                     | 27,536              | 29,485              | 30,955  |
| Trinidad.....   | 8,237  | 9,628               | 12,406              | 14,097              | 16,383  |
| Soviet Union.....   | <sup>4</sup> 27,253                                  | 45,324              | 19,263              | 11,391              | 4,916   |
| Total exports from countries listed above.....                | 514,017  | 419,736             | 537,912             | 597,291             | 617,252 |
|   | Percent of total exports from countries listed above |                     |                     |                     |         |
| Latin American countries listed above.....                    | 36.3   | 38.5                | 39.8                | 39.0                | 37.7    |

<sup>1</sup> Statistics are for the year 1933.

<sup>2</sup> Year ended Mar. 21.

<sup>3</sup> Year ended June 21.

<sup>4</sup> Year ended Sept. 30.

NOTE.—Exports from the Netherlands West Indies are not included in this table because such exports would duplicate those of certain Latin American countries.

Source: *International Petroleum Trade*.

### Trade barriers, competitive conditions, and prices.

Crude petroleum and its products enter the United States free of duty,<sup>5</sup> but since the passage of the Revenue Act of 1932, they have been subject to import-excite taxes.<sup>6</sup> The tax on crude and topped crude petroleum and fuel oil, including gas oil, was reduced in the trade agreement with Venezuela (provisionally effective December 16, 1939) from 0.5 cent per gallon to 0.25 cent per gallon; the reduction, however, is limited by quota to a combined quantity of these products not greater than 5 percent of the quantity of crude petroleum refined in United States refineries in the preceding year. The agreement also provided for the continued free entry of these same products for ships' stores (mainly fuel oil).

The United Kingdom, which is the largest market for petroleum and petroleum products moving in international trade, imposes a duty of 10 percent ad valorem on imports of crude petroleum and higher duties on refined products. Both petroleum and its products, when imported from Empire countries, are free of duty, but such countries are unimportant suppliers.

Other important export markets for petroleum have been Canada, France, Germany, and Japan. Crude petroleum is admitted free of duty in Canada, but refined products are dutiable and preferences are

<sup>5</sup> Tariff Act of 1930, par. 1733.

<sup>6</sup> As originally enacted, these taxes, applicable only to imports, were as follows: Crude petroleum,  $\frac{1}{2}$  cent per gallon; fuel oil derived from petroleum, gas oil derived from petroleum, and all liquid derivatives of crude petroleum, except lubricating oil and gasoline or other motor fuel,  $\frac{1}{2}$  cent per gallon; gasoline or other motor fuel,  $2\frac{1}{4}$  cents per gallon; lubricating oil, 4 cents per gallon; paraffin and other petroleum wax products, 1 cent per pound.

accorded to Empire countries. In France petroleum and its products are dutiable and the domestic refining industry has been encouraged by a substantial reduction in duty if the imported oil is processed in designated French refineries. Refined products are dutiable at higher rates than is crude petroleum. Imports from French colonies are admitted free of duty from the assimilated colonies and at minimum tariff rates from the others. The German duty on lubricating oils is 14 reichsmarks (\$5.60) per 100 kilos and on all other mineral oils, crude or refined, 21 reichsmarks (\$8.40) per 100 kilos. Crude oil and specified refined products, destined for certain uses, however, are admitted free of duty or at reduced rates. Importers of motor fuels are required to purchase specified amounts of alcohol from the German alcohol monopoly. In Japan the domestic refining industry is assisted by the imposition of higher duties on imports of the refined product than on those of crude petroleum, but duties in Japan may be waived on products urgently required by the State.

More important than tariffs, however, are the systems of exchange control and import licensing which most of the above-named countries now employ in the control of imports. These systems may be so operated as to make impossible the importation of a commodity even though it be free of duty, or they may be utilized to stimulate imports. In view of the urgent need of most of these countries for petroleum and its products, it may be assumed that their trade policies have been so adjusted as to permit the acquisition of maximum supplies. These systems may also be employed to determine the sources from which imports are derived.

Before the war the principal markets for Latin American petroleum (other than the United States) were the populous industrial countries of western Europe. All of these countries are deficient in petroleum resources, and among them only Germany has made any considerable progress toward overcoming its deficiency by the use of synthetic substitutes. In western Europe, Latin American oil ordinarily meets competition from oil produced in Rumania, Iraq, and Iran, as well as from the surplus United States output produced in the midcontinent region and exported from Gulf-coast points.

The United States, however, is an important market for Latin American oil, in spite of its dominant position in the production of crude oil and its high position as an exporter of crude and refined oils. It takes chiefly crude oil direct from Latin American countries and fuel oil produced in the Netherlands West Indies from Latin American crude. This situation is the result of several factors, including proximity to markets, the relative scarcity of low-grade crude in the United States, company affiliations, and refining for reexport. New York and other Atlantic points are closer by water to northern South America than to Gulf ports. More important is the fact that United States crude oil (except most of the California product) is relatively light in gravity, whereas the Latin American crude is nearly all heavy. The production of fuel oil from the light crude from which a high percentage of gasoline can be obtained would be a wasteful and unprofitable utilization of domestic resources as compared with the production of fuel oil from the heavier imported crude. Moreover, the principal producers and refiners in Latin America are subsidiaries or affiliates of United States companies engaged in refining and marketing domestic crude, especially in the Atlantic-coast area.



During 1939, United States production of crude petroleum was more than 1,200 million barrels. Imports of petroleum and petroleum products amounted to 62 million barrels, and exports to 184 million barrels. Heavy fuel oil and heavy crude, which yields chiefly fuel oil, accounted for more than 90 percent of the total imports. Exports consisted of 72 million barrels of crude, 42 million barrels of gasoline, 46 million barrels of gas and fuel oils, and 24 million barrels of kerosene, lubricating oil, and minor products. In value, exports exceeded imports by more than 343 million dollars.

The price of petroleum in the United States is affected by a number of factors, including the degree of industrial activity, the discovery of new fields, State-control programs, and the demand for and supply of oil abroad. The average annual prices of crude petroleum at the wells has followed fairly closely the general trend of commodity prices during the period 1929-39. It was high in 1929 and 1937, and low in the period 1931-33. But unlike the price behavior of many other commodities, the price of petroleum was considerably higher in 1932 than in either 1931 or 1933. After 1937, the price declined, and in 1939 was \$1 per barrel. (See table 3.)

TABLE 3.—Petroleum, crude: Annual average prices in the United States at the wells, 1929-39

| Year      | Average annual price | Year                    | Average annual price |
|-----------|----------------------|-------------------------|----------------------|
|           | <i>Per barrel</i>    |                         | <i>Per barrel</i>    |
| 1929..... | \$1.27               | 1935.....               | \$0.97               |
| 1930..... | 1.19                 | 1936.....               | 1.09                 |
| 1931..... | .65                  | 1937.....               | 1.18                 |
| 1932..... | .87                  | 1938.....               | 1.13                 |
| 1933..... | .67                  | 1939 <sup>1</sup> ..... | 1.00                 |
| 1934..... | 1.00                 |                         |                      |

<sup>1</sup> Preliminary.

Source: U. S. Bureau of Mines.

#### Effects of the war.

Petroleum and its principal products, gasoline, fuel oil, and lubricating oil, are strategic war materials. Airplanes and motorized equipment are dependent upon gasoline and lubricating oil, and the operation of navies and merchant marines is dependent upon fuel oil and lubricating oil.

As a result of the blockade of European ports, the European market for Latin American petroleum has been greatly restricted. The demand for petroleum in the United Kingdom, however, has been increased, offsetting in part the decline in shipments to other European countries. Should wartime transportation conditions lessen the ability of the United Kingdom to obtain petroleum from Asiatic countries, it might secure an even larger share of its imports from Latin America. The United States may also require increased quantities from Latin America.

TABLE 4.—Petroleum and products (gasoline, kerosene, gas and fuel oils, and lubricating oil): Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country                                | 1929 <sup>1</sup> | 1932 <sup>1</sup> | 1936  | 1937  | 1938  |
|--|-------------------|-------------------|-------|-------|-------|
| Quantity (1,000 barrels of 42 gallons) |                   |                   |       |       |       |
| Total, all countries.....              | 58                | 433               | 679   | 708   | 541   |
| United Kingdom.....                    | (2)               | 186               | 325   | 371   | 239   |
| France.....                            | (2)               | 86                | 144   | 141   | 150   |
| Paraguay.....                          | 1                 | 14                | 21    | 14    | 26    |
| Uruguay.....                           | 10                | 12                | 57    | 35    | 30    |
| Brazil.....                            | (2)               | 1                 | 35    | 33    | 7     |
| Germany.....                           | (2)               | 4                 | 28    | 21    | 25    |
| Norway.....                            |                   | 8                 | 9     | 21    | 17    |
| Italy.....                             | (2)               | 64                | 8     | 18    | 16    |
| UNITED STATES.....                     | (2)               | 17                | 26    | 16    | 12    |
| All other.....                         | * 47              | 41                | 26    | 38    | 19    |
| Percentage to the United States.....   | (2)               | 3.8               | 3.8   | 2.3   | 2.2   |
| Value (1,000 paper pesos)              |                   |                   |       |       |       |
| Total, all countries.....              | 338               | 1,779             | 4,065 | 3,066 | 3,390 |
| Value (1,000 U. S. dollars)            |                   |                   |       |       |       |
| Total, all countries.....              | * 141             | 457               | 1,186 | 1,224 | 1,008 |
| United Kingdom.....                    | (2)               | 184               | 435   | 501   | 328   |
| France.....                            | (2)               | 92                | 183   | 191   | 194   |
| Paraguay.....                          | 7                 | 15                | 128   | 102   | 104   |
| Uruguay.....                           | 70                | 24                | 110   | 83    | 105   |
| Brazil.....                            | 3                 | 4                 | 159   | 143   | 52    |
| Germany.....                           | 1                 | 4                 | 46    | 28    | 41    |
| Norway.....                            |                   | 9                 | 12    | 46    | 33    |
| Italy.....                             | (2)               | 65                | 10    | 22    | 27    |
| UNITED STATES.....                     | (2)               | 18                | 42    | 26    | 20    |
| All other.....                         | * 80              | 42                | 61    | 82    | 44    |
| Percentage to the United States.....   | 0.1               | 4.0               | 3.5   | 2.1   | 2.0   |

<sup>1</sup> Exports of fuel oil only prior to 1933.

<sup>2</sup> Not over 500.

<sup>3</sup> Includes 47,286 barrels, valued at \$59,673, exported to British possessions.

<sup>4</sup> Less than one-tenth of 1 percent.

<sup>5</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2,272.27 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina, converted to U. S. currency by applying the following factors: 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 5.—Fuel and gas oil (including Diesel): Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country  | 1929 <sup>1</sup> | 1932 <sup>1</sup> | 1935               | 1937   | 1938   |
|--|-------------------|-------------------|--------------------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                     |                   |                   |                    |        |        |
| Total, all countries.....                                  | 58                | 433               | 653                | 695    | 515    |
| United Kingdom.....  | ( <sup>2</sup> )  | 186               | 325                | 371    | 239    |
| France.....  | ( <sup>3</sup> )  | 86                | 144                | 141    | 150    |
| Uruguay.....   | 10                | 12                | 55                 | 33     | 26     |
| Germany.....   | ( <sup>4</sup> )  | 4                 | 28                 | 21     | 25     |
| Italy.....   | ( <sup>5</sup> )  | 64                | 8                  | 18     | 16     |
| Paraguay.....  | 1                 | 14                | 7                  | 6      | 8      |
| UNITED STATES.....   | ( <sup>6</sup> )  | 17                | 26                 | 16     | 12     |
| Brazil.....  | ( <sup>7</sup> )  | 1                 | 30                 | 31     | 3      |
| All other.....   | * 47              | 49                | 30                 | 58     | 36     |
| Percentage to the United States.....                       | ( <sup>8</sup> )  | 3.8               | 4.0                | 2.3    | 2.3    |
| Value (1,000 paper pesos)                                  |                   |                   |                    |        |        |
| Total, all countries.....                                  | 338               | 1,779             | 3,343 <sup>9</sup> | 3,414  | 2,515  |
| Value (1,000 U. S. dollars)                                |                   |                   |                    |        |        |
| Total, all countries.....                                  | * 141             | 457               | 975                | 1,054  | 748    |
| United Kingdom.....  | ( <sup>10</sup> ) | 184               | 427                | 495    | 326    |
| France.....  | ( <sup>11</sup> ) | 92                | 183                | 190    | 194    |
| Uruguay.....   | 70                | 24                | 80                 | 56     | 49     |
| Germany.....   | 1                 | 4                 | 45                 | 27     | 40     |
| Italy.....   | ( <sup>12</sup> ) | 65                | 10                 | 22     | 26     |
| Paraguay.....  | 7                 | 15                | 16                 | 20     | 23     |
| UNITED STATES.....   | ( <sup>13</sup> ) | 18                | 41                 | 26     | 20     |
| Brazil.....  | 3                 | 4                 | 116                | 119    | 6      |
| All other.....   | * 60              | 51                | 57                 | 99     | 64     |
| Percentage to the United States.....                       | 0.1               | 4.0               | 4.2                | 2.4    | 2.7    |
| Unit value per barrel of total exports <sup>14</sup> ..... | \$2.42            | \$1.06            | \$1.49             | \$1.52 | \$1.45 |

<sup>1</sup> Exports of fuel oil only, prior to 1933.

<sup>2</sup> Not over 500.

<sup>3</sup> Includes 47,286 barrels valued at \$59,673 exported to British possessions.

<sup>4</sup> Less than one-tenth of 1 percent.

<sup>5</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>6</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measure and currency by applying the following factors: Gas oil and Diesel oil, 7.25 barrels=1 metric ton; fuel oil, 6.66 barrels=1 metric ton; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

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TABLE 6.—Petroleum, crude: Exports from COLOMBIA to principal markets, in specified years, 1929 to 1938

| Country   | 1929               | 1932    | 1936    | 1937   | 1938   |
|---|--------------------|---------|---------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |                    |         |         |        |        |
| Total, all countries.....                                 | 18,479             | 15,855  | 16,437  | 17,743 | 18,453 |
| Netherlands West Indies.....                              |                    | 1,236   | 8,923   | 9,651  | 8,470  |
| Canada.....   | 3,867              | 2,359   | 4,067   | 3,652  | 6,035  |
| France.....   | ( <sup>1</sup> )   |         | 2,671   | 2,794  | 2,813  |
| Italy.....  | 202                | 529     | 403     | 651    | 733    |
| Argentina.....  | 313                | 291     | 168     | 273    | 83     |
| UNITED STATES.....  | 12,578             | 11,296  |         | 431    |        |
| All other.....  | <sup>2</sup> 1,519 | 144     | 205     | 291    | 319    |
| Percentage to the United States.....                      | 68.1               | 71.2    |         | 2.4    |        |
| Value (1,000 pesos)                                       |                    |         |         |        |        |
| Total, all countries.....                                 | 27,016             | 16,329  | 28,269  | 35,079 | 37,206 |
| Value (1,000 U. S. dollars) <sup>3</sup>                  |                    |         |         |        |        |
| Total, all countries.....                                 | 26,141             | 15,561  | 16,161  | 19,841 | 20,810 |
| Netherlands West Indies.....                              |                    | 1,024   | 8,481   | 10,340 | 9,329  |
| Canada.....   | 5,503              | 2,636   | 3,874   | 3,990  | 6,473  |
| France.....   | ( <sup>1</sup> )   |         | 2,957   | 3,548  | 3,569  |
| Italy.....  | 286                | 575     | 444     | 844    | 934    |
| Argentina.....  | 444                | 304     | 177     | 319    | 108    |
| UNITED STATES.....  | 17,787             | 10,874  |         | 453    |        |
| All other.....  | <sup>2</sup> 2,121 | 148     | 228     | 347    | 397    |
| Percentage to the United States.....                      | 68.0               | 69.9    |         | 2.3    |        |
| Unit value per barrel of total exports <sup>3</sup> ..... | \$1.42             | \$0.981 | \$0.983 | \$1.12 | \$1.13 |

<sup>1</sup> Not over 500.

<sup>2</sup> Includes 1,299,086 barrels, valued at \$1,787,119, exported to the United Kingdom.

<sup>3</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Colombia. Converted to U. S. measure and currency by applying the following factors: 7.17 barrels=1 metric ton; 1 peso=1929, \$0.9676; 1932, \$0.9530; 1936, \$0.5717; 1937, \$0.5656; 1938, \$0.5593.

TABLE 7.—Petroleum, crude: Exports from ECUADOR to principal markets, in specified years, 1929 to 1938

| Country   | 1929   | 1932   | 1936    | 1937   | 1938   |
|---|--------|--------|---------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |        |        |         |        |        |
| Total, all countries.....                                 | 1,185  | 1,462  | 1,281   | 1,889  | 1,686  |
| Uruguay.....  |        |        | 128     | 739    | 644    |
| Brazil.....   |        |        | 49      | 233    | 349    |
| United Kingdom.....                                       |        | (1)    | 155     | 78     | 304    |
| France.....   |        | 144    | 276     | 574    | 199    |
| Japan.....  |        |        |         | 193    | 190    |
| UNITED STATES.....  | 1,178  | 854    |         |        |        |
| All other.....  | 7      | 170    | 29      | 1      |        |
| Percentage to the United States.....                      | 99.4   | 58.4   |         |        |        |
| Value (1,000 sucres)                                      |        |        |         |        |        |
| Total, all countries.....                                 | 15,143 | 14,481 | 13,437  | 21,989 | 26,374 |
| Value (1,000 U. S. dollars)                               |        |        |         |        |        |
| Total, all countries.....                                 | 3,029  | 2,414  | 1,279   | 2,001  | 1,966  |
| Uruguay.....  |        |        |         |        |        |
| Brazil.....   |        |        |         |        |        |
| United Kingdom.....                                       |        | (2)    | (2)     | (2)    | (2)    |
| France.....   |        | 238    |         |        |        |
| Japan.....  |        |        |         |        |        |
| UNITED STATES.....  | 3,028  | 1,410  |         |        |        |
| All other.....  | 1      | 280    |         |        |        |
| Percentage to the United States.....                      | 99.9   | 58.4   | (1)     | (2)    | (1)    |
| Unit value per barrel of total exports <sup>3</sup> ..... | \$2.56 | \$1.65 | \$0.999 | \$1.06 | \$1.17 |

<sup>1</sup> Not over 500.

<sup>2</sup> Not shown separately.

<sup>3</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Ecuador, statistics of the Pan American Union, and *International Petroleum Trade*. Converted to U. S. measure and currency by applying the following factors: 7.59 barrels=1 metric ton; 1 sucre=1929, \$0.2000; 1932, \$0.1667; 1936, \$0.0952; 1937, \$0.0910; 1938, \$0.0746.

TABLE 8.—*Petroleum and products (except asphalt and emulsions and solutions of): Exports from MEXICO to principal markets, in specified years, 1929 to 1938*

| Country                                | 1929     | 1933   | 1936    | 1937    | 1938   |
|--|----------|--------|---------|---------|--------|
| Quantity (1,000 barrels of 42 gallons) |          |        |         |         |        |
| Total, all countries.....              | 25,339   | 21,178 | 22,605  | 21,901  | 13,803 |
| United Kingdom.....                    | 1,480    | 6,474  | 5,906   | 4,533   | 5,340. |
| UNITED STATES.....                     | 14,735   | 7,511  | 8,486   | 7,312   | 2,942  |
| Germany.....                           | 1,116    | 1,788  | 2,458   | 2,259   | 1,992  |
| Netherlands West Indies.....           | 1,635    | 299    | 2,903   | 4,420   | 1,108  |
| Bahama Islands.....                    | 4,220    | 853    | 357     | 790     | 75     |
| Brazil.....                            | 603      | 1,234  | 474     | 451     | 80     |
| Argentina.....                         | 823      | 1,150  | 124     | 25      | (?)    |
| All other.....                         | 1,327    | 1,869  | 1,897   | 2,111   | 2,326  |
| Percentage to the United States.....   | 58.2     | 35.5   | 37.5    | 33.4    | 21.3   |
| Value (1,000 pesos)                    |          |        |         |         |        |
| Total, all countries.....              | 77,386   | 76,213 | 134,949 | 138,526 | 71,751 |
| Value (1,000 U. S. dollars)            |          |        |         |         |        |
| Total, all countries.....              | 37,267   | 21,418 | 37,462  | 38,441  | 15,873 |
| United Kingdom.....                    | 1,422    | 8,221  | 11,963  | 10,310  | 6,458  |
| UNITED STATES.....                     | 14,879   | 3,780  | 8,958   | 7,914   | 2,479  |
| Germany.....                           | 1,561    | 800    | 2,864   | 2,627   | 2,211  |
| Netherlands West Indies.....           | 1,691    | 650    | 8,408   | 11,322  | 1,954  |
| Bahama Islands.....                    | 1 10,728 | 2,924  | 1,410   | 2,073   | 294    |
| Brazil.....                            | 1,988    | 1,860  | 1,109   | 1,319   | 82     |
| Argentina.....                         | 2,381    | 1,289  | 231     | 56      | (?)    |
| All other.....                         | 2,637    | 1,894  | 2,519   | 2,810   | 2,395  |
| Percentage to the United States.....   | 39.9     | 17.6   | 23.9    | 20.6    | 15.6   |

<sup>1</sup> Classified in 1929 as British West Indies; probably most of the exports were to the Bahama Islands as British West Indies are not listed in later years (Bahama Islands only shown).

<sup>2</sup> Not shown separately.

NOTE.—

1929—All countries shown.

1933—United States shown separately for crude petroleum, combustible fuel oil, and crude gasoline only. Argentina not shown separately for crude petroleum and gas oil, crude gasoline, and crude kerosene. Brazil not shown separately for crude petroleum. Germany shown separately for crude petroleum and gas oil only. Bahama Islands shown separately for refined oils and lubricants only. United Kingdom shown for all petroleum, except crude gasoline and crude kerosene.

1936—United States not shown separately for gasoline. Bahamas not shown separately for crude petroleum and fuel oil. Argentina not shown separately for crude petroleum and gas oil. Brazil not shown separately for crude petroleum. Germany not shown separately for gasoline, kerosene, and lubricating oil.

1937—United States not shown separately for gasoline. Bahama Islands not shown separately for crude petroleum and fuel oil. Argentina not shown separately for crude petroleum and gas oil. Brazil not shown separately for crude petroleum. Germany not shown separately for gasoline, kerosene, and lubricating oil. United Kingdom not shown separately for gasoline.

1938—United States not shown separately for gasoline. Brazil shown separately for gasoline, kerosene, and lubricants only. Germany shown separately for fuel and gas oil, and petroleum, crude, only. Bahama Islands shown separately for gasoline, kerosene, and lubricants only. Netherlands West Indies not shown separately for fuel oil. United Kingdom shown for all petroleum.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. measure and currency by applying the following factors: 1 cubic meter = 6.289773 barrels; 1 peso = 1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 9.—*Petroleum, crude: Exports from MEXICO to principal markets, in specified years, 1929 to 1938*

| Country   | 1929   | 1933 <sup>1</sup> | 1936             | 1937   | 1938             |
|---|--------|-------------------|------------------|--------|------------------|
| Quantity (1,000 barrels of 42 gallons)                    |        |                   |                  |        |                  |
| Total, all countries.....                                 | 15,470 | 11,082            | 6,836            | 7,459  | 4,840            |
| UNITED STATES.....  | 12,355 | 6,193             | 4,204            | 3,725  | 2,180            |
| United Kingdom.....                                       | 430    | 2,717             | ( <sup>2</sup> ) | 95     | 1,155            |
| Germany.....  | 933    | 1,772             | 2,295            | 2,133  | 567              |
| All other.....  | 1,752  | 400               | 337              | 1,506  | <sup>3</sup> 938 |
| Percentage to the United States.....                      | 79.9   | 55.9              | 61.5             | 49.9   | 45.0             |
| Value (1,000 pesos)                                       |        |                   |                  |        |                  |
| Total, all countries.....                                 | 32,813 | 17,126            | 28,369           | 28,746 | 17,226           |
| Value (1,000 U. S. dollars)                               |        |                   |                  |        |                  |
| Total, all countries.....                                 | 15,809 | 4,812             | 7,875            | 7,977  | 3,810            |
| UNITED STATES.....  | 12,498 | 2,635             | 4,852            | 3,997  | 1,791            |
| United Kingdom.....                                       | 462    | 1,179             | ( <sup>2</sup> ) | 95     | 915              |
| Germany.....  | 1,018  | 776               | 2,643            | 2,425  | 406              |
| All other.....  | 1,831  | 172               | 380              | 1,460  | <sup>4</sup> 698 |
| Percentage to the United States.....                      | 79.1   | 55.8              | 61.6             | 50.1   | 47.0             |
| Unit value per barrel of total exports <sup>4</sup> ..... | \$1.02 | \$0.434           | \$1.15           | \$1.07 | \$0.787          |

<sup>1</sup> Crude petroleum, heavy only; light not shown (amounts to about 3,000 barrels, according to *Foreign Commerce Yearbook*).

<sup>2</sup> Not over 500.

<sup>3</sup> Includes 517,000 barrels, valued at \$400,000, exported to Belgium.

<sup>4</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. measure and currency by applying the following factors: 1 cubic meter=6.289773 barrels; 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 10.—*Gasoline: Exports from MEXICO to principal markets, in specified years, 1929 to 1938*

| Country   | 1929   | 1933   | 1936   | 1937             | 1938   |
|---|--------|--------|--------|------------------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |        |        |        |                  |        |
| Total, all countries.....                                 | 1,790  | 2,278  | 4,272  | 4,392            | 2,715  |
| United Kingdom.....                                       |        | 900    | 1,147  | 493              | 1,179  |
| Netherlands West Indies <sup>1</sup> .....                | 57     | 215    | 2,532  | 3,083            | 960    |
| Bahama Islands <sup>2</sup> .....                         | 352    | 506    | 158    | 365              | 19     |
| Brazil.....   | 402    | 361    | 199    | 281              | 10     |
| Chile.....  | 37     | 38     | 155    | 92               | 1      |
| Argentina.....  | 350    | 167    | 54     | ( <sup>3</sup> ) | .....  |
| All other.....  | 562    | 91     | 27     | 78               | 546    |
| Value (1,000 pesos)                                       |        |        |        |                  |        |
| Total, all countries.....                                 | 12,502 | 18,153 | 46,625 | 49,029           | 22,676 |
| Value (1,000 U. S. dollars)                               |        |        |        |                  |        |
| Total, all countries.....                                 | 6,024  | 5,101  | 12,943 | 13,605           | 5,016  |
| United Kingdom.....                                       |        | 2,082  | 3,450  | 1,536            | 2,275  |
| Netherlands West Indies <sup>1</sup> .....                | 191    | 474    | 7,687  | 9,569            | 1,807  |
| Bahama Islands <sup>2</sup> .....                         | 1,178  | 1,096  | 506    | 1,073            | 40     |
| Brazil.....   | 1,329  | 811    | 587    | 886              | 24     |
| Chile.....  | 118    | 83     | 491    | 297              | 1      |
| Argentina.....  | 1,234  | 365    | 141    | 1                | .....  |
| All other.....  | 1,974  | 190    | 81     | 243              | 869    |
| Unit value per barrel of total exports <sup>4</sup> ..... | \$3.37 | \$2.24 | \$3.03 | \$3.10           | \$1.85 |

<sup>1</sup> Classified as Netherlands Indies only in 1929; probably includes both Netherlands East and Netherlands West Indies.

<sup>2</sup> Classified in 1929 as British West Indies; probably most of the exports were to the Bahama Islands, as British West Indies are not listed in later years (Bahama Islands only shown).

<sup>3</sup> Not over 500.

<sup>4</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. measure and currency by applying the following factors: 1 cubic meter=6.289773 barrels; 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 11.—Kerosene: Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country   | 1929   | 1933   | 1936   | 1937   | 1938   |
|---|--------|--------|--------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |        |        |        |        |        |
| Total, all countries.....                                 | 1,486  | 589    | 607    | 692    | 138    |
| United Kingdom.....                                       | 66     | 113    | 379    | 417    | 90     |
| Bahama Islands <sup>1</sup> .....                         | 561    | 213    | 42     | 78     | 21     |
| Brazil.....   | 185    | 104    | 69     | 158    | 14     |
| Argentina.....  | 287    | 42     | 21     | 25     | 4      |
| All other.....  | 387    | 117    | 96     | 14     |        |
| Value (1,000 pesos)                                       |        |        |        |        |        |
| Total, all countries.....                                 | 8,206  | 4,398  | 4,323  | 5,403  | 921    |
| Value (1,000 U. S. dollars)                               |        |        |        |        |        |
| Total, all countries.....                                 | 2,954  | 1,236  | 1,200  | 1,499  | 204    |
| United Kingdom.....                                       | 176    | 244    | 767    | 913    | 145    |
| Bahama Islands <sup>1</sup> .....                         | 1,496  | 443    | 86     | 153    | 32     |
| Brazil.....   | 479    | 216    | 140    | 349    | 21     |
| Argentina.....  | 768    | 89     | 45     | 65     |        |
| All other.....  | 1,035  | 244    | 162    | 29     | 6      |
| Unit value per barrel of total exports <sup>2</sup> ..... | \$2.66 | \$2.10 | \$1.98 | \$2.17 | \$1.48 |

<sup>1</sup> Classified in 1929 as British West Indies; probably most of the exports were to the Bahama Islands, as British West Indies are not listed in later years (Bahama Islands only shown).

<sup>2</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico, converted to U. S. measure and currency by applying the following factors: 1 cubic meter=6.289773 barrels; 1 peso=1929, \$0.4818; 1933, \$0.2610; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 12.—Fuel and gas oil:<sup>1</sup> Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1933             | 1936   | 1937   | 1938             |
|---|---------|------------------|--------|--------|------------------|
| Quantity (1,000 barrels of 42 gallons)                    |         |                  |        |        |                  |
| Total, all countries.....                                 | 6,147   | 6,884            | 10,515 | 8,957  | 6,021            |
| United Kingdom.....                                       | 984     | 2,566            | 4,133  | 3,190  | 2,867            |
| Germany.....  | 152     | 15               | 163    | 127    | 1,414            |
| UNITED STATES.....  | 2,012   | 1,318            | 4,282  | 3,586  | 762              |
| Cuba.....   | 407     | ( <sup>2</sup> ) | 578    | 482    | 284              |
| Netherlands West Indies.....                              | 964     | ( <sup>2</sup> ) | 290    | 621    | 82               |
| Bahama Islands <sup>1</sup> .....                         | 1,465   | ( <sup>2</sup> ) | 78     | 306    | ( <sup>2</sup> ) |
| All other.....  | 163     | * 2,985          | 991    | 643    | 612              |
| Percentage to the United States.....                      | 32.7    | 19.1             | 40.7   | 40.0   | 12.7             |
| Value (1,000 pesos)                                       |         |                  |        |        |                  |
| Total, all countries.....                                 | 11,695  | 24,427           | 43,409 | 42,580 | 28,414           |
| Value (1,000 U. S. dollars)                               |         |                  |        |        |                  |
| Total, all countries.....                                 | 5,635   | 6,864            | 12,050 | 11,816 | 6,285            |
| United Kingdom.....                                       | 781     | 3,067            | 5,489  | 4,747  | 2,875            |
| Germany.....  | 146     | 24               | 222    | 202    | 1,805            |
| UNITED STATES.....  | 1,238   | 1,095            | 4,101  | 3,913  | 687              |
| Cuba.....   | 254     | ( <sup>2</sup> ) | 503    | 515    | 219              |
| Netherlands West Indies.....                              | 1,456   | ( <sup>2</sup> ) | 443    | 1,075  | 107              |
| Bahama Islands <sup>1</sup> .....                         | 1,627   | ( <sup>2</sup> ) | 133    | 535    | ( <sup>2</sup> ) |
| All other.....  | 133     | * 2,738          | 1,066  | 829    | 592              |
| Percentage to the United States.....                      | 22.0    | 16.0             | 34.0   | 33.1   | 10.9             |
| Unit value per barrel of total exports <sup>2</sup> ..... | \$0.917 | \$0.997          | \$1.15 | \$1.32 | \$1.04           |

<sup>1</sup> Country detail for all years does not include all gas and fuel oil, as only important countries listed in trade statistics; negligible amounts for countries may be included in "all other."

<sup>2</sup> Not shown separately.

<sup>3</sup> Classified in 1929 as British West Indies; probably most of the exports were to the Bahama Islands as British West Indies are not listed in later years (Bahama Islands only shown).

<sup>4</sup> Includes 762,031 barrels, valued at \$766,619, exported to Brazil, and 932,433 barrels, valued at \$741,836, exported to Argentina, not shown separately or negligible in other years.

<sup>5</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico, converted to U. S. measure and currency by applying the following factors: 1 cubic meter=6.289773 barrels; 1 peso=1929, \$0.4818; 1933, \$0.2610; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.



TABLE 13.—Lubricating oil: Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country   | 1929             | 1933   | 1936   | 1937   | 1938             |
|---|------------------|--------|--------|--------|------------------|
| Quantity (1,000 barrels of 42 gallons)                    |                  |        |        |        |                  |
| Total, all countries.....                                 | 446              | 345    | 375    | 401    | 389              |
| United Kingdom.....                                       | ( <sup>1</sup> ) | 179    | 247    | 338    | 40               |
| Bahama Islands <sup>2</sup> .....                         | 374              | 135    | 78     | 39     | 35               |
| Brazil.....   | 13               | 7      | 19     | 8      | 6                |
| Chile.....  | 5                | 3      | 3      | 9      | 6                |
| Argentina.....  | 17               | 9      | 1      | -----  | ( <sup>3</sup> ) |
| All other.....  | 37               | 12     | 27     | 6      | 2                |
| Value (1,000 pesos)                                       |                  |        |        |        |                  |
| Total, all countries.....                                 | 12,170           | 12,109 | 12,223 | 12,763 | 2,514            |
| Value (1,000 U. S. dollars)                               |                  |        |        |        |                  |
| Total, all countries.....                                 | 5,863            | 3,403  | 3,393  | 3,543  | 556              |
| United Kingdom.....                                       | 3                | 1,708  | 2,257  | 3,019  | 248              |
| Bahama Islands <sup>2</sup> .....                         | 4,902            | 1,384  | 685    | 311    | 222              |
| Brazil.....   | 175              | 67     | 169    | 80     | 37               |
| Chile.....  | 74               | 29     | 26     | 78     | 35               |
| Argentina.....  | 229              | 94     | 6      | -----  | ( <sup>3</sup> ) |
| All other.....  | 480              | 121    | 250    | 57     | 14               |
| Unit value per barrel of total exports <sup>4</sup> ..... | \$13.15          | \$9.87 | \$9.04 | \$8.83 | \$6.27           |

<sup>1</sup> Not over 500.<sup>2</sup> Classified in 1929 as British West Indies; probably most of the exports were to the Bahama Islands as British West Indies are not listed in later years (Bahama Islands only shown).<sup>3</sup> Not shown separately.<sup>4</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. measure and currency by applying the following factors: 1 cubic meter=6.289773 barrels; 1 peso=1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 14.—Asphalt: <sup>1</sup> Exports from MEXICO to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1933             | 1936    | 1937    | 1938    |
|---|---------|------------------|---------|---------|---------|
| Quantity (long tons)  |         |                  |         |         |         |
| Total, all countries.....                                   | 279,906 | 136,384          | 289,844 | 336,945 | 108,206 |
| Australia.....  | 39,875  | 32,317           | 81,722  | 121,888 | 25,690  |
| United Kingdom.....   | 17,024  | 30,581           | 38,979  | 42,859  | 18,340  |
| France.....   | 20,961  | ( <sup>2</sup> ) | 3,080   | 14,479  | 11,110  |
| Germany.....  | 48,631  | 15,930           | 27,814  | 29,379  | 9,792   |
| Sweden.....   | 4,969   | ( <sup>2</sup> ) | 11,221  | 11,856  | 8,511   |
| Italy.....  | 12,962  | 9,673            | 1,063   | 8,968   | 8,029   |
| Belgium.....  | 12,541  | 6,689            | 16,136  | 26,194  | 6,870   |
| New Zealand.....  | 5,895   | 7,553            | 7,308   | 11,385  | 2,350   |
| Netherlands.....  | 22,135  | ( <sup>2</sup> ) | 4,018   | 4,560   | 1,026   |
| All other.....  | 84,913  | 33,641           | 98,503  | 65,377  | 16,439  |
| Value (1,000 pesos)   |         |                  |         |         |         |
| Total, all countries.....                                   | 9,951   | 11,842           | 15,682  | 17,831  | 6,475   |
| Value (1,000 U. S. dollars)                                 |         |                  |         |         |         |
| Total, all countries.....                                   | 4,794   | 3,328            | 4,353   | 4,948   | 1,432   |
| Australia.....  | 683     | 726              | 1,228   | 1,761   | 339     |
| United Kingdom.....   | 292     | 673              | 584     | 628     | 236     |
| France.....   | 359     | ( <sup>2</sup> ) | 47      | 218     | 147     |
| Germany.....  | 833     | 356              | 413     | 459     | 129     |
| Sweden.....   | 85      | ( <sup>2</sup> ) | 163     | 173     | 121     |
| Italy.....  | 222     | 217              | 16      | 131     | 104     |
| Belgium.....  | 215     | 155              | 246     | 388     | 94      |
| New Zealand.....  | 101     | 167              | 118     | 165     | 29      |
| Netherlands.....  | 379     | ( <sup>2</sup> ) | 60      | 67      | 15      |
| All other.....  | 1,625   | 1,034            | 1,478   | 978     | 218     |
| Unit value per long ton of total exports <sup>4</sup> ..... | \$17.13 | \$24.40          | \$15.02 | \$14.68 | \$13.24 |

<sup>1</sup> In 1929 and 1933 includes asphaltic emulsions and solutions.

<sup>2</sup> Includes Eire.

<sup>3</sup> Not shown separately.

<sup>4</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Mexico. Converted to U. S. measure and currency by applying the following factors: 1 metric ton = \$9.964196 long ton; 1 peso = 1929, \$0.4818; 1933, \$0.2810; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 15.—Petroleum and principal products: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country                                | 1929     | 1932   | 1936    | 1937    | 1938    |
|--|----------|--------|---------|---------|---------|
| Quantity (1,000 barrels of 42 gallons) |          |        |         |         |         |
| Total, all countries.....              | 11,812   | 8,740  | 15,850  | 15,820  | 13,135  |
| Argentina.....                         | 3,311    | 932    | 345     | 2,541   | 3,333   |
| France.....                            |          | 490    | 4,196   | 3,059   | 2,306   |
| Canada.....                            | 3,310    | 2,255  | 4,171   | 3,397   | 1,727   |
| Germany.....                           | 580      | 231    | 797     | 1,350   | 989     |
| Netherlands West Indies.....           |          |        | 1,222   | 977     | 981     |
| Uruguay.....                           |          |        | 216     | 180     | 882     |
| Chile.....                             | 1,210    | 852    | 395     | 572     | 518     |
| Brazil.....                            | 819      | 349    | 721     | 300     | 503     |
| United Kingdom.....                    | (1)      | 2,205  | 2,610   | 2,315   | 770     |
| Belgium.....                           |          |        | 357     | 326     | 451     |
| El Salvador.....                       | 49       | 55     | 47      | 138     | 97      |
| Bolivia.....                           | 51       | 68     | 89      | 113     | 97      |
| All other.....                         | * 2,482  | 1,804  | 684     | 552     | 481     |
| Value (1,000 soles)                    |          |        |         |         |         |
| Total, all countries.....              | 129,046  | 77,185 | 118,765 | 120,728 | 115,890 |
| Value (1,000 U. S. dollars)            |          |        |         |         |         |
| Total, all countries.....              | 51,618   | 16,440 | 29,572  | 30,423  | 25,983  |
| Argentina.....                         | 9,889    | 1,643  | 586     | 4,659   | 5,963   |
| France.....                            |          | 1,273  | 7,099   | 5,504   | 4,131   |
| Canada.....                            | 8,569    | 2,772  | 7,651   | 6,658   | 3,724   |
| Germany.....                           | 5,812    | 409    | 1,352   | 2,853   | 2,349   |
| Netherlands West Indies.....           |          |        | 2,932   | 1,948   | 1,812   |
| Uruguay.....                           |          |        | 520     | 389     | 1,592   |
| Chile.....                             | 6,257    | 897    | 1,023   | 1,862   | 1,420   |
| Brazil.....                            | 8,130    | 965    | 1,809   | 680     | 1,413   |
| United Kingdom.....                    | (1)      | 4,378  | 4,393   | 4,199   | 1,413   |
| Belgium.....                           |          |        | 607     | 591     | 797     |
| El Salvador.....                       | 467      | 149    | 157     | 362     | 276     |
| Bolivia.....                           | 394      | 126    | 254     | 295     | 263     |
| All other.....                         | * 12,100 | 3,830  | 1,189   | 923     | 831     |

<sup>1</sup> Not over 500.

\* Includes 1,301,501 barrels, valued at \$3,436,316, of crude petroleum exported to the United States and 584,548 barrels, valued at \$5,859,228, of gasoline exported to the Netherlands.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. currency by applying the following factors: 1 sol=1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2620; 1938, \$0.2242.

TABLE 16.—*Petroleum, crude: Exports from PERU to principal markets, in specified years, 1929 to 1938*

| Country   | 1929             | 1932    | 1936    | 1937    | 1938    |
|---|------------------|---------|---------|---------|---------|
| Quantity (1,000 barrels of 42 gallons)                    |                  |         |         |         |         |
| Total, all countries.....                                 | 7, 727           | 4, 663  | 11, 402 | 11, 613 | 9, 177  |
| Argentina.....  | 3, 156           | 847     | 345     | 2, 537  | 3, 329  |
| France.....   |                  | 199     | 4, 196  | 3, 059  | 2, 304  |
| Canada.....   | 3, 074           | 1, 896  | 3, 710  | 2, 877  | 1, 328  |
| United Kingdom.....                                       | ( <sup>1</sup> ) | 1, 422  | 2, 542  | 2, 315  | 748     |
| Belgium.....  |                  |         | 357     | 326     | 451     |
| UNITED STATES.....  | 1, 301           | 119     |         |         |         |
| All other.....  | 196              | 210     | 252     | 490     | 1, 017  |
| Percentage to the United States.....                      | 16. 8            | 2. 5    |         |         |         |
| Value (1,000 soles)                                       |                  |         |         |         |         |
| Total, all countries.....                                 | 51, 006          | 33, 525 | 77, 706 | 83, 371 | 73, 499 |
| Value (1,000 U. S. dollars)                               |                  |         |         |         |         |
| Total, all countries.....                                 | 20, 402          | 7, 141  | 19, 349 | 21, 010 | 16, 479 |
| Argentina.....  | 8, 333           | 1, 342  | 587     | 4, 655  | 5, 959  |
| France.....   |                  | 324     | 7, 099  | 5, 504  | 4, 123  |
| Canada.....   | 8, 116           | 2, 635  | 6, 318  | 5, 204  | 2, 437  |
| United Kingdom.....                                       | ( <sup>1</sup> ) | 2, 413  | 4, 319  | 4, 199  | 1, 334  |
| Belgium.....  |                  |         | 607     | 591     | 797     |
| UNITED STATES.....  | 3, 436           | 125     |         |         |         |
| All other.....  | 517              | 301     | 419     | 857     | 1, 829  |
| Percentage to the United States.....                      | 16. 8            | 1. 8    |         |         |         |
| Unit value per barrel of total exports <sup>2</sup> ..... | \$2. 64          | \$1. 53 | \$1. 70 | \$1. 81 | \$1. 80 |

<sup>1</sup> Not over 500.

<sup>2</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. measure and currency by applying the following factors: 1 metric ton=7.575 barrels; 1 sol= 1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 17.—Gasoline: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1932    | 1936   | 1937   | 1938   |
|---|---------|---------|--------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |         |         |        |        |        |
| Total, all countries.....                                 | 2,697   | 3,052   | 2,606  | 2,669  | 2,354  |
| Germany.....  | 580     | 225     | 266    | 942    | 655    |
| Canada.....   |         | (1)     | 461    | 520    | 398    |
| Chile.....  | 396     | 278     | 329    | 455    | 434    |
| Brazil.....   | 768     | 297     | 577    | 147    | 379    |
| Netherlands West Indies.....                              |         |         | 646    | 296    | 265    |
| El Salvador.....  | 34      | 40      | 35     | 116    | 74     |
| Bolivia.....  | 29      | 24      | 45     | 60     | 49     |
| Netherlands.....  | 584     | 841     |        |        |        |
| All other.....  | 306     | * 1,847 | 237    | 133    | 100    |
| Value (1,000 soles)                                       |         |         |        |        |        |
| Total, all countries.....                                 | 67,590  | 40,633  | 28,021 | 27,501 | 32,060 |
| Value (1,000 U. S. dollars)                               |         |         |        |        |        |
| Total, all countries.....                                 | 27,036  | 8,655   | 6,997  | 6,930  | 7,188  |
| Germany.....  | 6,812   | 407     | 715    | 2,407  | 1,993  |
| Canada.....   |         | (1)     | 1,333  | 1,454  | 1,287  |
| Chile.....  | 3,965   | 820     | 854    | 1,142  | 1,286  |
| Brazil.....   | 7,704   | 898     | 1,529  | 381    | 1,223  |
| Netherlands West Indies.....                              |         |         | 1,729  | 765    | 726    |
| El Salvador.....  | 338     | 104     | 90     | 290    | 218    |
| Bolivia.....  | 290     | 74      | 116    | 151    | 148    |
| Netherlands.....  | 5,859   | 2,666   |        |        |        |
| All other.....  | 3,068   | * 3,686 | 631    | 340    | 307    |
| Unit value per barrel of total exports <sup>1</sup> ..... | \$10.02 | \$2.84  | \$2.68 | \$2.60 | \$3.05 |

<sup>1</sup> Not over 500.<sup>2</sup> Includes 287,085 barrels, valued at \$947,961, exported to France and 756,541 barrels, valued at \$1,955,815, exported to the United Kingdom.<sup>3</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. measure and currency by applying the following factors: 1 metric ton=8.50 barrels; 1 sol=1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 18.—Kerosene: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country   | 1929   | 1932   | 1936   | 1937   | 1938   |
|---|--------|--------|--------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |        |        |        |        |        |
| Total, all countries.....                                 | 188    | 111    | 832    | 716    | 813    |
| Netherlands West Indies.....                              |        |        | 576    | 310    | 573    |
| Brazil.....   | 50     | 46     | 134    | 154    | 125    |
| Germany.....  |        |        |        | 67     | 37     |
| Chile.....  | 72     | 23     | 35     | 37     | 33     |
| Nicaragua.....  | 20     | 14     | 13     | 16     | 10     |
| El Salvador.....  | 15     | 11     | 12     | 13     | 9      |
| Bolivia.....  | 6      | 5      | 10     | 14     | 9      |
| All other.....  | 25     | 12     | 103    | 105    | 17     |
| Value (1,000 soles)                                       |        |        |        |        |        |
| Total, all countries.....                                 | 3,973  | 1,205  | 8,192  | 6,281  | 6,476  |
| Value (1,000 U. S. dollars)                               |        |        |        |        |        |
| Total, all countries.....                                 | 1,589  | 257    | 2,040  | 1,583  | 1,452  |
| Netherlands West Indies.....                              |        |        | 1,203  | 665    | 936    |
| Brazil.....   | 426    | 63     | 280    | 300    | 190    |
| Germany.....  |        |        |        | 131    | 62     |
| Chile.....  | 609    | 32     | 73     | 73     | 56     |
| Nicaragua.....  | 168    | 54     | 78     | 80     | 46     |
| El Salvador.....  | 129    | 43     | 66     | 63     | 43     |
| Bolivia.....  | 51     | 20     | 59     | 65     | 39     |
| All other.....  | 206    | 45     | 281    | 266    | 80     |
| Unit value per barrel of total exports <sup>1</sup> ..... | \$8.46 | \$2.32 | \$2.31 | \$2.21 | \$1.79 |

<sup>1</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to United States measures and currency by applying the following factors: 1 metric ton=7.75 barrels; 1 sol=1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 19.—Gas and fuel oils: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country   | 1929   | 1932   | 1936   | 1937   | 1938   |
|---|--------|--------|--------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |        |        |        |        |        |
| Total, all countries.....                                 | 1,186  | 900    | 953    | 817    | 787    |
| Germany.....  |        | 6      | 531    | 340    | 296    |
| Netherlands West Indies.....                              |        |        |        | 65     | 142    |
| Bolivia.....  |        | 36     | 33     | 39     | 39     |
| Chile.....  | 731    | 47     | 27     | 75     | 49     |
| Canada.....   | 235    | 349    |        |        |        |
| All other <sup>1</sup> .....                              | 220    | 431    | 362    | 299    | 261    |
| Value (1,000 soles)                                       |        |        |        |        |        |
| Total, all countries.....                                 | 5,698  | 1,615  | 4,515  | 3,263  | 3,690  |
| Value (1,000 U. S. dollars)                               |        |        |        |        |        |
| Total, all countries.....                                 | 2,279  | 344    | 1,124  | 822    | 827    |
| Germany.....  |        | 2      | 638    | 314    | 295    |
| Netherlands West Indies.....                              |        |        |        | 56     | 149    |
| Bolivia.....  |        | 20     | 68     | 72     | 69     |
| Chile.....  | 1,404  | 17     | 29     | 79     | 53     |
| Canada.....   | 453    | 137    |        |        |        |
| All other <sup>1</sup> .....                              | 422    | 168    | 389    | 301    | 261    |
| Unit value per barrel of total exports <sup>2</sup> ..... | \$1.92 | \$0.38 | \$1.18 | \$1.01 | \$1.05 |

<sup>1</sup> Includes exports for ship supplies as follows:

| Year      | Barrels | Value     |
|-----------|---------|-----------|
| 1929..... | 219,312 | \$421,508 |
| 1932..... | 271,212 | 112,144   |
| 1936..... | 284,975 | 305,110   |
| 1937..... | 276,293 | 278,684   |
| 1938..... | 231,814 | 232,191   |

<sup>2</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. measure and currency by applying the following factors: 1 metric ton = 7.25 barrels (gas oil) and 6.66 barrels (fuel oil); 1 sol = 1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 20.—Petroleum and principal products: Exports from VENEZUELA to principal markets, in specified years, 1929 to 1938

| Country                                | 1929             | 1932    | 1936    | 1937    | 1938               |
|--|------------------|---------|---------|---------|--------------------|
| Quantity (1,000 barrels of 42 gallons) |                  |         |         |         |                    |
| Total, all countries.....              | 129,765          | 113,900 | 157,025 | 174,850 | 185,126            |
| Netherlands West Indies.....           | 93,890           | 90,164  | 122,391 | 141,896 | 150,155            |
| UNITED STATES.....                     | 34,765           | 21,195  | 26,139  | 22,398  | 22,841             |
| United Kingdom.....                    | 907              | 958     | 2,236   | 2,666   | 4,182              |
| France.....                            | ( <sup>1</sup> ) | 197     | 1,408   | 1,447   | 2,303              |
| Canada.....                            | 105              | 649     | 1,651   | 3,786   | 1,791              |
| Chile.....                             |                  | 80      | 910     | 766     | 607                |
| All other <sup>2</sup> .....           | 98               | 657     | 2,290   | 1,891   | <sup>3</sup> 3,247 |
| Percentage to the United States.....   | 26.8             | 18.6    | 16.6    | 12.8    | 12.3               |
| Value (1,000 bolívares)                |                  |         |         |         |                    |
| Total, all countries.....              | 592,553          | 531,628 | 684,139 | 769,876 | 828,154            |
| Value (1,000 U. S. dollars)            |                  |         |         |         |                    |
| Total, all countries.....              | 114,363          | 80,223  | 174,524 | 217,413 | 259,626            |
| Netherlands West Indies.....           | 82,638           | 64,238  | 137,854 | 177,119 | 211,080            |
| UNITED STATES.....                     | 29,948           | 13,635  | 28,455  | 28,041  | 31,916             |
| United Kingdom.....                    | 780              | 644     | 2,346   | 3,267   | 5,845              |
| France.....                            | ( <sup>1</sup> ) | 133     | 1,450   | 1,673   | 2,981              |
| Canada.....                            | 90               | 367     | 1,504   | 4,179   | 2,502              |
| Chile.....                             |                  | 29      | 569     | 850     | 856                |
| All other <sup>2</sup> .....           | 907              | 1,177   | 2,343   | 2,184   | <sup>3</sup> 4,446 |
| Percentage to the United States.....   | 26.2             | 17.0    | 16.3    | 12.9    | 12.3               |

<sup>1</sup> Not over 500.

<sup>2</sup> In several instances may include countries shown as principal markets for exports of detailed items (see other tables).

<sup>3</sup> Includes 1,673,615 barrels of crude petroleum, valued at \$2,337,102, exported to Germany.

Source: Compiled by the United States Tariff Commission from official trade statistics of Venezuela. Converted to U. S. measure and currency by applying the following factors: 1 bolívar=1929, \$0.1930; 1932, \$0.1509; 1936, \$0.2551; 1937, \$0.2824; 1938, \$0.3135. (For conversion factors for net tons to barrels see separate tables for individual items.)

TABLE 21.—*Petroleum, crude: Exports from VENEZUELA to principal markets, in specified years, 1929 to 1938*

| Country   | 1929             | 1932    | 1936    | 1937    | 1938    |
|---|------------------|---------|---------|---------|---------|
| Quantity (1,000 barrels of 42 gallons)                    |                  |         |         |         |         |
| Total, all countries.....                                 | 129,445          | 109,053 | 150,483 | 169,133 | 179,222 |
| Netherlands West Indies.....                              | 93,670           | 85,608  | 117,356 | 137,312 | 145,161 |
| UNITED STATES.....  | 34,744           | 21,075  | 26,139  | 22,398  | 22,841  |
| United Kingdom.....                                       | 907              | 958     | 1,639   | 2,240   | 3,835   |
| France.....   |                  | 198     | 1,408   | 1,447   | 2,303   |
| Canada.....   | 104              | 649     | 1,651   | 3,786   | 1,792   |
| Germany.....  | ( <sup>1</sup> ) | 118     | 409     | 448     | 1,674   |
| All other.....  | 20               | 447     | 1,881   | 1,502   | 1,616   |
| Percentage to the United States.....                      | 26.8             | 19.3    | 17.4    | 13.2    | 12.7    |
| Value (1,000 bolívares)                                   |                  |         |         |         |         |
| Total, all countries.....                                 | 577,709          | 481,123 | 645,422 | 736,428 | 797,443 |
| (Value 1,000 U. S. dollars)                               |                  |         |         |         |         |
| Total, all countries.....                                 | 111,498          | 72,601  | 164,647 | 207,967 | 249,999 |
| Netherlands West Indies.....                              | 80,808           | 57,489  | 129,031 | 169,095 | 202,739 |
| UNITED STATES.....  | 29,803           | 13,588  | 28,458  | 28,040  | 31,916  |
| United Kingdom.....                                       | 780              | 644     | 1,863   | 2,725   | 5,356   |
| France.....   |                  | 133     | 1,450   | 1,673   | 2,981   |
| Canada.....   | 90               | 367     | 1,504   | 4,179   | 2,502   |
| Germany.....  | ( <sup>1</sup> ) | 80      | 464     | 564     | 2,337   |
| All other.....  | 17               | 300     | 1,877   | 1,691   | 2,168   |
| Percentage to the United States.....                      | 26.7             | 18.7    | 17.3    | 13.5    | 12.8    |
| Unit value per barrel of total exports <sup>2</sup> ..... | \$0.861          | \$0.666 | \$1.09  | \$1.23  | \$1.40  |

<sup>1</sup> Not over 500.

<sup>2</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Venezuela. Converted to U. S. measure and currency by applying the following factors: 6.735 barrels=1 metric ton; 1 bolívar=1929, \$0.1930; 1932, \$0.1509; 1936, \$0.2551; 1937, \$0.2824; 1938, \$0.3135.



TABLE 22.—*Fuel and gas oil: Exports from VENEZUELA to principal markets in specified years, 1929 to 1938*

| Country   | 1929   | 1932    | 1936   | 1937   | 1938   |
|---|--------|---------|--------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |        |         |        |        |        |
| Total, all countries.....                                 | 164    | 4,491   | 6,331  | 5,649  | 5,902  |
| Netherlands West Indies.....                              | 142    | 4,289   | 4,824  | 4,515  | 4,991  |
| Chile.....  |        | 80      | 911    | 707    | 565    |
| United Kingdom.....                                       |        | 3       | 598    | 426    | 346    |
| All other.....  | 22     | 122     | (1)    | 1      | (1)    |
| Value (1,000 bolívares)                                   |        |         |        |        |        |
| Total, all countries.....                                 | 5,650  | 29,129  | 31,720 | 31,418 | 30,649 |
| Value (1,000 U. S. dollars)                               |        |         |        |        |        |
| Total, all countries.....                                 | 1,091  | 4,396   | 8,092  | 8,872  | 9,608  |
| Netherlands West Indies.....                              | 942    | 4,305   | 7,038  | 7,451  | 8,322  |
| Chile.....  |        | 29      | 570    | 875    | 797    |
| United Kingdom.....                                       |        | (1)     | 483    | 542    | 489    |
| All other.....  | 149    | 62      | 1      | 4      | (1)    |
| Unit value per barrel of total exports <sup>1</sup> ..... | \$6.66 | \$0.979 | \$1.28 | \$1.67 | \$1.63 |

<sup>1</sup> Not over 500.<sup>2</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Venezuela. Converted to U. S. measure and currency by applying the following factors: Fuel oil, 6.66 barrels=1 metric ton; gas oil, 7.25 barrels=1 metric ton; 1 bolívar=1929, \$0.1930; 1932, \$0.1509; 1936, \$0.2551; 1937, \$0.2824; 1938, \$0.3135.

TABLE 23.—*Gasoline: Exports from VENEZUELA to principal markets, in specified years, 1929 to 1938*

| Country   | 1929    | 1932   | 1936   | 1937   | 1938   |
|---|---------|--------|--------|--------|--------|
| Quantity (1,000 barrels of 42 gallons)                    |         |        |        |        |        |
| Total, all countries.....                                 | 155     | 356    | 211    | 69     | 3      |
| Netherlands West Indies.....                              | 78      | 267    | 210    | 69     | 3      |
| All other.....  | 77      | 89     | 1      | (1)    | (1)    |
| Value (1,000 bolívares)                                   |         |        |        |        |        |
| Total, all countries.....                                 | 9,143   | 21,358 | 6,997  | 2,030  | 61     |
| Value (1,000 U. S. dollars)                               |         |        |        |        |        |
| Total, all countries.....                                 | 1,765   | 3,223  | 1,785  | 573    | 19     |
| Netherlands West Indies.....                              | 886     | 2,442  | 1,784  | 573    | 18     |
| All other.....  | 879     | 781    | 1      | (1)    | 1      |
| Unit value per barrel of total exports <sup>1</sup> ..... | \$11.39 | \$9.06 | \$8.44 | \$8.32 | \$7.49 |

<sup>1</sup> Not over 500.<sup>2</sup> See footnote 6, table 5.

Source: Compiled by the United States Tariff Commission from official trade statistics of Venezuela. Converted to U. S. measure and currency by applying the following factors: 8.50 barrels=1 metric ton; 1 bolívar=1929, \$0.1930; 1932, \$0.1509; 1936, \$0.2551; 1937, \$0.2824; 1938, \$0.3135.

## QUEBRACHO WOOD AND EXTRACT

Quebracho extract, obtained from the heartwood of the quebracho tree, is one of the most important and widely used of the numerous vegetable tanning materials. The extract differs from all other known tanning extracts in that it will not ferment. The wood of the quebracho tree, which is extremely hard, is in demand in South America for building purposes and for railroad ties, but is most important as a source of tannin. It contains a higher percentage of tannin to a given density than any other of the well-known extracts and is one of the quickest vegetable tans known. The tannin content of the heartwood averages 20 to 26 percent; 3 to 4 tons of wood are required to produce 1 ton of solid extract.

Quebracho extract finds extensive application in the tanning of all types of vegetable tanned leather. About 90 percent of the consumption is in the tanning of heavy leathers, such as sole leather, belting, and harness, but it is also adapted to the tanning of light leathers and bag, case, patent, and upholstery leathers. Practically every established heavy leather tannage in the United States includes a substantial proportion of quebracho.

### Latin American production.

Quebracho trees are native to northern Argentina and Paraguay, which together account for practically the entire world production. The actual quantity of wood produced is not known but is estimated to be in excess of 1 million tons annually. Approximately 80 percent of the supply of wood is believed to be located in Argentina. Extract preparation is an important industry in both Argentina and Paraguay. Some wood, perhaps 10 percent of the total annual cut, has been shipped abroad, principally to Italy, the United States, Germany, and France, for conversion into extract there (see table 1), but most of the cut is utilized in local extract factories.

### Latin American exports.

Exports of quebracho extract from Argentina and Paraguay, in specified years, 1929 to 1938, are shown in tables 2 and 3. The principal markets for quebracho extract in that period were the United States, Germany, the United Kingdom, Japan, and Poland.

Exports of extract from Latin America have been controlled and restricted in recent years through the operation of agreements between producers in both Argentina and Paraguay. Under these agreements, the extract factories limit their output pro rata according to capacity; they also fix prices, and sell through predetermined agencies to assigned markets. This arrangement, made with the tacit approval of the Argentine Government, followed a period of unlimited production and unrestricted competition which proved detrimental to the industry. A relatively small proportion of the quebracho extract produced in Argentina and Paraguay is consumed there.

Exports from Argentina in 1938 amounted to 370.2 million pounds; of this total, 61.6 million went to the United States, 57 million to

Germany, 46.4 million to Japan, 35.6 million to Poland, 23 million to the United Kingdom, 16.4 million to France, and 12.7 million to Belgium. Exports to the United States in 1938 were substantially smaller than in 1937; exports to Germany were more than double those in 1936, but were smaller than in 1937. Japanese purchases doubled in 1938 as compared with 1936. Exports to the United Kingdom, France, and Belgium declined after 1936.

Nearly three-fourths of Paraguayan exports of extract in 1937 were exported to Argentina or were recorded as "in transit" to Argentina; consequently, Argentine export statistics are indicative of the bulk of production of the two countries. The remainder of Paraguayan exports in 1937 went largely to the United States.

Exports of quebracho logs from Argentina in 1938, amounting to 192.3 million pounds, went chiefly to Italy (62.3 million), the United States (50.1 million), Germany (32.2 million), and France (30.5 million). (See table 1.) Prior to 1939, exports to Italy, the United States, and Germany increased, while those to France decreased. Exports of logs from Paraguay are small. Brazil has occasionally exported quebracho logs. In 1929 such exports amounted to 5.3 million pounds and in 1936, to 1.7 million pounds; in other recent years they were negligible.

TABLE 1.—*Quebracho logs; Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929                                     | 1932    | 1936    | 1937    | 1938    |
|--|--|---------|---------|---------|---------|
|  | Quantity (1,000 pounds)                  |         |         |         |         |
| Total, all countries.....                                | 360,024                                  | 113,160 | 132,977 | 193,943 | 192,332 |
| Italy.....   | 30,190                                   | 22,959  | 48,226  | 69,866  | 62,328  |
| UNITED STATES.....                                       | 142,664                                  | 15,628  | 14,639  | 43,717  | 50,102  |
| Germany.....   | 34,447                                   | 3,510   | 5,787   | 13,525  | 32,196  |
| France.....  | 114,028                                  | 44,480  | 37,346  | 52,997  | 30,467  |
| All other.....   | 38,695                                   | 26,583  | 26,979  | 13,838  | 17,239  |
| Percentages to the United States.....                    | 39.6                                     | 13.8    | 11.0    | 22.5    | 26.0    |
|  | Value (1,000 paper pesos)                |         |         |         |         |
| Total, all countries.....                                | 8,995                                    | 2,048   | 2,834   | 3,930   | 4,170   |
|  | Value (1,000 U. S. dollars) <sup>1</sup> |         |         |         |         |
| Total, all countries.....                                | 8,723                                    | 527     | 827     | 1,213   | 1,240   |
| Italy.....   | 314                                      | 108     | 286     | 436     | 403     |
| UNITED STATES.....                                       | 1,481                                    | 72      | 95      | 278     | 318     |
| Germany.....   | 358                                      | 16      | 33      | 84      | 216     |
| France.....  | 1,171                                    | 208     | 241     | 330     | 188     |
| All other.....   | 399                                      | 123     | 172     | 85      | 115     |
| Percentage to the United States.....                     | 39.8                                     | 13.7    | 11.5    | 22.9    | 25.7    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.010                                  | \$0.005 | \$0.006 | \$0.006 | \$0.006 |

<sup>1</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to United States weights and currency by applying the following factors: 1 metric ton = 2,204.6 pounds; 1 paper peso = 1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 2.—Quebracho extract: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                            |         |         |         |         |         |
| Total, all countries                               | 332,207 | 414,595 | 388,958 | 437,569 | 370,241 |
| UNITED STATES                                      | 54,645  | 87,622  | 71,841  | 92,326  | 61,621  |
| Germany  | 101,176 | 110,162 | 26,363  | 67,816  | 57,009  |
| Japan  | 7,553   | 10,862  | 21,563  | 23,779  | 46,427  |
| Poland   |         | 3,294   | 35,999  | 28,728  | 35,604  |
| United Kingdom                                     | 18,823  | 37,361  | 37,145  | 30,717  | 22,974  |
| France   | 21,330  | 27,853  | 33,219  | 26,032  | 16,429  |
| Belgium  | 21,409  | 21,327  | 23,065  | 21,197  | 12,672  |
| All other  | 107,271 | 116,114 | 139,763 | 146,976 | 117,505 |
| Percentage to the United States                    | 16.4    | 21.1    | 18.5    | 21.1    | 16.6    |
| Value (1,000 paper pesos)                          |         |         |         |         |         |
| Total, all countries                               | 31,507  | 25,144  | 34,067  | 40,168  | 34,495  |
| Value (1,000 U. S. dollars) <sup>1</sup>           |         |         |         |         |         |
| Total, all countries                               | 13,188  | 6,466   | 9,941   | 12,396  | 10,255  |
| UNITED STATES                                      | 2,169   | 1,396   | 1,837   | 2,607   | 1,707   |
| Germany  | 4,017   | 1,716   | 674     | 1,928   | 1,579   |
| Japan  | 300     | 168     | 551     | 676     | 1,286   |
| Poland   |         | 49      | 916     | 819     | 966     |
| United Kingdom                                     | 747     | 578     | 952     | 863     | 636     |
| France   | 847     | 425     | 848     | 736     | 456     |
| Belgium  | 850     | 330     | 590     | 600     | 351     |
| All other  | 4,238   | 1,804   | 3,573   | 4,167   | 3,255   |
| Percentage to the United States                    | 16.4    | 21.6    | 18.5    | 21.0    | 16.6    |
| Unit value per pound of total exports <sup>2</sup> | \$0.090 | \$0.016 | \$0.026 | \$0.028 | \$0.028 |

<sup>1</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.  
<sup>2</sup> See footnote 2, table 1.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 paper peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 3.—Quebracho extract: Exports from PARAGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                            |         |         |         |         |         |
| Total, all countries                               | 92,375  | 109,357 | 80,131  | 84,707  | 81,211  |
| UNITED STATES                                      |         |         |         | 19,835  | 27,342  |
| Argentina  |         | 21,113  | 2,425   | 14,881  | 22,118  |
| In transit (Argentina)                             |         | 88,244  | 77,706  | 46,647  | 31,310  |
| All other  |         |         |         | 3,344   | 441     |
| Percentage to the United States                    |         |         |         | 23.4    | 33.7    |
| Value (1,000 pesos)                                |         |         |         |         |         |
| Total, all countries                               | 2,765   | 3,325   | 2,181   | 2,305   | 2,210   |
| Value (1,000 U. S. dollars)                        |         |         |         |         |         |
| Total, all countries                               | 2,631   | 1,943   | 1,450   | 1,622   | 1,518   |
| UNITED STATES                                      |         |         |         | 380     | 511     |
| Argentina  |         | 395     | 44      | 285     | 413     |
| In transit (Argentina)                             |         | 1,548   | 1,406   | 893     | 565     |
| All other  |         |         |         | 64      | 9       |
| Percentage to the United States                    |         |         |         | 23.4    | 33.7    |
| Unit value per pound of total exports <sup>1</sup> | \$0.028 | \$0.018 | \$0.018 | \$0.019 | \$0.019 |

<sup>1</sup> See footnote 2, table 1.

Source: Compiled by the United States Tariff Commission from official trade statistics of Paraguay. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=2,204.6 pounds; 1 peso=1929, \$0.9513; 1932, \$0.5844; 1936, \$0.6649; 1937, \$0.7036; 1938, \$0.6866.

**Trade barriers, competitive conditions, and prices.**

Most European countries and Japan permit the entry of quebracho wood free of duty. Japan also permits the free entry of the extract and Germany accords free entry to that extract originating in countries which are accorded "conventional" rather than "general" tariff treatment. Other European countries, including the United Kingdom and France, impose nominal duties on quebracho extract. Recently Japan and belligerent European countries have made imports of practically all commodities, including both quebracho wood and extract, subject to import controls or licenses. Quebracho wood is admitted to the United States free of duty; <sup>2</sup> the extract is dutiable at 7.5 percent ad valorem.<sup>3</sup>

Under present operating conditions in the United States, quebracho extract appears to be essential in the tanning process. Both quebracho and chestnut are employed in tanning, but they are in general complementary rather than strictly competitive. The proportions of quebracho and chestnut used in tanning, however, may vary widely, depending upon availability and relative prices. Chestnut extract is the most important vegetable tanning material produced in the United States, but the chestnut blight in this country has virtually eliminated the possibility of long-continued domestic supplies from that source. Tanning materials may be obtained from the blighted chestnut trees on a salvage basis, but at the present rate of consumption, domestic chestnut extract will probably not be available for longer than 15 or 20 years. It is possible, therefore, that dwindling supplies of chestnut may result in an even greater use of quebracho in the United States tanning industry. Hemlock and oak, formerly the most important domestic tanning materials, are now relatively unimportant.

TABLE 4.—Quebracho extract (solid, 63 percent): Average wholesale price quotations per pound, New York (ex dock, duty-paid), 1929-39, and by months, September 1939-April 1940

| Year      | Cents per pound | Month          | Cents per pound |
|-----------|-----------------|----------------|-----------------|
| 1929..... | 5.0             | 1939:          |                 |
| 1930..... | 4.5             | September..... | 4.0             |
| 1931..... | 2.8             | October.....   | 4.4             |
| 1932..... | 2.4             | November.....  | 4.4             |
| 1933..... | 2.8             | December.....  | 4.5             |
| 1934..... | 3.0             | 1940:          |                 |
| 1935..... | 3.6             | January.....   | 4.5             |
| 1936..... | 3.7             | February.....  | 4.5             |
| 1937..... | 4.0             | March.....     | 4.5             |
| 1938..... | 4.0             | April.....     | 4.5             |
| 1939..... | 4.1             |                |                 |

Source: U. S. Bureau of Labor Statistics. *Wholesale Prices*, except 1940 prices, which are from *Oil, Pain and Drug Reporter* (first quotation of month).

The average price quotations of quebracho extract at New York, following general price trends, declined from 5 cents per pound in 1929 to 2.4 cents in 1932. (See table 4.) Thereafter prices increased, reaching 4 cents per pound in the years 1937-39. Following the declaration of war in Europe (September 1939), the price of quebracho increased further, and during the first 4 months of 1940 was

<sup>2</sup> Tariff Act of 1930, par. 1670.

<sup>3</sup> Tariff Act of 1930, par. 38. Reduced from 15 percent in the trade agreement with Argentina, effective November 15, 1941.

4.5 cents per pound. The average unit values of exports from Argentina followed a trend closely parallel to that of prices in New York. (See table 2.) In 1929 the average unit value was 4 cents per pound; in 1932, 1.6 cents per pound; and in 1937-38, 2.8 cents per pound. These unit values are considerably below prices at New York, but such values do not include freight, insurance, and commission charges and the United States duty of 15 percent ad valorem.

#### **Effects of the war.**

Europe, as well as the remainder of the world, is entirely dependent on the Western Hemisphere for its supply of quebracho. The use of quebracho is so well established that a sudden cessation of supply would undoubtedly be serious for tanners. Other materials, however, could take the place of quebracho. Europe has a variety of chestnut with good tanning qualities, and is the home of valonia. Wattle bark from South Africa is another possible substitute. The Soviet Union is understood to have immense forests of a tree similar to the United States hemlock. Synthetic materials, which are already used to a considerable extent in Germany, are also eventual substitutes for quebracho as well as other vegetable tans.

Over one-third of Argentine exports of quebracho extract and about two-thirds of exports of logs have heretofore gone to European nations. Sales of quebracho to continental European markets will probably cease for the duration of the war. Continuance of exports to the United Kingdom will depend on its ability to maintain and finance commercial relations with Latin America. Inasmuch as quebracho extract is essential to the tanning process, it may be expected that it will be given some priority by those belligerent nations which are able to obtain it. The United States and the United Kingdom may increase their consumption of quebracho; should this occur, it would offset, in whole or in part, the loss of European markets.

## CRUDE RUBBER

Crude rubber is obtained principally from latex, a milky fluid found in certain species of trees.<sup>1</sup> After the latex is gathered, it is coagulated and the solid portion made into ribbed smoked sheets. Some latex is shipped from producing areas, but most of the crude rubber enters commerce in the form of sheets produced on or near the plantation.

There is no production of crude rubber in the United States, and domestic producers of rubber goods import all of the crude rubber which they use. On a value basis, crude rubber has been one of the most important single commodities imported into the United States. The domestic rubber-goods-manufacturing industry employed 120,000 persons in 1937 and had a total output valued at 883 million dollars. In that year the domestic consumption of crude rubber amounted to 531,000 long tons, of which 79.8 percent was used in making automobile tires and inner tubes, 4.2 percent in making rubber boots and shoes, and 16.0 percent in making rubber hose, belts, druggists' sundries, and other miscellaneous products. Rubber is indispensable in the manufacture of numerous products essential to our present civilization, including motor vehicles and other equipment used in time of war. Synthetic rubber is now being produced in most industrial countries, but it is expensive and not completely satisfactory for some uses, although superior for others.

### Position of Latin America in world production and exports.

British Malaya and the Netherlands Indies are the two principal rubber-producing regions of the world. In these areas rubber is produced on large plantations from cultivated trees. Latin America accounts for about 2 percent of the world's production of rubber, which is obtained from wild trees and (in Mexico) from a desert shrub known as guayule. Practically all of the rubber produced in these various regions is exported, consequently over a period of years exports can be assumed to represent a close approximation to production, though from year to year stocks in the producing countries may vary considerably.

Total world exports of crude rubber in 1938 amounted to 895,000 long tons, of which Malaysia (principally British Malaya and the Netherlands Indies) accounted for 865,000 long tons and Latin America for 18,000, or about 2 percent. (See table 1.) Of total shipments from Latin America, 15,000 long tons came from South America (principally Brazil) and 3,000 from Mexico. Practically all of the crude rubber produced in Latin America is exported to North America and to Europe. In South America, crude rubber is produced almost entirely in the basin drained by the Amazon River and its tributaries. This basin lies principally in Brazil, but partly in Bolivia, Peru, Ecuador, and Colombia, where some rubber is also gathered from wild trees.

<sup>1</sup> More than 90 percent of the current supply of crude rubber is obtained from the tree known as the *Ficus brasiliensis*.

TABLE 1.—Crude rubber: Exports from producing countries and regions, in specified years, 1929 to 1938

| Country                                  | 1929                                | 1932  | 1936  | 1937    | 1938  |
|--|-------------------------------------|-------|-------|---------|-------|
|  | Quantity (1,000 long tons)          |       |       |         |       |
| Latin America <sup>1</sup> .....         | 22.6                                | 6.5   | 15.9  | 19.7    | 18.1  |
| British colonies:                        |                                     |       |       |         |       |
| Malaya, including Brunei and Labuan..... | 457.0                               | 406.0 | 353.7 | 469.9   | 372.0 |
| Ceylon.....                              | 80.3                                | 49.3  | 49.7  | 70.4    | 49.5  |
| British India.....                       | 7.9                                 | 1.1   | 8.6   | 9.8     | 8.5   |
| Burma.....                               | 5.5                                 | 3.0   | 5.8   | 7.2     | 6.7   |
| North Borneo.....                        | 7.4                                 | 5.4   | 8.2   | 13.2    | 9.5   |
| Sarawak.....                             | 11.2                                | 7.1   | 21.0  | 25.9    | 17.8  |
| Total British colonies.....              | 569.3                               | 471.9 | 447.0 | 506.4   | 464.0 |
| Netherlands Indies.....                  | 225.0                               | 211.0 | 309.6 | 431.7   | 298.1 |
| French Indochina.....                    | 9.5                                 | 13.5  | 40.8  | 43.4    | 59.2  |
| Thailand (Siam).....                     | 4.3                                 | 3.0   | 34.6  | 35.6    | 41.6  |
| Philippines and Oceania.....             | .9                                  | .8    | 1.6   | 1.6     | 2.0   |
| Liberia.....                             | .2                                  | ..... | 1.6   | 2.3     | 2.9   |
| Other Africa.....                        | 6.1                                 | 2.0   | 6.8   | 9.1     | 9.0   |
| Total world exports.....                 | 867.9                               | 708.7 | 867.9 | 1,139.8 | 894.9 |
|  | Percent of total of above countries |       |       |         |       |
| Latin America.....                       | 2.6                                 | 0.9   | 1.9   | 1.7     | 2.0   |

<sup>1</sup> About three-fourths of the crude rubber produced in Latin America is exported from Brazil. Mexico produces guayule rubber.

Source: International Rubber Regulation Committee, *Statistical Bulletin*, May 1940.

The year of greatest production of crude rubber in South America was 1912, when the output amounted to 49,000 long tons. Following the establishment of rubber plantations in Malaysia, South American production declined rapidly; in 1932 exports amounted to only 6,500 long tons, and in 1938 to 15,000 long tons. Practically all the rubber produced in South America has been obtained from wild trees, and it is unlikely, even with high prices, that such production will ever equal the output of 1912. The production of rubber on plantations in South America has been negligible, largely because of the South American leaf disease and the higher cost of labor as compared with that in Malaysia. High-yielding strains of rubber trees have been developed recently which appear to be resistant to this disease; such strains could be utilized advantageously on existing farms and plantations in Latin America. It is unlikely, however, that the production of plantation rubber will reach significant proportions within the next decade. About 7 years are required before rubber trees come into bearing.

Exports of crude rubber are important to Brazil, although they constitute only a small part of the world output. In general, about three-fourths of the crude rubber exported from Latin America is shipped from Brazil. These exports include appreciable quantities of rubber produced in neighboring countries but sent to market via the Amazon River and its tributaries. Exports of crude rubber from Brazil to principal markets, in specified years, 1929 to 1937,<sup>2</sup> are shown in table 2. The destination of Brazilian exports has shifted considerably. The United States was the principal country of destination in 1929 and 1932, and Germany in 1936 and 1937. The United King-

<sup>2</sup> Statistics for 1938 are not available.



dom was the third principal market. Other purchasers were France, Belgium, the Netherlands, and Italy, but the quantities taken by these countries were not large.

TABLE 2.—*Rubber, crude (except balata, gutta percha, chicle, and coquiram):<sup>1</sup> Exports from BRAZIL to principal markets, in specified years, 1929 to 1937<sup>2</sup>*

| Country                                  | 1929     | 1932     | 1936 <sup>3</sup> | 1937     |
|--|----------|----------|-------------------|----------|
| Quantity (long tons)                     |          |          |                   |          |
| Total, all countries.....                | 17,698   | 4,998    | 11,216            | 13,050   |
| Germany.....                             | 4,764    | 1,305    | 6,099             | 6,160    |
| UNITED STATES.....                       | 7,676    | 1,512    | 3,143             | 4,039    |
| United Kingdom.....                      | 3,112    | 1,519    | 1,237             | 1,509    |
| Italy.....                               | 36       | 53       | 283               | 219      |
| France.....                              | 1,599    | 443      | 54                | 115      |
| Belgium.....                             | 288      | 86       | 10                | 66       |
| All other.....                           | 228      | 80       | 132               | 942      |
| Percentage to the United States.....     | 43.4     | 30.3     | 28.7              | 31.0     |
| Value (1,000 milreis)                    |          |          |                   |          |
| Total, all countries.....                | 48,685   | 7,148    | 59,401            | 65,259   |
| Value (1,000 U. S. dollars)              |          |          |                   |          |
| Total, all countries.....                | 5,750    | 509      | 3,883             | 4,456    |
| Germany.....                             | 1,495    | 124      | 2,157             | 2,277    |
| UNITED STATES.....                       | 2,533    | 168      | 1,052             | 1,411    |
| United Kingdom.....                      | 1,119    | 153      | 438               | 569      |
| Italy.....                               | 14       | 5        | 101               | 81       |
| France.....                              | 426      | 43       | 19                | 43       |
| Belgium.....                             | 83       | 9        | 4                 | 20       |
| All other.....                           | 60       | 7        | 53                | 54       |
| Percentage to the United States.....     | 44.1     | 32.9     | 27.1              | 31.7     |
| Unit value per ton of total exports..... | \$324.88 | \$101.82 | \$346.20          | \$341.35 |

<sup>1</sup> Includes the following kinds of rubber: Hevea, manissoba, mangabeira, and sorb.

<sup>2</sup> Statistics for 1938 are not available.

<sup>3</sup> Country detail is for hevea rubber only; 1936 statistics show only important items by countries. Hevea rubber total amounted to 11,133,579 kilos (10,958 long tons), valued at 58,504,944 milreis (\$3,824,468).

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 long ton=1016.057 kilos; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826.

There is a small production of crude rubber in Mexico, all of which is obtained from wild guayule, a desert shrub. At the time of harvest the entire plant is cut and the rubber removed by a mechanical process. United States interests have several thousand acres of wild guayule plants near Torreón, Mexico, and these holdings account for the entire production in that country. In 1912, the year of greatest output, Mexico produced 10,000 long tons of guayule rubber. Mexican production decreased after that year largely because of the decline in prices caused by the increased production of rubber in Malaysia. In 1938, it amounted to about 3,000 long tons, practically all of which was shipped to the United States. Guayule rubber has a high resin content, which has confined its use in the United States principally to the manufacture of rubberized fabrics and to blending with crude rubber imported from other sources. After deresining, guayule rubber compares favorably in quality with crude rubber of other types.

**Trade barriers, competitive conditions, and prices.**

Crude rubber has entered the United States<sup>3</sup> and the United Kingdom free of duty for many years. Germany, Italy, the Soviet Union, and numerous other countries, on the other hand, impose high rates of duty on imports of crude rubber in order to stimulate the production of synthetic rubber, or for revenue.

After 1934 both the production and distribution of rubber from the Far East were regulated by agreements between British, Dutch, and other producers, and that fact, as well as changes in world industrial activity and in general price levels, has affected recent price movements of rubber. The average price of ribbed smoked sheets (No. 1) at New York in 1929 was 20.6 cents per pound. It declined to 3.5 cents per pound in 1932 and then rose to 19.4 cents in 1937. The average price was 14.6 cents per pound in 1938 and 17.6 cents in 1939. With the outbreak of war in Europe, the New York price rose from 16.8 cents per pound in August 1939 to 21.1 cents in September. Thereafter the price ranged from 18.6 cents per pound (March 1940) to 20.2 cents (November 1939); in April 1940, it was 19.2 cents per pound. (See table 3.)

**TABLE 3.**—*Crude rubber: Average spot closing prices of ribbed smoked sheets (No. 1) at New York, 1929-39 and August 1939-April 1940*<sup>1</sup>

[Cents per pound]

| Year      | Price | Month          | Price |
|-----------|-------|----------------|-------|
| 1929..... | 20.6  | 1939:          |       |
| 1930..... | 12.0  | August.....    | 18.8  |
| 1931..... | 6.2   | September..... | 21.1  |
| 1932..... | 3.5   | October.....   | 19.9  |
| 1933..... | 6.0   | November.....  | 20.2  |
| 1934..... | 12.9  | December.....  | 20.0  |
| 1935..... | 12.4  | 1940:          |       |
| 1936..... | 16.4  | January.....   | 19.1  |
| 1937..... | 19.4  | February.....  | 18.8  |
| 1938..... | 14.6  | March.....     | 18.6  |
| 1939..... | 17.6  | April.....     | 19.2  |

<sup>1</sup> Upriver fine Para, the principal type of crude rubber produced in South America, is generally quoted in New York at prices 1 or 2 cents lower than those for smoked ribbed sheet No. 1, but during the period 1930-33 it sold at prices higher than those for smoked ribbed sheet No. 1. Para rubber is generally used for specific purposes, such as for cut rubber thread.

Source: *The Rubber Age*, May 1940.

**Effects of the war.**

Although the war has dislocated established European markets for Latin American rubber, it has increased the demand for such rubber in the United States. Latin American production from wild trees and shrubs will doubtless be stimulated, but the output may not equal the quantity produced in 1912. No significant supplies of plantation rubber can be expected from Latin America in the immediate future, because of the time required to establish plantations and to bring the trees into bearing. Should the United States be unable to obtain its customary supplies from the Far East, it is possible that a part of this country's requirements can be met by synthetic rubber.

<sup>3</sup> Tariff Act of 1930, par. 1607. Crude rubber was bound free of duty in trade agreements with Brazil, Colombia, the Netherlands, and the United Kingdom. The agreement with the United Kingdom became effective on January 1, 1939.

## SUGAR

Cane sugar is produced principally in countries having a tropical climate, and beet sugar in those having a temperate climate. Both move in large quantities in international trade. Cane sugar enters international trade chiefly as raw sugar for further refining, but there is also a considerable movement of refined cane sugar for direct consumption. Beet sugar is usually ready for consumption when it leaves the factory.

### Position of Latin America in world production.

Latin American countries produce annually over 6 million short tons of sugar, or about 18 percent of the total world production. Cuba alone produces more than 3 million tons, about 10 percent of the world total, and more than one-half of the entire Latin American output. Other important Latin American producers are Brazil, Argentina, the Dominican Republic, Peru, and Mexico. With the exception of Chile, which imports about 138,000 tons of sugar annually, the several Latin American countries are practically self-sufficient with respect to sugar. Brazil and Argentina, although relatively large producers, consume within their own borders nearly all the sugar produced there. Production of sugar in the principal producing countries of Latin America and of the world, in specified years, 1928-29 to 1937-38, is shown in table 1.

TABLE 1.—*Sugar; Production in principal producing countries of Latin America, in the United States, and in other important producing countries, in specified years, 1929 to 1938*

| Country  | 1928-29                     | 1931-32    | 1935-36    | 1936-37    | 1937-38    |
|--|-----------------------------|------------|------------|------------|------------|
|  | Quantity (short tons)       |            |            |            |            |
| Cuba.....  | 5,775,073                   | 2,915,208  | 2,899,002  | 3,374,524  | 3,379,944  |
| Brazil.....  | 1,076,148                   | 1,137,054  | 1,135,232  | 989,778    | 1,103,049  |
| Dominican Republic.....  | 396,575                     | 478,936    | 503,795    | 500,209    | 469,060    |
| Argentina.....   | 420,368                     | 388,046    | 437,853    | 488,179    | 415,690    |
| Peru.....  | 405,154                     | 443,402    | 429,184    | 455,120    | 378,403    |
| Mexico.....  | 200,619                     | 260,131    | 344,522    | 311,499    | 334,329    |
| Haiti.....   | 13,997                      | 23,461     | 41,784     | 40,328     | 44,999     |
| Total production of Latin American countries listed above..... | 8,287,934                   | 5,646,238  | 5,791,362  | 6,159,637  | 6,125,374  |
| UNITED STATES production:                                      |                             |            |            |            |            |
| Continental.....   | 1,183,330                   | 1,328,482  | 1,561,232  | 1,744,364  | 1,741,842  |
| Offshore <sup>1</sup> .....                                    | 1,543,779                   | 2,022,359  | 1,946,166  | 1,925,452  | 2,094,086  |
| Total UNITED STATES.....                                       | 2,727,109                   | 3,350,841  | 3,507,398  | 3,669,816  | 3,835,928  |
| British India.....   | 4,643,673                   | 2,462,973  | 5,848,692  | 6,479,659  | 5,463,544  |
| Soviet Union and Ukraine.....                                  | 2,835,120                   | 1,693,440  | 2,912,000  | 2,238,816  | 2,800,000  |
| Germany.....   | 2,690,865                   | 1,756,315  | 2,126,029  | 2,184,590  | 2,669,698  |
| Formosa and Japan.....   | 2,087,008                   | 1,285,256  | 1,220,670  | 1,335,813  | 1,347,380  |
| Java.....  | 1,936,079                   | 2,877,717  | 652,991    | 1,559,204  | 1,542,092  |
| Philippine Islands.....  | 1,100,026                   | 1,100,709  | 982,221    | 1,117,827  | 1,058,846  |
| All other.....   | 4,512,211                   | 8,363,147  | 8,072,550  | 8,555,105  | 8,500,343  |
| Total world production.....                                    | 30,870,025                  | 28,536,636 | 31,113,913 | 33,300,467 | 33,343,205 |
|  | Percent of world production |            |            |            |            |
| Latin American countries listed above.....                     | 26.8                        | 19.8       | 18.6       | 18.5       | 18.4       |

<sup>1</sup> Includes Hawaii, Puerto Rico, and the Virgin Islands of the United States.

Source: Willet and Gray, *Weekly Statistical Sugar Trade Journal* (corrected to Jan. 18, 1940, issue).

**Latin American exports.**

The annual exports from Latin American countries average over 3.8 million tons, which represents about 30 percent of the world exports of sugar. Cuba is the outstanding Latin American exporter of sugar, furnishing about 75 percent of all Latin American exports and more than 20 percent of total world exports. The two other important exporting countries are the Dominican Republic and Peru. All three of these countries have facilities for refining only a part of their total production, and exports consist of both raw and refined sugar, principally raw sugar. Exports of sugar from the principal producing countries of Latin America and of the world, in specified years, 1929 to 1938, are shown in table 2.

About two-thirds of the exports of Cuban sugar are customarily shipped to the United States. The remainder is sold chiefly to the United Kingdom and Canada. Before the war other purchasers were Belgium, France, Switzerland, Canada, and the Scandinavian countries. (See table 3.) Prior to 1939 the Dominican Republic sent about 60 percent of its exports to the United Kingdom; other important markets were the United States, France, Morocco, and the Netherlands (table 4). Approximately one-half of Peru's exports of sugar went to other South American markets—Chile, Bolivia, Ecuador, and Uruguay; the United Kingdom and the United States consumed most of the remainder (table 5). Brazil is a larger producer than either the Dominican Republic or Peru, but its production is principally for domestic consumption. Exports of sugar from Haiti, Brazil, and Argentina to principal markets, in specified years, 1929 to 1938, are shown in tables 6 to 8.

TABLE 2.—*Sugar: Exports from principal producing countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country  | 1929       | 1932       | 1936       | 1937       | 1938       |
|--|------------|------------|------------|------------|------------|
| Quantity (short tons)                                  |            |            |            |            |            |
| Cuba.....  | 5,543,942  | 2,930,852  | 2,910,302  | 2,987,571  | 2,910,695  |
| Dominican Republic.....                                | 355,574    | 484,731    | 479,288    | 473,641    | 447,174    |
| Peru.....  | 400,553    | 358,393    | 359,534    | 344,641    | 275,504    |
| Haiti <sup>1</sup> .....                               | 5,213      | 22,701     | 38,363     | 35,720     | 37,909     |
| Brazil.....  | 16,399     | 44,698     | 99,399     | 343        | 8,974      |
| Argentina.....   | 10,034     | 1,553      | 5,436      | 1,385      | 2,900      |
| Total exports from above Latin American countries..... | 6,331,715  | 3,842,828  | 3,892,322  | 3,843,201  | 3,683,156  |
| Netherlands Indies.....                                | 2,680,790  | 1,668,507  | 974,532    | 1,254,078  | 1,198,279  |
| All other.....   | 7,051,533  | 7,744,374  | 7,823,044  | 8,026,597  | 7,890,113  |
| Total world exports.....                               | 16,064,038 | 13,255,709 | 12,689,898 | 13,123,874 | 12,761,648 |
| Percent of total world exports                         |            |            |            |            |            |
| Latin American countries listed above.....             | 39.4       | 29.0       | 30.7       | 29.3       | 28.9       |

<sup>1</sup> Fiscal year ended Sept. 30.

Source: Compiled by the United States Tariff Commission from official trade statistics of the respective countries, and from the *International Yearbook of Agricultural Statistics*.

TABLE 3.—*Sugar: Exports from CUBA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929      | 1932      | 1936      | 1937      | 1938      |
|--|-----------|-----------|-----------|-----------|-----------|
| Quantity (short tons)  |           |           |           |           |           |
| Total, all countries.....                                    | 5,543,942 | 2,930,852 | 2,910,302 | 2,987,571 | 2,910,695 |
| UNITED STATES.....   | 4,319,495 | 1,907,913 | 1,847,004 | 2,177,046 | 1,990,786 |
| United Kingdom.....  | 870,137   | 742,058   | 795,219   | 579,148   | 661,284   |
| Belgium.....   | 32,987    | 21,595    | 9,934     | 78,329    | 85,779    |
| France.....  | 151,847   | 104,918   | 100,261   | 44,911    | 60,490    |
| French Morocco.....  | (1)       | (1)       | 32,583    | 24,996    | 31,880    |
| Switzerland.....   | (1)       | (1)       | 9,278     | 17,762    | 15,147    |
| Canada.....  | 52,816    | 22,799    | 2,905     | 14,150    | 1,871     |
| Sweden.....  | 38,760    | 31,913    | 5,584     | 13,254    | 5,077     |
| Norway.....  | (1)       | (1)       | 15,665    | 11,758    | 12,851    |
| All other.....   | 77,900    | 99,656    | 91,869    | 26,217    | 45,530    |
| Percentage to the United States.....                         | 77.9      | 65.1      | 63.5      | 72.9      | 68.4      |
| Value (1,000 U. S. dollars) *                                |           |           |           |           |           |
| Total, all countries.....                                    | 204,849   | 53,973    | 112,591   | 127,285   | 99,771    |
| UNITED STATES.....   | 161,812   | 38,940    | 91,798    | 107,073   | 80,507    |
| United Kingdom.....  | 30,477    | 10,997    | 15,454    | 13,730    | 13,599    |
| Belgium.....   | 1,227     | 287       | 185       | 2,126     | 1,806     |
| France.....  | 4,901     | 1,595     | 2,126     | 1,481     | 1,292     |
| French Morocco.....  | (1)       | (1)       | 536       | 665       | 748       |
| Switzerland.....   | (1)       | (1)       | 146       | 449       | 324       |
| Canada.....  | 2,327     | 320       | 55        | 338       | 41        |
| Sweden.....  | 1,330     | 436       | 96        | 476       | 99        |
| Norway.....  | (1)       | (1)       | 282       | 254       | 291       |
| All other.....   | 2,776     | 1,380     | 1,913     | 693       | 1,064     |
| Percentage to the United States.....                         | 79.0      | 72.2      | 81.5      | 84.1      | 80.7      |
| Unit value per short ton of total exports <sup>1</sup> ..... | \$36.95   | \$18.42   | \$38.69   | \$42.60   | \$34.28   |

<sup>1</sup> Not separately reported.

\* One Cuban peso = 1 U. S. dollar (all years).

<sup>†</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to U. S. weights by applying the following factor: 1 short ton = 1972.142 libras.

TABLE 4.—*Sugar: Exports from the DOMINICAN REPUBLIC to principal markets, in specified years, 1929 to 1938*

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (short tons)                                     |         |         |         |         |         |
| Total, all countries.....                                 | 355,574 | 484,731 | 479,288 | 473,641 | 447,174 |
| United Kingdom <sup>1</sup> .....                         | 256,682 | 345,294 | 307,034 | 230,344 | 308,718 |
| UNITED STATES.....  | 3,526   | 3,193   | 64,740  | 71,927  | 60,151  |
| Virgin Islands.....                                       | 1,159   | 716     | 2,688   | 2,243   | 2,070   |
| France.....   | 39,763  | 106,719 | 25,958  | 70,648  | 37,918  |
| Morocco.....  |         | 13,276  | 24,820  | 47,793  | 20,366  |
| New Zealand.....  |         |         | 17,779  | 17,117  | 8,920   |
| Netherlands.....  | 4,282   | 3,389   | 16,952  | 14,216  | 5,774   |
| Netherlands West Indies.....                              | 611     | 791     | 2,880   | 2,663   | 2,993   |
| Canada.....   | 46,230  | 5,931   |         |         |         |
| All other.....  | 3,321   | 5,452   | 26,437  | 16,690  | 264     |
| Percentage to the United States.....                      | 1.0     | 0.7     | 11.4    | 15.2    | 13.5    |
| Value (1,000 U. S. dollars) <sup>2</sup>                  |         |         |         |         |         |
| Total, all countries.....                                 | 12,291  | 6,869   | 8,669   | 10,740  | 8,664   |
| United Kingdom <sup>1</sup> .....                         | 8,755   | 4,812   | 5,446   | 5,250   | 5,875   |
| UNITED STATES.....  | 103     | 61      | 953     | 1,625   | 1,208   |
| Virgin Islands.....                                       | 55      | 16      | 53      | 53      | 47      |
| France.....   | 1,428   | 1,569   | 487     | 1,554   | 727     |
| Morocco.....  |         | 171     | 457     | 1,077   | 411     |
| New Zealand.....  |         |         | 340     | 390     | 200     |
| Netherlands.....  | 149     | 41      | 294     | 315     | 112     |
| Netherlands West Indies.....                              | 32      | 22      | 71      | 73      | 77      |
| Canada.....   | 1,648   | 92      |         |         |         |
| All other.....  | 121     | 95      | 468     | 403     | 7       |
| Percentage to the United States.....                      | 0.8     | 0.7     | 11.1    | 15.1    | 14.0    |
| Unit value per short ton of total exports <sup>3</sup> .. | \$34.57 | \$14.17 | \$17.88 | \$22.68 | \$19.38 |

<sup>1</sup> Includes exports to Iceland.<sup>2</sup> Value reported in U. S. dollars (all years).<sup>3</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of the Dominican Republic. Converted to U. S. weights by applying the following factor: 1 short ton=907.194 kilos.

TABLE 5.—*Sugar: Exports from PERU to principal markets, in specified years, 1929 to 1938*

| Country                                      | 1929      | 1932     | 1936     | 1937     | 1938     |
|--|-----------|----------|----------|----------|----------|
| Quantity (short tons)                        |           |          |          |          |          |
| Total, all countries .....                   | 400, 553  | 358, 393 | 359, 534 | 344, 541 | 276, 604 |
| Chile .....                                  | 126, 808  | 96, 866  | 128, 200 | 129, 901 | 125, 492 |
| United Kingdom .....                         | 131, 214  | 226, 165 | 143, 181 | 109, 807 | 62, 118  |
| UNITED STATES .....                          | 3         | 30       | 20, 495  | 46, 373  | 56, 477  |
| Bolivia .....                                | 8, 637    | 10, 311  | 22, 639  | 24, 548  | 21, 893  |
| Ecuador .....                                | (1)       |          | 8, 339   | 4, 750   | 3, 153   |
| France .....                                 | 29, 200   | 14, 752  | 8, 971   |          |          |
| Belgium .....                                | 18, 469   | 4, 822   | 634      | 340      | 566      |
| Uruguay .....                                | 7, 824    | 2, 952   | 11, 655  | 2, 612   | 1, 715   |
| Germany .....                                | 912       | 1, 540   | 2, 142   | 2, 378   | 1, 653   |
| All other .....                              | * 77, 486 | 955      | 13, 281  | 23, 832  | 2, 437   |
| Percentage to the United States .....        | (2)       | (3)      | 5. 7     | 13. 5    | 20. 6    |
| Value (1,000 soles)                          |           |          |          |          |          |
| Total, all countries .....                   | 33, 770   | 25, 975  | 25, 031  | 31, 759  | 24, 948  |
| Value (1,000 U. S. dollars)                  |           |          |          |          |          |
| Total, all countries .....                   | 13, 507   | 5, 533   | 6, 233   | 8, 003   | 5, 693   |
| Chile .....                                  | 4, 313    | 1, 466   | 2, 211   | 2, 933   | 2, 449   |
| United Kingdom .....                         | 4, 444    | 3, 503   | 2, 399   | 2, 471   | 1, 221   |
| UNITED STATES .....                          | (4)       | 1        | 346      | 1, 091   | 1, 174   |
| Bolivia .....                                | 316       | 202      | 457      | 709      | 543      |
| Ecuador .....                                | (1)       |          | 175      | 121      | 79       |
| France .....                                 | 931       | 193      | 153      |          |          |
| Belgium .....                                | 622       | 72       | 10       | 8        | 11       |
| Uruguay .....                                | 271       | 53       | 212      | 69       | 34       |
| Germany .....                                | 31        | 24       | 37       | 56       | 33       |
| All other .....                              | * 2, 579  | 19       | 233      | 546      | 49       |
| Percentage to the United States .....        | (4)       | (5)      | 5. 5     | 13. 6    | 21. 0    |
| Unit value per short ton of total exports .. | \$33. 72  | \$16. 44 | \$17. 34 | \$23. 23 | \$20. 30 |

1 Not shown separately.

2 Includes the following: Canada, 32,966 short tons valued at \$1,118,360; New Zealand, 14,863 short tons, valued at \$475,104.

3 Less than one-tenth of 1 percent.

4 Not over \$500.

5 See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 short ton=907.194 kilos, gross; 1 sol=1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 6.—*Sugar: Exports from HAITI to principal markets, in specified years, 1929 to 1938 (fiscal years ended September 30)*

| Country  | 1929               | 1932    | 1936    | 1937    | 1938    |
|--|--------------------|---------|---------|---------|---------|
| Quantity (short tons)  |                    |         |         |         |         |
| Total, all countries.....                                    | 5,213              | 22,701  | 38,363  | 35,720  | 37,909  |
| United Kingdom.....  | 2,847              | 21,892  | 31,403  | 29,796  | 20,577  |
| UNITED STATES.....   | 210                | 258     | 5,726   | 3,797   | 15,792  |
| Netherlands West Indies.....                                 |                    | 7       | 352     | 752     | 836     |
| Virgin Islands.....  |                    | 200     | 675     | 1,150   | 622     |
| All other.....   | <sup>1</sup> 2,158 | 344     | 207     | 225     | 82      |
| Percentage to the United States.....                         | 4.0                | 1.1     | 14.9    | 10.6    | 41.7    |
| Value (1,000 gourdes)  |                    |         |         |         |         |
| Total, all countries.....                                    | 1,064              | 2,221   | 3,822   | 4,083   | 3,893   |
| Value (1,000 U. S. dollars)                                  |                    |         |         |         |         |
| Total, all countries.....                                    | 211                | 444     | 764     | 817     | 779     |
| United Kingdom.....  | 109                | 418     | 608     | 674     | 389     |
| UNITED STATES.....   | 11                 | 7       | 126     | 91      | 346     |
| Netherlands West Indies.....                                 |                    | (?)     | 9       | 19      | 22      |
| Virgin Islands.....  |                    | 7       | 16      | 27      | 19      |
| All other.....   | <sup>1</sup> 91    | 12      | 5       | 6       | 3       |
| Percentage to the United States.....                         | 5.3                | 1.6     | 16.5    | 11.2    | 44.5    |
| Unit value per short ton of total exports <sup>2</sup> ..... | \$40.44            | \$19.67 | \$19.93 | \$22.86 | \$20.54 |

<sup>1</sup> Includes 1,781 short tons, valued at \$71,260, exported to Canada. There were no other shipments to Canada in the years shown. <sup>2</sup> Not over \$500. <sup>3</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Haiti. Converted to United States weights and currency by applying the following factors: 1 short ton=907.104 kilos; 1 gourde=\$0.2000 (all years).

TABLE 7.—*Sugar: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938*

| Country  | 1929               | 1932    | 1936    | 1937 <sup>1</sup> | 1938 <sup>1</sup> |
|--|--------------------|---------|---------|-------------------|-------------------|
| Quantity (short tons)  |                    |         |         |                   |                   |
| Total, all countries.....                                    | 16,399             | 44,598  | 99,399  | 343               | 8,974             |
| United Kingdom.....  | 8,486              | 39,069  | 98,710  |                   | 8,400             |
| Portugal.....  | 9                  | 146     | 69      | (?)               |                   |
| Uruguay.....   | 5,903              | 4,922   | 297     | 212               | 390               |
| Argentina.....   | 478                | 134     | 177     | 13                |                   |
| All other.....   | <sup>2</sup> 2,423 | 327     | 146     | <sup>4</sup> 118  | <sup>4</sup> 184  |
| Values (1,000 milreis)                                       |                    |         |         |                   |                   |
| Total, all countries.....                                    | 9,028              | 19,174  | 43,724  | 328               | 2,882             |
| Value (1,000 U. S. dollars)                                  |                    |         |         |                   |                   |
| Total, all countries.....                                    | 1,066              | 1,365   | 2,858   | 22                | 167               |
| United Kingdom.....  | 569                | 1,203   | 2,837   |                   |                   |
| Portugal.....  | 1                  | 5       | 7       |                   |                   |
| Uruguay.....   | 395                | 141     | 6       | (?)               | (?)               |
| Argentina.....   | 23                 | 6       | 3       |                   |                   |
| All other.....   | <sup>3</sup> 78    | 10      | 5       |                   |                   |
| Unit value per short ton of total exports <sup>5</sup> ..... | \$65.02            | \$30.61 | \$28.75 | \$65.27           | \$18.63           |

<sup>1</sup> The statistics for the countries shown are taken from Statistical Bulletin of the International Sugar Council, August 1939. <sup>2</sup> Includes 2,416 short tons, valued at \$77,400, exported to France. <sup>3</sup> Mostly to Colombia and Bolivia. <sup>4</sup> Not available. <sup>5</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to United States weights and currency by applying the following factors: 1 short ton=907.194 kilos; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.0826; 1938, \$0.0580.



TABLE 8.—*Sugar: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country  | 1929     | 1932    | 1936     | 1937     | 1938     |
|--|----------|---------|----------|----------|----------|
| Quantity (short tons)  |          |         |          |          |          |
| Total, all countries.....                                    | 10,034   | 1,553   | 5,436    | 1,385    | 2,900    |
| Bolivia.....   | 6,372    | 1,520   | 5,337    | 1,314    | 2,805    |
| All other.....   | 3,662    | 33      | 99       | 71       | 95       |
| Value (1,000 paper pesos)                                    |          |         |          |          |          |
| Total, all countries.....                                    | 3,004    | 522     | 1,864    | 449      | 1,082    |
| Value (1,000 U. S. dollars) <sup>1</sup>                     |          |         |          |          |          |
| Total, all countries.....                                    | 1,267    | 134     | 544      | 139      | 322      |
| Bolivia.....   | 798      | 131     | 534      | 131      | 311      |
| All other.....   | 469      | 3       | 10       | 8        | 11       |
| Unit value per short ton of total exports <sup>2</sup> ..... | \$125.31 | \$86.41 | \$100.07 | \$100.15 | \$110.92 |

<sup>1</sup> Includes Uruguay, 1,854 short tons, valued at \$232,344; Paraguay, 1,530 short tons, valued at \$192,843; Brazil, 267 short tons, valued at \$33,434.

<sup>2</sup> For 1929 and 1932 the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

<sup>3</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 short ton=907.194 kilos; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

#### Trade barriers, competitive conditions, and prices.

Since 1934 the marketing of sugar in continental United States has been limited by law.<sup>1</sup> The Secretary of Agriculture under this authority designates at the beginning of the year the maximum quantity to be marketed, subject to revision during the year. The estimated consumption is apportioned to the supplying areas in accordance with a formula set forth in the statute. The continental producing areas, the domestic offshore areas,<sup>2</sup> Cuba, and each of the other regular foreign supplying countries are assigned definite pro-rata shares or quotas of the total designated supply. Of the total United States consumption of sugar, under the quota program, Cuba supplies about 29 percent, and all other Latin American countries combined furnish less than 2 percent.<sup>3</sup> Under the quota system, the United States continental supply of sugar is definitely limited, and Cuba, the Dominican Republic, Peru, and other Latin American exporters cannot ship to the United States any sugar in excess of a definite proportion of the designated supply, even though at times the United States price (exclusive of duty) is appreciably higher than that realized by these exporters in other world markets.

In order to stabilize the production and international marketing of sugar, the countries which are the major exporters and importers of sugar concluded an international sugar agreement at London on May 6, 1937. Under the terms of this agreement, the major exporting

<sup>1</sup> Except for the period September 12 to December 31, 1939, when the quotas were suspended by Presidential proclamation because of excessive prices arising out of speculation stimulated by the outbreak of war in Europe.

<sup>2</sup> Hawaii, Puerto Rico, the Philippines, and the Virgin Islands. From all of these, sugar enters the continental United States free of duty.

<sup>3</sup> The quota provisions of the sugar Act of 1937 expire on December 31, 1944.

countries agreed to limit for a period of 5 years their exports of sugar to the so-called free market, a term used to designate the limited international trade in sugar which does not enjoy preferential treatment. The principal importing countries also agreed not to adopt measures which would reduce the free market for sugar. The countries of Latin America which are parties to the international agreement are Cuba, Peru, the Dominican Republic, Brazil, and Haiti.

Barriers to international trade in sugar, other than quotas, are import duties, excise taxes, import-licensing systems, and sugar rationing. In May 1938 the import duties and excise taxes in the four leading importing countries, per pound of refined sugar, were as follows: United States, 2.5225 cents (on Cuban sugar, 1.489 cents);<sup>4</sup> the United Kingdom, 1.25 cents; Canada, 2.89 cents; and France, 1.48 cents.<sup>5</sup>

A substantial quantity of sugar (especially full-duty sugar from Latin American countries other than Cuba) is imported into the United States for refining and reexport with benefit of drawback. The United Kingdom and Canada have preferential duties on sugar from Empire sources. Sugar from French colonies pays the French consumption tax, as do imports from foreign countries, but sugar from assimilated colonies is free of duty and that from nonassimilated colonies is accorded the minimum tariff rate. Since the outbreak of war in Europe, most European countries have rationed sugar supplies, thus curtailing civilian consumption. Moreover, these same countries have imposed rigid controls over imports through licensing systems.

The price of sugar in London was high in 1929 and low in 1932; the recovery in the London price of sugar after 1932 went steadily forward, reaching a peak in 1939, although at no time did it approach the level of 1929. In the United States the price of sugar (ex duty) followed the world trend of sugar prices until 1934; in that year the quota system was established and thereafter the principal factor affecting the price of sugar in this country was the quantity permitted to be marketed. The price (ex duty) in this country was higher in 1935-38 than in 1929. The duty-paid price, however, was higher in 1929 than in any subsequent year.<sup>6</sup>

With the outbreak of war in Europe in September 1939, the price of sugar in the two markets rose sharply. It declined somewhat in the last 3 months of 1939, but increased in the first 4 months of 1940, though it remained considerably below the September peak (see table 9).

<sup>4</sup> The rate quoted for the United States includes the processing tax of 0.535 cent per pound on refined sugar, but this tax is applicable to both domestic and imported sugars. After the suspension of the quota system on September 12, 1939, the United States rate of duty on 96° Cuban sugar became 1.5 cents per pound, and the rate on refined Cuban sugar including the tax was 2.125 cents per pound. The United States duty on 96° sugar was reduced by Presidential proclamation from 2.5 cents per pound to 1.875 cents, effective June 8, 1934, and the duty on 96° sugar from Cuba became 1.5 cents per pound instead of 2 cents, Cuba having a tariff preference of 20 percent in this country. As a result of the trade agreement with Cuba, effective September 3, 1934, the duty on 96° Cuban sugar was reduced to 0.9 cent per pound, so long as the quota system remained in force. Sugar from Cuba remained dutiable at this rate until September 12, 1939, when the quotas were suspended. The 0.9-cent rate was restored on December 26, 1939 (when notice was given that quotas would be reinstated), in accordance with the provisions of a supplemental agreement with Cuba signed December 18, 1939. A second supplemental agreement with Cuba, effective January 5, 1942, established a rate of 0.75 cent per pound on 96° sugar imported from that country.

<sup>5</sup> U. S. Department of Commerce, *Sugar, Retail Prices in 45 Countries*, December 1938. The rates quoted for foreign countries are the nonpreferential rates.

<sup>6</sup> Prior to 1934, variations in the spread between the New York price ex duty and the duty-paid price were caused, of course, by changes in the rate of duty on Cuban sugar.

TABLE 9.—Raw sugar, 96°: Wholesale price quotations in New York, London, and Cuba, annual 1929-39, and by months, August 1939-April 1940

[Cents per pound]

| Period    | New York<br>duty-paid <sup>1</sup> | New York <sup>2</sup> | London <sup>3</sup> |
|-----------|------------------------------------|-----------------------|---------------------|
| 1929      | 3.76                               | 2.00                  | 1.91                |
| 1930      | 3.37                               | 1.48                  | 1.36                |
| 1931      | 3.34                               | 1.34                  | 1.25                |
| 1932      | 2.93                               | .93                   | .87                 |
| 1933      | 3.23                               | 1.23                  | .97                 |
| 1934      | 3.00                               | 1.48                  | 1.04                |
| 1935      | 3.23                               | 1.33                  | 1.00                |
| 1936      | 3.61                               | 2.71                  | 1.00                |
| 1937      | 3.45                               | 2.55                  | 1.07                |
| 1938      | 2.94                               | 2.04                  | 1.14                |
| 1939      | 2.95                               | 1.87                  | 1.46                |
| 1939:     |                                    |                       |                     |
| August    | 2.86                               | 1.96                  | 1.35                |
| September | 3.69                               | 2.37                  | 1.17                |
| October   | 2.95                               | 1.46                  | 1.80                |
| November  | 3.01                               | 1.51                  | 1.47                |
| December  | 2.97                               | 1.54                  | 1.35                |
| 1940:     |                                    |                       |                     |
| January   | 2.85                               | 1.96                  | 1.51                |
| February  | 2.83                               | 1.94                  | 1.54                |
| March     | 2.82                               | 1.93                  | 1.54                |
| April     | 2.84                               | 1.95                  | 1.47                |

<sup>1</sup> The duty on 96° Cuban sugar in 1929 was 1.7648 cents per pound; in 1930-34, 2 cents; June 8, 1934-Sept. 2, 1934, 1.5 cents; Sept. 3, 1934-Sept. 11, 1939, 0.9 cent; Sept. 12, 1939-Dec. 25, 1939, 1.5 cent; and from Dec. 26, 1939, 0.9 cent.

<sup>2</sup> C. and f. New York quotations.

<sup>3</sup> C. I. f. London quotations on the New York c. and f. basis.

<sup>4</sup> Spot quotations, f. o. b. Cuba, No. 4 Contract, as established daily by the New York Coffee and Sugar Exchange; London quotations were discontinued in September 1939.

Source: United States Tariff Commission, *Sugar Statistics*, 1940.

#### Effects of the war.

Europe produces about 80 percent of its requirements of sugar. More than one-half of its imports are obtained from the Western Hemisphere. The United Kingdom is the largest importer of sugar in Europe. Many of the smaller European countries, deficient in the supply of sugar, import the major portion of their requirements from other European countries. The important surplus-producing countries of Europe are Germany, Czechoslovakia, and Poland.

Should the production of sugar be curtailed as a result of a prolonged war, it is possible that the price might increase despite the rationing of sugar in most belligerent countries. The blockade of European ports, so long as it is effective, will restrict the sale of Latin American sugar to the United States, Canada, the United Kingdom, and Latin America itself. The United Kingdom has been the principal market for exports from the Dominican Republic, Haiti, and Brazil; it has been an important market for Cuba and Peru. Sales of Latin American sugar to the United States will be governed chiefly by the sugar policy of this country.

Should the United States abandon the quota system, no Latin American country other than Cuba would find it profitable to sell sugar in this market because of the tariff preference accorded sugar from that country.<sup>7</sup> If, however, the Sugar Act of 1937 is retained in force, Latin American countries will be permitted to ship limited amounts of sugar to the United States. This they will be likely to do, provided the price of sugar in the United States exceeds the world

<sup>7</sup> Limited quantities might be imported into the United States from countries other than Cuba by refiners, fruit canners, and others to be used in the export trade, inasmuch as they would receive benefit of drawback of 99 percent of the duty paid.

price by an amount at least equal to the duty which they are required to pay. The production of sugar in the Western Hemisphere may be stimulated by an increased demand and by the loss of supplies from other producing areas.

#### MOLASSES (BLACKSTRAP)

The so-called blackstrap molasses is the waste or byproduct molasses obtained in the manufacture of sugar. For duty purposes in the United States, imports of blackstrap molasses are classified as molasses not to be used for the further extraction of sugar or for human consumption. This molasses is used chiefly in the manufacture of industrial alcohol, and to a lesser extent as an ingredient in sweet cattle feeds and in the manufacture of yeast and vinegar. Certain edible molasses or sirups are imported into the United States from the Barbados and Cuba, but the trade in these products with Latin American countries is not large.

#### Position of Latin America in world production.

Inasmuch as blackstrap molasses is a byproduct of the sugar industry, the output by countries varies directly with the production of sugar.<sup>8</sup> Many countries consume all or a large part of the molasses which they produce. Brazil, for example, uses molasses in the production of industrial alcohol for fuel purposes, and Haiti in the manufacture of rum. During recent years Cuba, in addition to its production of blackstrap molasses, has also produced large quantities of so-called high-test molasses. This is a partially inverted sirup from which no sugar has been extracted, and which is produced from surplus cane. This molasses moves through the same trade channels and is utilized in part for the same purposes (principally in the production of alcohol) as byproduct blackstrap molasses.

#### Latin American exports.

Cuba leads in volume of exports of molasses from the Latin American countries; about 85 percent comes from this source. The principal exporters other than Cuba are the Dominican Republic and Haiti. Practically all of the exports of molasses from these three countries are shipped to the United States. Exports of molasses from Cuba, the Dominican Republic, and Haiti, in specified years, 1929 to 1938, are shown in tables 10 and 11.

<sup>8</sup> See the discussion on sugar.

TABLE 10.—*Molasses, blackstrap: Exports from CUBA to principal markets, in specified years, 1929 to 1938*

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 gallons of 11.7 pounds)                   |         |         |         |         |         |
| Total, all countries.....                                 | 244,322 | 130,112 | 202,718 | 168,105 | 118,906 |
| UNITED STATES.....  | 242,651 | 130,111 | 181,211 | 163,130 | 102,976 |
| United Kingdom.....                                       | 1,670   |         | 21,391  | 4,122   | 13,117  |
| All other.....  | 1       | 1       | 116     | 853     | 2,813   |
| Percentage to the United States.....                      | 99.3    | 99.9    | 89.4    | 97.0    | 86.6    |
| Value (1,000 U. S. dollars) <sup>1</sup>                  |         |         |         |         |         |
| Total, all countries.....                                 | 11,674  | 3,457   | 10,726  | 8,188   | 4,387   |
| UNITED STATES.....  | 11,603  | 3,457   | 9,308   | 7,881   | 3,962   |
| United Kingdom.....                                       | 70      |         | 1,401   | 263     | 346     |
| All other.....  | 1       | 279     | 17      | 44      | 179     |
| Percentage to the United States.....                      | 99.4    | 99.9    | 86.8    | 96.3    | 90.3    |
| Unit value per gallon of total exports <sup>4</sup> ..... | \$0.048 | \$0.027 | \$0.053 | \$0.049 | \$0.037 |

<sup>1</sup> Principally to Greece and France.

<sup>2</sup> One Cuban peso=1 U. S. dollar (all years).

<sup>3</sup> Not over \$500.

<sup>4</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba.

TABLE 11.—*Molasses, blackstrap: Exports from the DOMINICAN REPUBLIC and HAITI, in specified years, 1929 to 1938*<sup>1</sup>

| Country                                 | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 gallons of 11.7 pounds) |         |         |         |         |         |
| Dominican Republic.....                 | 18,959  | 16,409  | 21,191  | 18,916  | 20,576  |
| Haiti <sup>2</sup> .....                | 1,860   | 2,547   | 2,141   | 2,043   | 2,996   |
| Value (foreign currency)                |         |         |         |         |         |
| Dominican Republic (1,000 dollars)..... | 689     | 441     | 985     | 844     | 616     |
| Haiti <sup>2</sup> (1,000 gourdes)..... | 627     | 397     | 570     | 393     | 597     |
| Value (1,000 U. S. dollars)             |         |         |         |         |         |
| Dominican Republic.....                 | 689     | 441     | 985     | 844     | 616     |
| Haiti <sup>2</sup> .....                | 125     | 77      | 114     | 79      | 119     |
| Value per gallon <sup>3</sup>           |         |         |         |         |         |
| Dominican Republic.....                 | \$0.036 | \$0.027 | \$0.046 | \$0.045 | \$0.030 |
| Haiti <sup>2</sup> .....                | .067    | .030    | .053    | .038    | .040    |

<sup>1</sup> Practically all shipped to the United States.

<sup>2</sup> Fiscal year ended Sept. 30.

<sup>3</sup> See footnote 3, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of the Dominican Republic and Haiti. Converted to U. S. weights and currency by applying the following factors: 1 kilo=0.188427 gallon; Haiti, 1 gourde=\$0.2000 (all years); Dominican Republic, reported in U. S. dollars (all years).

#### Trade barriers, competitive conditions, and prices.

Blackstrap molasses entering the United States is dutiable at the rate of three one-hundredths of 1 cent a pound of total sugars, equal

on the average to about 0.2 cent per gallon, and from 3 to 6 percent ad valorem according to fluctuations in the price.<sup>9</sup> In the United States blackstrap molasses is used as a raw material in the manufacture of ethyl alcohol, but during the last few years the production of alcohol synthetically from petroleum or natural gas has become increasingly important. In 1939 (fiscal year), the production of synthetic ethyl alcohol in the United States amounted to 48 million proof gallons, which was nearly four times the production by this method in 1934. The total United States production of ethyl alcohol in 1939 amounted to 201 million gallons, of which about 68 percent was made from molasses and 24 percent from petroleum or natural gas. Any material increase in the price of molasses would probably stimulate the production of alcohol from petroleum or natural gas.

The average price quotation for inedible blackstrap molasses in tank carlots at New York, was 11.65 cents per gallon in 1929; it declined slightly in 1930 and sharply in 1931 and 1932, reaching 5 cents per gallon in the latter year. After 1932 the price advanced to 8.1 cents in 1935 and then declined steadily to 5.3 cents in 1939. With the outbreak of war in Europe the quoted price rose from 4.5 cents in August 1939 to 5.75 cents in September, a level which was maintained through March 1940. (See table 12.)

TABLE 12.—*Molasses (blackstrap, inedible): Price quotations in tank carlots at New York, 1929-39, and by months, August 1939-March 1940*

[F. o. b. New York]

| Year | Cents per gallon | Year and Month | Cents per gallon |
|------|------------------|----------------|------------------|
| 1929 | 11.65            | 1939:          |                  |
| 1930 | 11.62            | August         | 4.50             |
| 1931 | 7.00             | September      | 5.75             |
| 1932 | 5.00             | October        | 5.75             |
| 1933 | 6.70             | November       | 5.75             |
| 1934 | 5.90             | December       | 5.75             |
| 1935 | 8.10             | 1940:          |                  |
| 1936 | 7.80             | January        | 5.75             |
| 1937 | 7.25             | February       | 5.75             |
| 1938 | 6.67             | March          | 5.75             |
| 1939 | 5.33             |                |                  |

Source: *The Journal of Commerce* (1929-34), and *Oil, Paint and Drug Reporter*.

#### Effects of the war.

Inasmuch as practically all of the exports of molasses from the countries of Latin America are absorbed by the United States, the war is unlikely to affect adversely these exports, unless there is a shortage of shipping facilities to the United States. Inasmuch as blackstrap molasses is a byproduct of the sugar industry, production will be affected to the extent that the war affects the production of sugar (see the section on sugar). Production of both sugar and molasses in the Western Hemisphere may be stimulated by the increased demand for sugar and industrial alcohol and by the loss of supplies from other producing areas. The sugar policy of the United States, however, may be as important to Latin American producers of sugar and molasses as the war.

<sup>9</sup> Tariff Act of 1930, par. 502. Blackstrap molasses from Cuba was dutiable at 0.024 cent per pound of total sugars; this rate was reduced to 0.012 cent per pound of total sugars in the supplemental trade agreement with Cuba, effective January 5, 1942.

## TIN

Tin is utilized in the production of tin plate for containers, as an alloy in bronze, bearing metals, babbitts, and pewter, and in the production of solder. Although glass and paper containers may to a certain extent be substituted for tin containers, there is no acceptable substitute for tin in the production of bronze or solder.

### Position of Latin America in world production.

Prior to 1942, the Federated Malay States, Bolivia, the Netherlands Indies, Thailand, China, and Nigeria produced about 80 percent of all the tin mined. Australia, the United Kingdom, and Argentina rank next in importance. Tin is mined in 12 or more other countries, no one of which produces a significant proportion of the world total. The United Kingdom is the only industrial country which has tin mines of importance. (See table 1.)

Tin ore is mined in Bolivia, and to a small extent in Argentina; the entire production is exported. Bolivian tin ores are complex, and the production of good-quality metal from them is much more difficult than it is from the ores of Malaya and Cornwall. In the past the Bolivian ore has been thought to carry too much impurity to be satisfactorily treated without "sweetening" with the purer ore of Malaya. For this reason, and because of financial interrelationships, almost all of the Bolivian tin ore has been shipped to the United Kingdom for smelting.

Prior to 1942 more than one-half of the world's tin ore was smelted in the Straits Settlements, which drew supplies from the Malay States, the Netherlands Indies, Thailand, Burma, Japan, and South Africa. About one-fourth was smelted in England from Cornish, Bolivian, and Nigerian supplies. Smaller tin-smelting industries are located in China, Germany, Australia, the Netherlands, and France; some of the silver-bearing portion of the Bolivian tin ore is smelted locally.

TABLE 1.—*Tin: Production of principal producing countries of Latin America and of the world, in specified years, 1929 to 1938*

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Short tons (tin content of ore)                                 |         |         |         |         |         |
| Latin America:  |         |         |         |         |         |
| Bolivia .....   | 51,897  | 23,054  | 26,963  | 28,027  | 28,416  |
| Argentina .....   |         |         | 997     | 1,495   | 1,240   |
| Total production of Latin American countries listed above ..... | 51,897  | 23,054  | 27,960  | 29,522  | 30,656  |
| Other countries:  |         |         |         |         |         |
| Federated Malay States .....                                    | 75,085  | 30,368  | 74,823  | 86,847  | 48,437  |
| Netherlands Indies .....  | 39,146  | 16,689  | 35,486  | 44,604  | 23,546  |
| Thailand .....  | 11,779  | 10,372  | 14,199  | 18,473  | 15,142  |
| China .....   | 7,591   | 7,980   | 11,760  | 11,780  | 12,320  |
| Nigeria .....   | 12,022  | 4,675   | 10,760  | 11,724  | 8,182   |
| Other Asia .....  | 7,419   | 7,889   | 9,214   | 9,435   | 8,770   |
| Australia .....   | 2,508   | 2,395   | 3,591   | 3,643   | 3,920   |
| United Kingdom .....  | 3,664   | 1,497   | 2,351   | 2,225   | 2,251   |
| Union of South Africa .....                                     | 1,344   | 645     | 691     | 605     | 647     |
| All other .....   | 2,546   | 2,676   | 11,278  | 14,235  | 11,564  |
| Total world production .....                                    | 215,001 | 108,240 | 201,943 | 233,073 | 165,435 |
| Percent of total world production                               |         |         |         |         |         |
| Latin American countries listed above .....                     | 24      | 21      | 14      | 13      | 18      |

<sup>1</sup> Estimated.

Source: American Bureau of Metal Statistics.

## Latin American exports.

In 1937, the Bolivian tin quota<sup>1</sup> was set at 44,100 long tons, of which only 23,860 long tons were actually exported. In 1938 exports from Bolivia amounted to 25,484 long tons. Failure of Bolivia to meet its quota is attributed in part to the labor shortage resulting from the Chaco War, and in part to exchange restrictions affecting exports. No tin was exported from Argentina in 1929 or 1932; in 1936 exports from that country amounted to 1,000 long tons and in 1938 to 2,200 long tons.

Prior to 1941, tin concentrates, the most important Bolivian export commodity, went principally to the United Kingdom (90 percent) and to Belgium and the Netherlands. Other purchasers were Chile, the United States, Germany, and Japan. Over half of the tin slag was purchased by Belgium. Smaller quantities were taken by the United Kingdom, the Netherlands, and France. Exports of tin concentrates from Bolivia to principal markets, in specified years, 1929 to 1938, are shown in table 2.

TABLE 2.—Tin concentrates: Exports from BOLIVIA to principal markets, in specified years, 1929 to 1938

| Country                                      | 1929             | 1932   | 1936             | 1937             | 1938 <sup>1</sup> |
|--|------------------|--------|------------------|------------------|-------------------|
| Quantity (long tons) <sup>2</sup>            |                  |        |                  |                  |                   |
| Total, all countries.....                    | 45,110           | 20,050 | 23,718           | 23,860           | 25,484            |
| United Kingdom.....                          | 44,206           | 18,661 | 22,525           | 21,584           | 22,220            |
| Belgium.....                                 | 468              | 662    | 301              | 1,033            | 2,002             |
| Netherlands.....                             | 188              | 725    | 859              | 1,181            | 1,233             |
| Germany.....                                 | 144              |        | ( <sup>3</sup> ) | 7                | 14                |
| UNITED STATES.....                           | 2                |        | 18               | 8                | 11                |
| Chile.....                                   |                  |        | 15               | 56               | 11                |
| All other.....                               | 12               | 2      | ( <sup>3</sup> ) | 1                | 4                 |
| Percentage to the United States.....         | ( <sup>4</sup> ) |        | 0.1              | ( <sup>5</sup> ) | ( <sup>6</sup> )  |
| Value (1,000 bolivianos)                     |                  |        |                  |                  |                   |
| Total, all countries.....                    | 98,018           | 33,585 | 61,964           | 77,791           | 64,692            |
| Value (1,000 U. S. dollars)                  |                  |        |                  |                  |                   |
| Total, all countries.....                    | 35,817           | 7,667  | 23,810           | 28,394           | 28,613            |
| United Kingdom.....                          | 35,169           | 7,126  | 22,617           | 25,667           | 20,596            |
| Belgium.....                                 | 369              | 255    | 306              | 1,222            | 1,851             |
| Netherlands.....                             | 142              | 285    | 855              | 1,421            | 1,138             |
| Germany.....                                 | 128              |        | ( <sup>3</sup> ) | 8                | 14                |
| UNITED STATES.....                           | 1                |        | 17               | 10               | 10                |
| Chile.....                                   |                  |        | 15               | 65               | 11                |
| All other.....                               | 18               | 1      | ( <sup>3</sup> ) | 1                | 4                 |
| Percentage to the United States.....         | ( <sup>4</sup> ) |        | 0.1              | ( <sup>5</sup> ) | ( <sup>6</sup> )  |
| Unit value per long ton of total exports.... | \$794            | \$382  | \$1,004          | \$1,190          | \$927             |

<sup>1</sup> Includes slag amounting to 1,724 long tons valued at \$1,581,993. Exports of slag in previous years were—

| Year      | Long tons | 1,000 U. S. dollars |
|-----------|-----------|---------------------|
| 1929..... | 6,755     | 997                 |
| 1932..... | 3,215     | 210                 |
| 1936..... | 2,212     | 331                 |
| 1937..... | 9,437     | 1,495               |

<sup>2</sup> 1938 is known to be stated in terms of tin content. Previous years are believed to be so stated.

<sup>3</sup> Not over 1,000 pounds.

<sup>4</sup> Consists of exports to France only.

<sup>5</sup> Less than one-tenth of 1 percent.

<sup>6</sup> Not over \$500.

Source: Compiled by the United States Tariff Commission from official trade statistics of Bolivia. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 long ton=1016.057 kilos; 1 boliviano=1929, \$0.3388; 1932, \$0.2122; 1936-38, \$0.3650.

<sup>1</sup> The international quota system is described under the heading "Trade barriers, competitive conditions, and prices."



**Trade barriers, competitive conditions, and prices.**

Export taxes are imposed on tin ore shipped from British colonies to other than British territory, thus restricting the smelting of the ore in other countries.

Tin ore, tin in bars, blocks, or pigs, alloys in chief value of tin, and grain or granulated and scrap tin, including scrap tin plate, enter the United States free of duty.<sup>2</sup> Tin is also admitted free of duty in most of the other important consuming countries.

The United States is the largest tin-consuming country in the world. It relies wholly on imports, which enter chiefly in the form of bars or blocks. United States imports of tin metal in 1939 amounted to 78,514 short tons; principal sources were as follows: British Malaya, 52,399 short tons; the United Kingdom, 11,981; the Netherlands, 5,953; China, 3,650; and other countries, 4,531. A substantial part of United States requirements of tin might be obtained from Bolivian ore smelted in the United States if the export taxes on tin ore from British colonies were reduced or eliminated and if this country could obtain Malayan ore for mixture with that from Bolivia. Under existing conditions, however, this seems improbable.<sup>3</sup>

The leading producing countries—British Malaya, Bolivia, the Netherlands Indies, Nigeria, and other—have entered into arrangements to restrict the production of tin. The agreements, of which the first went into effect in 1931, established for the several producing countries quotas which have been varied from time to time. In the same year an International Tin Pool was announced, with the apparent purpose of holding accumulated tin stocks and releasing them to the market only under certain agreed prices. Since the beginning of the war, the quotas established for the producing countries by the International Tin Committee have been increased several times, rising from 45 percent of the standard tonnage to 130 percent.

Although affected appreciably by the international control of production and marketing, the price of tin has nevertheless followed in general the price trend of most other commodities. New York quotations, which averaged 45 cents per pound in 1929, declined to an average of 22 cents in 1932. The average price increased thereafter, reaching 52 cents per pound in 1934; it declined in 1935-36, but rose to 54 cents in 1937. In 1938 the average price was 42 cents per pound and in 1939, 50 cents. During the period September 1939-March 1940 (except for September and October) the price of tin did not increase; in fact, it declined slightly. (See table 3.) The frequent increases in the quotas of the various producing countries since September 1939 have probably been a factor in stabilizing the price.

The prices of tin in London have been practically the same as the unit values of United States imports, most of which originate in British Malaya and the United Kingdom. United States prices have usually been somewhat higher than those in London, principally because of the cost of transportation. In the last 4 months of 1939, United States prices were considerably higher than London prices, but this is attributable to the uncertainty created in this country regarding supplies.

<sup>2</sup> Tariff Act of 1930, pars. 1785 and 1786. Should domestic production ever amount to 1,500 tons of tin ore, paragraph 1785 provides for a duty of 4 cents per pound on the ore and of 6 cents per pound on tin bars or pigs. Inasmuch as domestic production is negligible, this provision has never been operative.

<sup>3</sup> The reduction of export duties on tin ore from Nigeria in the trade agreement with the United Kingdom has not given any impetus to the redevelopment of smelting in the United States.

TABLE 3.—*Tin: Average prices in the United States and the United Kingdom, 1929-39, and by months, August 1939-March 1940*

[Cents per pound]

| Year           | United States                      |                                 | London quotation <sup>1</sup> |
|----------------|------------------------------------|---------------------------------|-------------------------------|
|                | Unit value of imports <sup>1</sup> | New York quotation <sup>2</sup> |                               |
| 1929.....      | \$0.47                             | \$0.45                          | \$0.44                        |
| 1930.....      | .33                                | .32                             | .31                           |
| 1931.....      | .25                                | .24                             | .24                           |
| 1932.....      | .21                                | .22                             | .21                           |
| 1933.....      | .36                                | .39                             | .38                           |
| 1934.....      | .50                                | .52                             | .52                           |
| 1935.....      | .48                                | .50                             | .49                           |
| 1936.....      | .44                                | .46                             | .45                           |
| 1937.....      | .53                                | .54                             | .53                           |
| 1938.....      | .40                                | .42                             | .41                           |
| 1939.....      | .45                                | .50                             | .45                           |
| 1939:          |                                    |                                 |                               |
| August.....    | .46                                | .49                             | .47                           |
| September..... | .46                                | .65                             | .41                           |
| October.....   | .46                                | .55                             | .41                           |
| November.....  | .43                                | .52                             | .40                           |
| December.....  | .43                                | .51                             | .44                           |
| 1940:          |                                    |                                 |                               |
| January.....   | .42                                | .47                             | .43                           |
| February.....  | .43                                | .46                             | .43                           |
| March.....     | .44                                | .47                             | .42                           |

<sup>1</sup> Compiled from official statistics of the U. S. Department of Commerce.<sup>2</sup> *Engineering and Mining Journal*.**Effects of the war.**

Western Hemisphere countries account for 40 to 50 percent of world tin consumption, and this area produces less than 25 percent of the world's output—almost entirely in Bolivia. Although practically all of Bolivia's tin goes to Europe for processing, the Western Hemisphere—a large importer of the product—cannot be regarded as an important supplier of Europe's consumption. Both Europe and the Western Hemisphere depend chiefly on the Malay States and the Netherlands Indies for their supplies of tin.

Because of the increased demand for tin containers, for solder, and for machinery and other implements containing bronze, there has been an increase in the demand for tin as a result of the war.

Since the United Kingdom customarily takes 90 percent of Bolivian tin ore, continuance of Bolivian exports during the war presumably depends upon the ability of the United Kingdom to keep the sea lanes open, to provide adequate shipping space, and to finance shipments of tin. In the event that Bolivian tin ore cannot be shipped to the United Kingdom, it will doubtless be acquired by the United States.

In the past the smelting of Bolivian tin ore in the United States has not been considered practicable. Export taxes imposed on tin ore from British colonies to tin smelters in other than British territory have practically precluded shipment to the United States. Tin smelters which formerly operated in the United States, therefore, were confined to purchases of ore in non-British countries, with Bolivia the nearest source. The Bolivian ore, however, has carried too much impurity to be satisfactorily treated without "sweetening" with the purer ore of Malaya or Nigeria, and the cost of such ore in the United States has been high because of the effect of the export taxes and the operation of the international agreement. For this and

other, minor reasons, the smelting of tin ore in the United States ceased in 1923.

Under the stimulus of war conditions, the smelting of Bolivian tin ore is to be undertaken in the United States. A smelter is being erected in Texas which was originally designed for an annual production of 18,000 tons of fine tin, or approximately 25 percent of the customary consumption of this country.<sup>4</sup> Although the capacity of this smelter is being expanded somewhat, it is expected that it will be completed in the near future and stock piles of Bolivian ore are being accumulated. Should it be considered desirable, arrangements could be made to smelt the entire Bolivian output in the United States.<sup>5</sup>

<sup>4</sup> United States imports in 1939 aggregated 70,000 long tons.

<sup>5</sup> Bolivian exports were highest in 1929 when they amounted to 43,000 long tons; they were 27,000 long tons in 1939.

## TOBACCO AND MANUFACTURES

The cultivation of tobacco was carried on in Latin America before the colonial period. The plant was taken to Spain in 1558, but its utilization for smoking purposes spread to the Continent from England. During the seventeenth century, the use of tobacco spread rapidly and its production and preparation have since become an industry of great importance.

Pronounced differences have been developed between the several types of leaf tobacco used in the manufacture of cigarettes, cigars, chewing and smoking tobacco, and snuff. Varieties of seed, soil, and climatic conditions, and methods of cultivation and curing are all factors in determining the type or grade produced. The differences between types have become so marked that even the most important producing countries import tobaccos of types and grades not produced by them. Thus the United States, which exports nearly 40 percent of all of the tobacco entering into international trade, expends annually millions of dollars for aromatic cigarette leaf of the Turkish type from Near Eastern countries, and for cigar leaf from Cuba and Sumatra. Likewise, Brazil, the largest tobacco exporter among the Latin American countries, has imported leaf tobacco, chiefly from the Netherlands. Differences among types of tobacco, therefore, as well as inequalities in the aggregate supply and demand, account for the large volume of international trade in tobacco.

### **Position of Latin America in world production.**

China, the United States, and British India are the largest tobacco-producing countries in the world (in terms of quantity); the next largest, in order, are, Brazil, Turkey, Greece, the Netherlands Indies, and Cuba. Tobacco is grown and manufactured in virtually all of the Latin American countries. At least four of them—Brazil, Cuba, Argentina, and Mexico—each produce more than 20 million pounds of tobacco annually. Cuba and Brazil are among the 10 leading tobacco-exporting countries of the world. Together, Latin American countries account for 6 to 8 percent of the world's tobacco production (excluding China) and for 9 to 12 percent of the exports of the principal exporting countries. Production of tobacco in the principal producing countries of Latin America and of the world, in specified years 1929 to 1938, is shown in table 1.

Most of the Latin American countries produce tobacco chiefly for domestic consumption. In those countries, as in the rest of the world, cigarettes have become the most important form of tobacco consumption. Dark tobaccos, of types not considered suitable for cigarette manufacture in the United States, are used for much of the cigarette production in Latin American countries. Cigarettes are made principally by cigarette machines imported from the United States, but some German and Scandinavian machines are also used. The relatively small imports of tobaccos into Latin American countries consist of types distinct from those grown domestically. Such tobaccos as bright flue-cured from the United States for cigarettes and fine

tobaccos from Cuba for cigars make up most of the imports, although there is some movement of tobaccos between the various Latin American countries other than Cuba; Brazil, for example, ships large quantities of dark tobacco to Argentina and Uruguay.

Exports of leaf tobacco from the United States have recently constituted more than one-third of the total shipments from the world's principal tobacco-trading countries (see table 2). United States exports have been more than three times as large as those of any of the other principal exporting countries, such as the Netherlands Indies, Greece, Turkey, or Brazil. In recent years production of tobacco in the United States has ranged from 1.2 to 1.6 billion pounds annually, while exports have ranged from about 400 to 600 million pounds. Total United States exports to Latin American countries in the last decade have been only between 1 and 2 percent of total exports to all countries. Since the peak of exports to Latin American countries of 11 million pounds in 1917, the trend has been downward, and shipments to those countries in 1938 amounted to less than 4½ million pounds.

TABLE 1.—*Tobacco: Production in principal producing countries of Latin America and of the world, in specified crop years, 1928-29 to 1938-39*<sup>1</sup>

| Country  | 1928-29          | 1931-32          | 1935-36          | 1936-37          | 1937-38          | 1938-39 <sup>2</sup> |
|--|------------------|------------------|------------------|------------------|------------------|----------------------|
| Quantity (1,000 pounds)                            |                  |                  |                  |                  |                  |                      |
| Brazil.....  | 241,554          | 187,153          | 191,573          | 205,991          | ( <sup>3</sup> ) | ( <sup>3</sup> )     |
| Cuba.....  | 59,965           | 80,670           | 42,446           | 42,073           | 55,308           | 55,232               |
| Argentina.....                                     | 23,307           | 28,953           | 33,563           | 23,114           | 17,225           | 40,490               |
| Mexico.....  | 27,793           | 25,183           | 30,581           | 28,017           | 25,353           | 20,283               |
| Chile.....   | 13,868           | 8,403            | 14,902           | 15,263           | ( <sup>3</sup> ) | ( <sup>3</sup> )     |
| Dominican Republic.....                            | 29,983           | ( <sup>3</sup> ) | 8,818            | ( <sup>3</sup> ) | 26,456           | 13,228               |
| Colombia.....                                      | 19,553           | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> )     |
| Paraguay.....                                      | ( <sup>3</sup> ) | 31,177           | 8,501            | ( <sup>3</sup> ) | ( <sup>3</sup> ) | ( <sup>3</sup> )     |
| Uruguay.....                                       | 848              | 1,564            | 1,029            | 971              | 1,525            | ( <sup>3</sup> )     |
| Total, above Latin American countries.....         | 416,871          | 363,103          | 332,013          | 315,419          | ( <sup>3</sup> ) | ( <sup>3</sup> )     |
| China.....   | ( <sup>3</sup> ) | 465,000          | 1,357,813        | 1,392,866        | 1,396,945        | 1,638,679            |
| UNITED STATES.....                                 | 1,374,547        | 1,583,567        | 1,297,155        | 1,155,328        | 1,562,886        | 1,378,534            |
| British India.....                                 | 1,351,420        | 1,395,520        | 1,458,240        | 1,218,560        | ( <sup>3</sup> ) | ( <sup>3</sup> )     |
| Turkey.....  | 102,863          | 112,679          | 79,375           | 163,253          | 161,778          | 134,906              |
| Netherlands Indies.....                            | 116,236          | 141,042          | 110,619          | 119,926          | 123,063          | ( <sup>3</sup> )     |
| Greece.....  | 129,493          | 95,273           | 101,549          | 178,503          | 151,617          | 101,756              |
| Rumania.....                                       | 34,080           | 24,926           | 28,737           | 33,218           | 22,635           | 27,560               |
| All other.....                                     | 1,415,490        | 986,890          | 320,499          | 435,927          | 1,782,210        | ( <sup>3</sup> )     |
| Estimated world production, excluding China.....   | 4,491,000        | 5,168,000        | 5,086,000        | 5,013,000        | 5,327,000        | ( <sup>3</sup> )     |
| Percent of total world production, excluding China |                  |                  |                  |                  |                  |                      |
| Latin American countries listed above.....         | 8.4              | 7.0              | 6.5              | 6.3              | ( <sup>3</sup> ) | ( <sup>3</sup> )     |

<sup>1</sup> Years beginning July 1.

<sup>2</sup> Preliminary.

<sup>3</sup> 1930-31 included in total.

<sup>4</sup> Not available.

<sup>5</sup> Export crop.

<sup>6</sup> Estimated.

Source: U. S. Department of Agriculture, *Agricultural Yearbook*.

TABLE 2.—Leaf tobacco:<sup>1</sup> Exports from principal producing countries of Latin America and of the world, in specified years, 1929 to 1933

| Country   | 1929                           | 1932      | 1936      | 1937      | 1938 <sup>2</sup> |
|---|--------------------------------|-----------|-----------|-----------|-------------------|
|   | Quantity (1,000 pounds)        |           |           |           |                   |
| Brazil.....   | 65,588                         | 57,898    | 68,344    | 80,688    | 59,002            |
| Cuba.....   | 46,693                         | 36,869    | 23,049    | 27,379    | 28,029            |
| Dominican Republic.....                                       | 36,297                         | 9,779     | 10,558    | 6,912     | 16,320            |
| Paraguay.....   | 18,995                         | 14,228    | 7,260     | 9,589     | 5,953             |
| Total exports from Latin American countries listed above..... | 182,573                        | 118,774   | 109,211   | 124,568   | 109,304           |
| UNITED STATES.....  | 565,902                        | 411,159   | 425,269   | 434,796   | 489,093           |
| Netherlands Indies.....                                       | 161,289                        | 163,604   | 106,525   | 107,458   | 107,783           |
| Turkey.....   | 71,971                         | 63,569    | 54,451    | 90,694    | 95,904            |
| Philippine Islands.....                                       | 64,833                         | 50,521    | 34,196    | 25,029    | 25,958            |
| All other.....  | 340,874                        | 284,162   | 313,095   | 333,653   | 381,430           |
| Total world exports <sup>3</sup> .....                        | 1,372,442                      | 1,091,809 | 1,042,746 | 1,116,198 | 1,209,472         |
|   | Percent of total world exports |           |           |           |                   |
| Latin American countries listed above.....                    | 12.2                           | 10.9      | 10.5      | 11.2      | 9.0               |

<sup>1</sup> Tobacco comprises leaf, stems, and trimmings.<sup>2</sup> Preliminary.<sup>3</sup> Approximately 40 countries represented.Source: Compiled by the United States Tariff Commission from official trade statistics of the Latin American countries designated, and from U. S. Department of Agriculture, *Annual Report on Tobacco Statistics*.**Latin American exports.**

In international trade, Brazil and Cuba are the leading tobacco countries of Latin America. The production of tobacco in Brazil is carried on chiefly in the States of Bahia and Rio Grande do Sul, the former accounting for 85 to 95 percent of all of the Brazilian tobacco exported. In Bahia, tobacco is second only to cacao in importance among agricultural products; it is grown in all parts of the State except the southeast, and is cultivated almost exclusively by small landholders. Before the war, the principal destinations for Brazil's exports of tobaccos (nearly all dark tobaccos) were Germany, the Netherlands, Argentina, France, Algeria, Belgium, and Uruguay; none of this tobacco went to the United States (see table 3). In 1933, trade restrictions, and especially the inability of German importers to obtain adequate import licenses, affected unfavorably Brazilian export trade in tobacco. Total Brazilian exports declined from 81 million pounds in 1937 to 59 million pounds in 1933; shipments to both Germany and the Netherlands were lower in 1933 than in 1937.

For many years Cuba has been famous as a center of production of fine cigar tobaccos and of fine cigars. In terms of value, tobacco is second to sugar among Cuban export products. By far the larger part of Cuba's production of tobacco and cigars is exported, so that prosperity in the Cuban industry is directly affected by conditions in export markets, especially the United States. The value of Cuba's exports of cigar tobaccos, for which the United States is the principal market, is about three times that of its exports of cigars, for which the United Kingdom is the chief outlet. Prior to 1940, the principal markets for Cuban leaf tobacco, other than the United States, were Spain, Germany, Argentina, the Netherlands, Canada, Uruguay, and Chile. Principal destinations for shipments of Cuban cigars, other than the United Kingdom, were Spain, France, British Africa, Ar-

gentina, Germany, Canada, Chile, and the United States. (See tables 4 and 5.)

In recent years the Cuban industry has suffered severely because of various developments which have restricted its export trade. The value of Cuban exports of tobacco and tobacco products fell from over 40 million dollars in 1929 to 14 million dollars in 1938. The mechanization of the United States cigar industry, accompanied by the sharp decline in the consumption of higher-priced cigars, which contained large proportions of Havana cigar leaf, was one of the chief factors in the loss of Cuban trade in leaf tobacco. The Spanish market for Cuban cigar leaf, customarily second only to the United States, was seriously curtailed by the civil war in Spain. The Cuban trade in cigars was damaged by adverse economic conditions in Europe and various trade restrictions, as well as by the increasing competition of the cigarette throughout the world. Following labor troubles in Habana, important cigar factories owned by United States interests were closed, and in 1932 a factory was built in New Jersey for the manufacture of Havana cigars. Thereafter, Cuban export trade in cigars declined. This was the second migration of a part of the Cuban tobacco industry to the United States. Much earlier, under the encouragement of the high United States duty on cigars, a clear Havana cigar industry had been established with Cuban workers in Key West and Tampa, Fla.

TABLE 3.—*Leaf tobacco: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938*

| Country  | 1929    | 1932    | 1936    | 1937    | 1938   |         |
|--|---------|---------|---------|---------|--------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |        |         |
| Total, all countries.....                                | 65,588  | 57,898  | 68,344  | 80,688  | 59,002 |         |
| Germany.....   | 23,592  | 24,471  | 35,041  | 33,408  | (1)    |         |
| Netherlands.....   | 12,971  | 9,024   | 13,475  | 21,851  |        |         |
| Argentina.....   | 13,033  | 9,940   | 11,552  | 11,619  |        |         |
| France.....  | 2,690   | 1,094   | 838     | 3,519   |        |         |
| Algeria.....   | 1,901   | 1,418   | 2,586   | 2,569   |        |         |
| Belgium.....   | 1,643   | 2,382   | 1,508   | 2,290   |        |         |
| Uruguay.....   | 5,310   | 3,727   | 2,019   | 2,147   |        |         |
| All other.....   | 4,448   | 5,852   | 1,325   | 3,285   |        |         |
| Value (1,000 milreis)                                    |         |         |         |         |        |         |
| Total, all countries.....                                | 61,600  | 37,064  | 65,038  | 87,694  |        | 85,518  |
| Value (1,000 dollars)                                    |         |         |         |         |        |         |
| Total, all countries.....                                | 7,275   | 2,639   | 4,252   | 5,986   | 4,960  |         |
| Germany.....   | 2,693   | 1,115   | 2,263   | 2,560   | (1)    |         |
| Netherlands.....   | 1,462   | 373     | 730     | 1,385   |        |         |
| Argentina.....   | 1,411   | 444     | 713     | 841     |        |         |
| France.....  | 277     | 44      | 42      | 262     |        |         |
| Algeria.....   | 214     | 56      | 157     | 166     |        |         |
| Belgium.....   | 196     | 126     | 99      | 134     |        |         |
| Uruguay.....   | 593     | 196     | 139     | 151     |        |         |
| All other.....   | 429     | 265     | 107     | 269     |        |         |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.111 | \$0.046 | \$0.062 | \$0.074 |        | \$0.084 |

<sup>1</sup> Not available.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 lb.; 1 milreis=1929, \$0.1161; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06626; 1938, \$0.058.

TABLE 4.—Leaf tobacco: Exports from CUBA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 46,693  | 36,609  | 23,049  | 27,379  | 28,028  |
| UNITED STATES.....                                       | 24,768  | 13,106  | 12,040  | 14,288  | 13,249  |
| Spain.....   | 9,360   | 13,610  | 3,509   | 2,932   | 6,605   |
| Argentina.....   | 4,487   | 2,144   | 777     | 994     | 1,270   |
| Germany.....   | 1,265   | 1,055   | 3,231   | 4,956   | 3,496   |
| Netherlands.....   | 2,872   | 3,310   | 558     | 1,244   | 920     |
| All other.....   | 3,941   | 3,644   | 2,934   | 2,965   | 2,488   |
| Percentage to the United States.....                     | 53.0    | 35.5    | 52.2    | 52.2    | 47.3    |
| Value (1,000 dollars) <sup>1</sup>                       |         |         |         |         |         |
| Total, all countries.....                                | 27,247  | 10,381  | 9,153   | 11,217  | 10,478  |
| UNITED STATES.....                                       | 19,971  | 7,646   | 6,902   | 8,634   | 7,609   |
| Spain.....   | 1,621   | 739     | 471     | 399     | 899     |
| Argentina.....   | 2,814   | 918     | 334     | 455     | 614     |
| Germany.....   | 237     | 86      | 469     | 596     | 419     |
| Netherlands.....   | 630     | 252     | 105     | 192     | 151     |
| All other.....   | 2,074   | 740     | 852     | 941     | 786     |
| Percentage to the United States.....                     | 73.3    | 73.7    | 75.4    | 77.0    | 72.6    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.584 | \$0.282 | \$0.397 | \$0.410 | \$0.374 |

<sup>1</sup> One Cuban peso=1 U. S. dollar (all years).<sup>2</sup> See footnote 2, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba. Converted to U. S. weights by applying the following factor: 1 kilo=2.2046 lb.

TABLE 5.—Cigars: Exports from CUBA to principal markets, in specified years, 1929 to 1938

| Country  | 1929     | 1932    | 1936    | 1937     | 1938    |
|--|----------|---------|---------|----------|---------|
| Quantity (1,000 cigars)                                  |          |         |         |          |         |
| Total, all countries.....                                | 89,387   | 23,669  | 42,054  | 35,762   | 32,634  |
| United Kingdom.....                                      | 29,581   | 13,723  | 23,258  | 21,077   | 17,620  |
| France.....  | 5,288    | 495     | 1,879   | 3,440    | 2,807   |
| UNITED STATES.....                                       | 25,481   | 2,873   | 2,960   | 3,096    | 2,457   |
| Spain.....   | 15,354   | 8,653   | 5,613   | 3,875    | 4,028   |
| Argentina.....   | 2,184    | 427     | 492     | 626      | 614     |
| Germany.....   | 1,601    | 92      | 586     | 565      | 413     |
| All other.....   | 9,898    | 2,306   | 4,366   | 3,083    | 4,795   |
| Percentage to the United States.....                     | 28.5     | 10.1    | 7.0     | 8.7      | 7.6     |
| Value (1,000 dollars) <sup>1</sup>                       |          |         |         |          |         |
| Total, all countries.....                                | 10,262   | 2,365   | 4,068   | 3,655    | 2,963   |
| United Kingdom.....                                      | 3,390    | 1,208   | 2,438   | 2,250    | 1,646   |
| France.....  | 644      | 55      | 223     | 422      | 327     |
| UNITED STATES.....                                       | 3,102    | 302     | 335     | 362      | 275     |
| Spain.....   | 1,529    | 538     | 568     | 113      | 237     |
| Argentina.....   | 299      | 64      | 60      | 76       | 73      |
| Germany.....   | 170      | 10      | 57      | 51       | 39      |
| All other.....   | 1,128    | 198     | 367     | 381      | 396     |
| Percentage to the United States.....                     | 30.2     | 12.8    | 8.2     | 9.9      | 9.2     |
| Unit value per 1,000 of total exports <sup>2</sup> ..... | \$114.80 | \$82.78 | \$96.73 | \$102.20 | \$91.41 |

<sup>1</sup> Cuban peso=1 U. S. dollar (all years).<sup>2</sup> See footnote 2, table 3.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba.



**Trade barriers.**

The trade in tobacco rivals that in alcoholic beverages in providing for many countries a source of large revenue. Four general methods are used in collecting such revenue: Government tobacco monopolies, internal-revenue taxation, import duties, and export taxes. Latin American countries have resorted to all these methods. For example, Peru maintains a government tobacco monopoly, the States of Brazil have imposed export taxes on tobacco, and Argentina collects considerable revenue from the import duties on tobacco and tobacco products. Venezuela and Guatemala maintain a government monopoly of the importation and printing of cigarette paper, which is sold to cigarette manufacturers, and thus collect a tax for revenue. The United States imposes duties on imports of raw and manufactured tobacco, and internal-revenue taxes on manufactured tobacco of all kinds; imported manufactured tobacco pays both the duties and the internal-revenue taxes.

The duties on tobacco in most countries are so high as practically to preclude the entry of competitive tobaccos. In general, only those types of tobacco which are not produced in a particular country are imported. High duties can be paid on such tobaccos, provided they are essential in the manufacture of certain tobacco products required by consumers.

The United States imports practically no raw or manufactured tobacco from any Latin American country except Cuba. Imports of tobacco into the United States consist chiefly of Cuban cigar-leaf tobacco<sup>1</sup> and cigars, Sumatra cigar-wrapper tobacco, cigarette tobacco from southeastern Europe, and cigars, with some scrap tobacco, from the Philippines. These imports enter because of the peculiar qualities of the several tobaccos.

Cuba has at all times enjoyed a substantial preference below the tariff rates applicable to imports from other countries. These preferences were further increased for the principal types of tobacco imported from Cuba by the trade agreement effective September 3, 1934. After a temporary lapse, between March 17, 1936 and December 22, 1939, these additional preferences were reinstated by the supplemental agreement with Cuba, effective December 23, 1939, and were further extended by a second supplemental agreement, effective January 5, 1942. The preferences accorded Cuba, however, are of little significance with respect to competition between Cuban producers and other foreign producers. Apart from the Philippines, which supply cigars and scrap tobacco free of duty, Cuba is practically the sole source of United States imports of cigar-leaf filler, scrap tobacco, and cigars. This situation is attributable to the special quality of Cuban tobacco. The Netherlands Indies as well as Cuba is a large supplier of wrapper tobacco, but there is practically no competition between the Cuban and the Sumatra wrappers. The preferences accorded Cuban cigarette-leaf tobacco and cigarettes have not resulted in any appreciable importation of such products.

United States-Cuban preferential duties on the principal imports of tobacco from Cuba during the period since the enactment of the Tariff Act of 1930 are shown in table 6.

<sup>1</sup> Including scrap.

TABLE 6.—*Tobacco: United States-Cuban preferential duties on principal imports from Cuba*

| Type                 | From Jan. 5, 1942          | From Sept. 3, 1934 to March 16, 1936 and from Dec. 23, 1939 to Jan. 4, 1942 (trade-agreement rates) | From June 18, 1930 to Sept. 2, 1934, and from March 17, 1936 to Dec. 22, 1939 (general rates less 20 percent) | General rate, act of 1930      |
|----------------------|----------------------------|---|---|--------------------------------|
| Cigar-leaf tobacco:  |                            |   |   |                                |
| Unstemmed.....       | 14¢ per lb.                | 17 $\frac{1}{2}$ ¢ per lb. 1.   | 28¢ per lb.   | 35¢ per lb.                    |
| Stemmed.....         | 20¢ per lb.                | 25¢ per lb. 1.  | 40¢ per lb.   | 50¢ per lb.                    |
| Scrap.....           | 14¢ per lb.                | 17 $\frac{1}{2}$ ¢ per lb. 1.   | 28¢ per lb.   | 35¢ per lb.                    |
| Cigars.....          | \$1.80 lb. +10%<br>ad val. | \$2.25 lb. +<br>12 $\frac{1}{2}$ % ad val.  | \$3.60 lb. + 20%<br>ad val.   | \$4.50 lb. + 25%<br>ad val.    |
| Wrapper tobacco..... | 9 $\frac{1}{2}$ ¢ per lb.  | (?)   | (?)   | \$2.27 $\frac{1}{2}$ ¢ per lb. |

<sup>1</sup> Combined imports of filler and scrap subject to quota limitations.

<sup>2</sup> The rate on wrapper tobacco under the Tariff Act of 1930 is \$2.27 $\frac{1}{2}$  per pound. This was reduced by the trade agreement with the Netherlands to \$1.50 per pound, effective July 1, 1936. The Cuban preference below these rates was 20 percent; it was not affected by the trade agreement of 1934 and the rate of \$1.20 per pound was found in the supplemental agreement, effective Dec. 23, 1939. Cuba supplies considerable quantities of wrapper tobacco.

#### Prices and competitive conditions.

The average prices of United States flue-cured tobacco and the average unit values of selected imported tobaccos for the period 1929-39 are shown in table 7. The types of tobacco shown in the table are not competitive. United States flue-cured tobacco is used chiefly in the manufacture of cigarette and smoking tobaccos. The imported cigarette tobacco is higher priced than most cigarette tobacco produced in the United States and is used together with United States tobaccos in the production of special blends. The cigar-filler tobacco imported from Cuba is higher priced than United States filler and supplements the United States product in the manufacture of blended cigars.<sup>2</sup> The cigar wrapper imported from Sumatra is also higher priced than United States shade-grown wrapper tobacco; it is used chiefly in the manufacture of expensive cigars.

The prices or unit values of these tobaccos were high in 1929, declined until 1932-33, and rose thereafter, reaching a peak in 1937-38. In fact, the average prices of United States flue-cured tobacco, influenced by the agricultural adjustment program, were higher in the years 1936-38 than they were in 1929, and the average unit value of imported Sumatra wrapper was higher in 1938 than in 1929. Although the average unit value of unstemmed cigar-filler tobacco from Cuba advanced somewhat in 1934 and 1935, it was appreciably lower in 1937 than in any other year in the period 1929-39. All data relating to values show a decline in 1939 as compared with 1938. This may be attributed in part to the dislocation of markets and to the reduction in European demand following the outbreak of war.

<sup>1</sup> Published prices of cured domestic cigar-filler tobacco are not available, inasmuch as such tobacco is sold at auction and the price at any given time varies in accordance with the size and quality of the lots offered for sale. The values of raw domestic cigar-filler tobacco on the farm are not comparable with the unit value of the cured cigar-filler tobacco imported from Cuba. The unit values of the cured Cuban product (duty-unpaid), however, are known to be appreciably higher than the prices for the cured domestic product.

TABLE 7.—Tobacco: Average annual prices of flue-cured tobacco, compared with average annual unit values of imports of unstemmed cigar-filler tobacco, Sumatra wrapper tobacco, and cigarette tobacco, in crop years, 1929-39<sup>1</sup>

[Per pound]

| Year | Average price of United States flue-cured | Average unit values of selected imported tobaccos |                       |                   |
|------|---|---|-----------------------|-------------------|
|      |   | Unstemmed cigar-filler from Cuba                  | Sumatra cigar wrapper | Cigarette tobacco |
| 1929 | \$0.182                                   | \$0.75  | \$1.92                | \$0.57            |
| 1930 | .120                                      | .73   | 1.66                  | .56               |
| 1931 | .085                                      | .62   | 1.50                  | .53               |
| 1932 | .116                                      | .55   | 1.24                  | .44               |
| 1933 | .153                                      | .45   | 1.46                  | .40               |
| 1934 | .273                                      | .47   | 1.92                  | .35               |
| 1935 | .200                                      | .46   | 2.09                  | .31               |
| 1936 | .222                                      | .49   | 1.12                  | .33               |
| 1937 | .230                                      | .32   | 1.82                  | .42               |
| 1938 | .222                                      | .58   | 2.26                  | .50               |
| 1939 | .151                                      | .54   | 1.53                  | .49               |

<sup>1</sup> Years beginning July 1.

<sup>2</sup> July 1939-February 1940. From *Tobacco Market Review*, U. S. Department of Agriculture.

Source: Domestic data from U. S. Department of Agriculture, *Agricultural Statistics*, except as noted; data on imports from official statistics of the U. S. Department of Commerce.

#### Effects of the war.

Europe (except the Soviet Union) is dependent upon imports from countries outside the Continent for somewhat more than half of its supply of tobacco. It is dependent upon the Western Hemisphere for one-fourth to one-third of its supply. The United States is the principal source of European imports, and in 1937 furnished about 80 percent of such imports from the Western Hemisphere. Brazil and Cuba are the only other important suppliers in the Western Hemisphere.

Despite the "essential" character of tobacco, European purchases of this product have been curtailed since the war began. Because of the importance of European markets, continuance of the war, with its attendant disruption of ordinary channels of trade, necessarily will affect seriously the tobacco industries in the exporting countries of Latin America and elsewhere.

The leaders in this Latin American trade, Cuba and Brazil, will probably suffer severe losses. In this respect, however, Cuba is somewhat more favorably situated than Brazil, since more than three-fourths of the value of Cuban exports of leaf tobacco ordinarily go to the United States and other American countries. Germany and the Netherlands usually have been the most important destinations for exports of Brazilian tobacco; in 1937 they took nearly 70 percent of the total value of such exports to all countries. Most of this trade has ceased, and Germany is obtaining its essential supplies of tobacco from other countries, including Bulgaria, Greece, Turkey, and Italy.

Germany and the Netherlands have also been among the important European destinations for exports of Cuban leaf tobacco. Cuba is likely, however, to sustain a greater loss through a reduction in its exports of cigars. More than one-half of the value of this luxury product ordinarily goes to the United Kingdom. In 1936 the value of exports of Cuban cigars to the United Kingdom amounted to about 2.5 million dollars, and in 1938, to 1.6 million dollars. The greater part of this trade will probably be lost to Cuba throughout the period of the war. There is little reason to expect that United States imports from Cuba will be increased sufficiently to offset the losses sustained in other markets.

## WHEAT AND WHEAT PRODUCTS

Hard, soft, and durum varieties are recognized as the three principal types of wheat. Hard wheat is preferred for bread flours, soft wheat for pastry, biscuits, and crackers, and durum, a very hard variety of wheat with a high gluten content, for macaroni, vermicelli, noodles, and similar products. In addition to its use for flour, wheat is also employed in the manufacture of breakfast foods, and, to some extent, in the making of starch. The low grades of wheat and the byproducts of the flour-milling industry are used for livestock feed.

### **Position of Latin America in world production.**

The annual world production of wheat (exclusive of production in the Soviet Union and in China) has ranged between a low of 3,143 million bushels in 1924 and a high point of 4,559 million bushels in 1938. Fluctuations in the annual volume of wheat consumed, however, have been smaller than the fluctuations in production. The lowest annual disappearance was 3,293 million bushels in 1924 and the highest, 3,950 million bushels in 1931. Because of the inelasticity in world consumption as compared with world production, a considerable part of the world's harvest in recent years has been carried over in storage, thus increasing the total supply available for consumption.

Production of wheat in Latin America has averaged about 300 million bushels annually in recent years; in 1938 production amounted to 395 million bushels, of which 85 percent was produced in Argentina, 7.5 percent in Chile, 4 percent in Uruguay, and 3.5 percent in Mexico. Latin American production of wheat is greater than that in Canada, double that in Australia, and about 40 percent of that in the United States. About 8 percent of world production of wheat<sup>1</sup> is accounted for by Latin America; in 1938 Argentina alone supplied more than 7 percent. Production in Argentina ranged from 163 to 336 million bushels in the 10-year period ended 1938. (See table 1.)

The Argentine wheat harvest of December 1939–January 1940 was estimated at only 118 million bushels. The carry-over from the previous year was about 67 million bushels. Allowing 100 million bushels for domestic requirements, the surplus for export and carry-over in 1940 was estimated to be 85 million bushels, a quantity somewhat larger than exports in 1938 but very much smaller than exports in 1937, and in most other years. Shipments of wheat from Argentina for the period July–December 1939 were substantially greater than those for the same period in most of the years immediately preceding. This increase was probably accounted for in part by the price policy of the Argentine Grain Regulating Board, the political objectives of foreign purchasers, and improved transportation facilities. The total amount available for export on March 1, 1940, was reported to be about 58 million bushels, including wheat of low-test weight.

<sup>1</sup> Exclusive of the Soviet Union and China.

TABLE 1.—Wheat: World production by principal countries, in specified crop years, 1929 to 1938

| Country  | 1929                                  | 1932      | 1935      | 1937      | 1938 <sup>1</sup> |
|--|---------------------------------------|-----------|-----------|-----------|-------------------|
|  | Quantity (1,000 bushels of 60 pounds) |           |           |           |                   |
| Argentina.....   | 162,576                               | 240,889   | 249,193   | 184,801   | 336,201           |
| Chile.....   | 33,529                                | 26,114    | 28,607    | 30,394    | (?)               |
| Uruguay.....   | 19,157                                | 5,407     | 9,246     | 16,575    | 15,288            |
| Mexico.....  | 11,333                                | 9,638     | 13,906    | 10,587    | 13,425            |
| Total production in Latin American countries listed above..... | 220,595                               | 282,068   | 300,652   | 242,357   | * 364,914         |
| UNITED STATES.....   | 812,573                               | 745,788   | 626,766   | 875,676   | 930,801           |
| Canada.....  | 304,520                               | 443,061   | 219,218   | 180,210   | 350,010           |
| Soviet Union.....  | 4 693,634                             | 744,052   | (?)       | (?)       | (?)               |
| France.....  | 337,252                               | 333,524   | 254,618   | 257,838   | 345,386           |
| Italy.....   | 260,125                               | 276,922   | 224,570   | 296,282   | 217,319           |
| Germany.....   | 153,062                               | 183,830   | 162,660   | 164,120   | * 204,954         |
| Rumania.....   | 99,753                                | 55,537    | 184,207   | 121,492   | 181,511           |
| Spain.....   | 154,245                               | 184,207   | 121,492   | 110,200   | 95,500            |
| India.....   | 320,731                               | 336,896   | 351,680   | 364,075   | 402,453           |
| Turkey.....  | 99,900                                | 71,135    | 141,582   | 132,985   | 160,424           |
| Australia.....   | 126,885                               | 213,927   | 151,390   | 188,018   | 145,000           |
| All other <sup>2</sup> .....                                   | 701,359                               | 684,105   | 894,655   | 905,081   | 1,080,728         |
| Total world production <sup>3</sup> .....                      | 3,561,000                             | 3,811,000 | 3,578,000 | 3,855,000 | 4,558,000         |
|  | Percent of total world production     |           |           |           |                   |
| Latin American countries listed above.....                     | 6.2                                   | 7.4       | 8.4       | 6.3       | * 8.0             |

<sup>1</sup> Preliminary.<sup>2</sup> Not shown.<sup>3</sup> Excludes Chile.<sup>4</sup> European territory only.<sup>5</sup> Includes the Saar and is, therefore, not strictly comparable with data for previous years.<sup>6</sup> Estimated, excluding the Soviet Union and China.Source: *Agricultural Yearbook*.

Argentina is the only country in Latin America in which wheat growing is an important farm enterprise and in which the major part of the production is exported. The other countries grow wheat only for their own use and are distinctly on an import basis. Brazil is encouraging the production of wheat through experimental research and government regulation, but the southeastern States of that country import a large part of their requirements from Argentina; the wheat is processed in those States in mills largely controlled by Argentine capital. Most of the byproducts of milling are exported. The northeastern part of Brazil—the Pernambuco district—imports flour chiefly from the United States.

The wheat region of Argentina is in the Provinces of Cordoba, western and southern Buenos Aires, and the northwestern part of La Pampa. This crop also enters into systems of mixed farming in the Province of Santa Fé. While the amount of rainfall is about 40 inches annually in the corn and flax region, wheat is the principal farm crop in areas of 15 to 20 inches of precipitation, particularly in the cooler regions in the southwest.

There are three types or classes of wheat grown in Argentina: Hard, semihard, and soft. The first two classes are exported. In the past, exports of Argentine wheat were not carefully graded; consequently importers were unable to depend on its hardness and milling qualities. The Argentine Government, therefore, has issued regulations prohibiting the export of certain soft varieties of the cereal.

**Latin American exports.**

Total world exports of wheat declined from about 800 million bushels annually in the period 1925-29 to 500 million bushels in 1936 and 560 million bushels in 1938. Europe is the largest deficit area for wheat. Before the war the principal world movement of that product was from surplus-producing countries of other continents to European markets, although there was also a considerable movement from eastern to western Europe. The principal exporting countries were Canada, the United States, Argentina, and Australia; the combined exports from these sources usually represented about three-fourths of all wheat entering world trade. Other exporting countries were the Soviet Union, Rumania, Yugoslavia, Hungary, and Poland. Total exports from these European countries usually fluctuated between 50 and 100 million bushels, depending chiefly upon the variable exports from the Soviet Union. The United Kingdom generally imported about 200 million bushels annually, or approximately one-third of all wheat entering international trade. Other important importing countries in Europe were Germany, Italy, Belgium, and the Netherlands.

Argentine exports of wheat fluctuated greatly during the period 1929-38; the general trend, however, was downward. In 1929 Argentina exported 243 million bushels; in 1936, 59 million; in 1937, 143 million; and in 1938, 71 million. (See table 2.) The percentage of world trade supplied by Argentina also declined from the peak of 35 percent attained in 1929; in 1936 it was 12 percent; in 1937, 28 percent; and in 1938, 13 percent.

In 1938 Brazil ranked first as a market for Argentine wheat and the United Kingdom second; other important markets were Germany, Belgium, the Netherlands, and Peru. (See table 4.) Exports to the United States have been negligible except in 1937.<sup>2</sup>

Argentine exports of wheat flour declined after 1929 when they amounted to 1,541,000 barrels.<sup>3</sup> In the years immediately preceding the war, exports were fairly steady; they amounted to 897,000 barrels in 1936, 1,071,000 in 1937, and 945,000 in 1938. (See table 3.) Argentina, however, supplied only a small part of the export trade of the world in wheat flour; in the period 1929-38, the proportion ranged from 2 to 4 percent of the total. The United Kingdom was the largest market for Argentine wheat flour in 1938, and Brazil was a close second. Paraguay, Bolivia, Chile, the Netherlands, and Italy also were important purchasers. (See table 5.) Including wheat flour in terms of wheat, about 50 percent of Argentine exports of wheat and wheat flour in 1938 was shipped to Brazil, and 15 percent was shipped to the United Kingdom.

About 70 percent of the byproducts of wheat (bran and shorts) exported from Argentina in 1938 was purchased by the United Kingdom, and about 15 percent by Sweden and Belgium combined. (See table 6.) Exports of these products from Argentina to the United States constituted less than 5 percent of the total. Exports of "bran of all kinds" from Brazil amounted to 193,000 short tons in 1938.

<sup>2</sup> In 1937 exports to the United States amounted to 740,000 bushels, or about one-half of 1 percent of total Argentine exports in that year. Although exports of wheat from Argentina to the United States are indicated for each year, United States statistics report no imports of wheat for consumption except in 1936 and 1937, and no imports were reported for wheat flour. This may be accounted for by a change in destination en route, or because the wheat may have been entered in-transit and reexported from the United States.

<sup>3</sup> Each barrel weighs 196 pounds.

(See table 7.) Thirty-three percent of these products were exported to Germany in 1936. Distribution of these exports from Brazil for 1937 and 1938 is not available.

TABLE 2.—Wheat: Exports from ARGENTINA and from other principal exporting countries of the world, in specified years, 1929 to 1938

| Country                               | 1929             | 1932    | 1936    | 1937    | 1938    |
|---------------------------------------|------------------|---------|---------|---------|---------|
| Quantity (1,000 bushels of 60 pounds) |                  |         |         |         |         |
| Argentina.....                        | 242,996          | 126,466 | 59,171  | 142,829 | 71,295  |
| Canada.....                           | 210,947          | 228,221 | 243,043 | 96,009  | 114,179 |
| Australia.....                        | 74,964           | 123,735 | 71,049  | 74,403  | 94,041  |
| UNITED STATES.....                    | 90,130           | 54,880  | 1,879   | 34,849  | 86,902  |
| Soviet Union.....                     | ( <sup>1</sup> ) | 20,243  | 2,129   | 31,075  | 46,880  |
| Rumania.....                          | 308              | 3,781   | 22,439  | 36,753  | 32,416  |
| Hungary.....                          | 17,857           | 5,288   | 20,964  | 13,148  | 16,024  |
| India.....                            | 530              | 106     | 7,222   | 17,097  | 11,896  |
| Belgium and Luxemburg.....            | 1,164            | 4,103   | 1,898   | 5,392   | 5,007   |
| Yugoslavia.....                       | 20,356           | 4,889   | 10,795  | 11,686  | 4,057   |
| French Morocco.....                   | 4,674            | 6,962   | 3,016   | 1,733   | 4,184   |
| Bulgaria.....                         | 123              | 6,354   | 4,569   | 7,109   | 4,020   |
| All other.....                        | 36,194           | 53,450  | 53,924  | 38,543  | 68,194  |
| Total world exports.....              | 700,243          | 638,478 | 502,098 | 510,625 | 559,095 |
| Percent of world exports              |                  |         |         |         |         |
| Argentina.....                        | 34.7             | 19.8    | 11.8    | 28.0    | 12.8    |

<sup>1</sup> Not over 500 bushels.

Source: Compiled by the United States Tariff Commission from *International Yearbook of Agricultural Statistics*. Data for the United States and the Soviet Union compiled from official statistics in 1938. Converted to U. S. measure by applying the following factor: 1 quintal=3.674333 bushels of 60 pounds.

TABLE 3.—Wheat flour: Exports from ARGENTINA and from other principal exporting countries of the world, in specified years, 1929 to 1938

| Country                                | 1929   | 1932   | 1936   | 1937   | 1938   |
|--|--------|--------|--------|--------|--------|
| Quantity (1,000 barrels of 196 pounds) |        |        |        |        |        |
| Argentina.....                         | 1,541  | 652    | 897    | 1,071  | 945    |
| Australia.....                         | 5,553  | 6,275  | 5,705  | 5,796  | 6,925  |
| UNITED STATES <sup>1</sup> .....       | 13,663 | 5,795  | 3,660  | 4,453  | 5,213  |
| Canada.....                            | 9,574  | 5,132  | 4,850  | 4,087  | 3,912  |
| Japan.....                             | 2,067  | 2,494  | 1,461  | 1,811  | 3,212  |
| United Kingdom.....                    | 2,439  | 2,735  | 1,344  | 892    | 1,204  |
| Italy.....                             | 744    | 1,573  | 1,706  | 1,871  | 1,125  |
| France.....                            | 23     | 1,659  | 1,495  | 1,305  | 933    |
| All other.....                         | 7,115  | 5,602  | 6,431  | 5,889  | 5,920  |
| Total world exports.....               | 42,749 | 31,917 | 27,549 | 27,175 | 29,389 |
| Percent of world exports               |        |        |        |        |        |
| Argentina.....                         | 3.6    | 2.0    | 3.3    | 3.9    | 3.2    |

<sup>1</sup> Includes flour milled in bond from foreign wheat or in part from foreign wheat.

Source: Compiled by the United States Tariff Commission from *International Yearbook of Agricultural Statistics*. Converted to U. S. measure by applying the following factor: 1 quintal=1.124796 barrels of 196 pounds.

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TABLE 4.—Wheat: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country                                     | 1929                | 1932                | 1936    | 1937                | 1938    |
|---|---------------------|---------------------|---------|---------------------|---------|
| Quantity (1,000 bushels of 60 pounds)       |                     |                     |         |                     |         |
| Total, all countries.....                   | 242,996             | 126,466             | 59,171  | 142,829             | 71,294  |
| Brazil.....                                 | 25,766              | 10,446              | 32,116  | 33,486              | 36,961  |
| United Kingdom.....                         | 81,557              | 37,290              | 5,901   | 25,219              | 10,420  |
| Germany.....                                | 14,164              | 4,027               | 1,912   | 5,738               | 4,744   |
| Belgium.....                                | 33,406              | 21,158              | 5,338   | 14,104              | 5,137   |
| Netherlands.....                            | 27,111              | 12,045              | 2,508   | 15,502              | 3,483   |
| Peru.....                                   | 1,849               | 1,302               | 3,952   | 3,463               | 4,268   |
| Denmark.....                                | 1,433               | 2,397               | 572     | 917                 | 998     |
| Italy.....                                  | 18,998              | 10,995              | 3,318   | 26,610              | 461     |
| France.....                                 | 17,541              | 14,975              | 181     | 1,514               | 2,251   |
| All other.....                              | <sup>1</sup> 21,171 | <sup>1</sup> 11,841 | 3,373   | <sup>1</sup> 16,276 | 4,672   |
| Value (1,000 paper pesos)                   |                     |                     |         |                     |         |
| Total, all countries.....                   | 631,755             | 226,060             | 170,043 | 475,541             | 183,410 |
| Value (1,000 U. S. dollars) <sup>2</sup>    |                     |                     |         |                     |         |
| Total, all countries.....                   | 264,435             | 58,128              | 49,618  | 146,752             | 54,528  |
| Brazil.....                                 | 28,304              | 4,599               | 26,703  | 36,285              | 26,028  |
| United Kingdom.....                         | 90,978              | 17,198              | 5,093   | 24,700              | 9,017   |
| Germany.....                                | 15,257              | 1,899               | 1,542   | 6,171               | 4,372   |
| Belgium.....                                | 36,287              | 9,675               | 4,574   | 14,119              | 3,979   |
| Netherlands.....                            | 29,169              | 5,600               | 2,154   | 15,653              | 3,090   |
| Peru.....                                   | 2,062               | 689                 | 3,299   | 3,742               | 3,018   |
| Denmark.....                                | 1,594               | 1,110               | 469     | 928                 | 811     |
| Italy.....                                  | 19,926              | 6,030               | 2,837   | 27,117              | 366     |
| France.....                                 | 18,418              | 6,930               | 145     | 1,467               | 181     |
| All other.....                              | <sup>1</sup> 22,440 | <sup>1</sup> 5,498  | 2,802   | <sup>1</sup> 16,570 | 3,666   |
| Unit value per bushel of total exports..... | \$1.09              | \$0.46              | \$0.84  | \$1.03              | \$0.76  |

<sup>1</sup> Includes exports to Spain of 9,516,450 bushels, valued at \$9,779,995, in 1929 and 4,325,388 bushels, valued at \$2,056,862, in 1932. In 1937 exports to Greece amounted to 7,132,138 bushels, valued at \$7,127,668.

<sup>2</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measure and currency by applying the following factors: 1 metric ton = 36.743333 bushels of 60 pounds; 1 peso = 1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2972.



TABLE 5.—Wheat flour: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country                                     | 1929   | 1932   | 1936   | 1937   | 1938   |
|---|--------|--------|--------|--------|--------|
| Quantity (1,000 barrels of 196 pounds)      |        |        |        |        |        |
| Total, all countries.....                   | 1,541  | 652    | 897    | 1,071  | 945    |
| United Kingdom.....                         | 404    | 273    | 162    | 234    | 248    |
| Brazil.....                                 | 810    | 36     | 333    | 347    | 248    |
| Paraguay.....                               | 67     | 50     | 138    | 200    | 163    |
| Bolivia.....                                | 32     | 30     | 40     | 74     | 84     |
| Chile.....                                  | 14     | 33     | 6      | 58     | 45     |
| Italy.....                                  | 4      | 4      | 41     | 47     | 36     |
| Netherlands.....                            | 4      | 3      | 7      | 20     | 36     |
| Spanish Africa <sup>1</sup> .....           | 99     | 195    | 51     | .....  | .....  |
| All other.....                              | 111    | 28     | 119    | 91     | 57     |
| Value (1,000 paper pesos) <sup>2</sup>      |        |        |        |        |        |
| Total, all countries.....                   | 17,748 | 5,858  | 11,610 | 16,608 | 10,225 |
| Value (1,000 U. S. dollars)                 |        |        |        |        |        |
| Total, all countries.....                   | 7,429  | 1,506  | 3,388  | 5,125  | 3,040  |
| United Kingdom.....                         | 1,955  | 635    | 615    | 1,121  | 800    |
| Brazil.....                                 | 3,901  | 81     | 1,255  | 1,668  | 795    |
| Paraguay.....                               | 321    | 116    | 519    | 955    | 647    |
| Bolivia.....                                | 155    | 70     | 151    | 350    | 280    |
| Chile.....                                  | 68     | 74     | 21     | 287    | 136    |
| Italy.....                                  | .....  | 9      | 156    | 222    | 114    |
| Netherlands.....                            | 21     | 8      | 28     | 98     | 105    |
| Spanish Africa <sup>1</sup> .....           | 485    | 450    | 191    | .....  | .....  |
| All other.....                              | 523    | 63     | 452    | 424    | 163    |
| Unit value per barrel of total exports..... | \$4.82 | \$2.31 | \$3.78 | \$4.79 | \$3.22 |

<sup>1</sup> Classified as "Spanish possessions" in 1929 and 1932.

<sup>2</sup> For 1929-32, the United States dollar value has been converted from the gold-peso value. One gold peso is equal to 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. measure and currency by applying the following factors: 1 metric ton=11.247959 barrels of 196 pounds; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

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TABLE 6.—*Bran, shorts, and middlings of wheat: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938*

| Country                                  | 1929    | 1932    | 1936    | 1937    | 1938             |
|--|---------|---------|---------|---------|------------------|
| Quantity (short tons)                    |         |         |         |         |                  |
| Total, all countries.....                | 274,757 | 319,529 | 340,377 | 291,781 | 312,748          |
| United Kingdom.....                      | 88,797  | 205,576 | 247,138 | 215,104 | 226,760          |
| Sweden.....                              | 22,812  | 20,123  | 8,206   | 13,006  | 25,608           |
| Belgium.....                             | 38,393  | 29,028  | 29,435  | 10,898  | 22,963           |
| Netherlands.....                         | 13,325  | 5,382   | 3,402   | 4,396   | 7,769            |
| Denmark.....                             | 9,687   | 14,362  | 19,202  | 16,541  | 7,663            |
| Norway.....                              | 4,785   | 11,787  | 1,944   | 6,299   | 8,064            |
| Germany.....                             | 79,659  | 9,185   | 6,929   | 1,840   | 4,012            |
| Finland.....                             | 567     | 2,281   | 5,925   | 2,714   | 1,711            |
| UNITED STATES.....                       | 1,813   | 646     | 9,820   | 19,237  | 1                |
| All other.....                           | 14,919  | 21,159  | 8,376   | 1,746   | 8,197            |
| Percentage to the United States.....     | 0.7     | 0.2     | 2.9     | 6.6     | ( <sup>1</sup> ) |
| Value (1,000 paper pesos)                |         |         |         |         |                  |
| Total, all countries.....                | 13,987  | 12,835  | 15,989  | 16,642  | 15,904           |
| Value (1,000 U. S. dollars) <sup>2</sup> |         |         |         |         |                  |
| Total, all countries.....                | 5,855   | 3,300   | 4,666   | 5,197   | 4,724            |
| United Kingdom.....                      | 1,860   | 2,118   | 3,393   | 3,832   | 3,459            |
| Sweden.....                              | 465     | 209     | 110     | 230     | 378              |
| Belgium.....                             | 825     | 294     | 399     | 198     | 345              |
| Netherlands.....                         | 290     | 55      | 45      | 78      | 120              |
| Denmark.....                             | 207     | 152     | 272     | 293     | 114              |
| Norway.....                              | 106     | 122     | 26      | 114     | 105              |
| Germany.....                             | 1,714   | 98      | 86      | 83      | 61               |
| Finland.....                             | 12      | 24      | 75      | 48      | 26               |
| UNITED STATES.....                       | 38      | 7       | 147     | 340     | ( <sup>1</sup> ) |
| All other.....                           | 318     | 221     | 113     | 31      | 120              |
| Percentage to the United States.....     | 0.6     | 0.2     | 3.1     | 6.5     | ( <sup>1</sup> ) |
| Unit value per ton of total exports..... | \$21.31 | \$10.33 | \$13.71 | \$17.81 | \$15.12          |

<sup>1</sup> Less than one-tenth of 1 percent.<sup>2</sup> For 1929-32, the U. S. dollar value has been converted from the gold-peso value. One gold-peso is equal to 2.2727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.5844.<sup>3</sup> Not over \$500.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 metric ton=1.1023 short tons; 1 peso=1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 7.—*Bran of all kinds: <sup>1</sup> Exports from BRAZIL to principal markets, in specified years, 1929 to 1938*

| Country                                  | 1929    | 1932    | 1936    | 1937      | 1938    |
|--|---------|---------|---------|-----------|---------|
| Quantity (short tons)                    |         |         |         |           |         |
| Total, all countries.....                | 93,290  | 90,625  | 145,372 | 171,522   | 193,002 |
| Germany.....                             | 79,835  | 22,729  | 47,955  | 91,222    | (1)     |
| UNITED STATES.....                       |         | 451     | 25,169  | 22,796    |         |
| Belgium.....                             | 5,465   | 30,841  | 22,645  | 22,819    |         |
| United Kingdom.....                      | 6,275   | 23,190  | 32,515  | 20,848    |         |
| Netherlands.....                         | 596     | 5,303   | 4,405   | 6,194     |         |
| Norway.....                              |         | 981     | 5,062   | 3,195     |         |
| Denmark.....                             |         | 3,177   | 2,112   | 3,307     |         |
| France.....                              | 1       | 2,264   | 4,582   | (2) 4,141 |         |
| All other.....                           | 1,118   | 1,689   | 927     |           |         |
| Percentage to the United States.....     |         | 0.5     | 17.3    | 13.3      |         |
| Value (1,000 milreis)                    |         |         |         |           |         |
| Total, all countries.....                | 19,146  | 16,550  | 31,932  | 46,018    | 54,702  |
| Value (1,000 U. S. dollars)              |         |         |         |           |         |
| Total, all countries.....                | 2,261   | 1,178   | 2,087   | 3,141     | 3,173   |
| Germany.....                             | 1,922   | 299     | 671     | 1,623     | (1)     |
| UNITED STATES.....                       |         | 5       | 350     | 445       |         |
| Belgium.....                             | 144     | 400     | 346     | 428       |         |
| United Kingdom.....                      | 159     | 299     | 448     | 385       |         |
| Netherlands.....                         | 13      | 71      | 57      | 102       |         |
| Norway.....                              |         | 15      | 108     | 76        |         |
| Denmark.....                             |         | 39      | 38      | 6         |         |
| France.....                              | (4)     | 29      | 56      | (1) 76    |         |
| All other.....                           | 23      | 21      | 13      | 76        |         |
| Percentage to the United States.....     |         | 0.4     | 16.8    | 14.2      |         |
| Unit value per ton of total exports..... | \$24.24 | \$13.00 | \$14.36 | \$18.31   | \$16.44 |

<sup>1</sup> Principally wheat bran, the total exports of which were as follows:

| Year        | Short tons | Value (1,000 U. S. dollars) | Percent of total |       |
|-------------|------------|-----------------------------|------------------|-------|
|             |            |                             | Quantity         | Value |
| 1929.....   | 74,862     | 1,661                       | 80               | 73    |
| 1932.....   | 82,751     | 1,061                       | 91               | 90    |
| 1936.....   | 122,679    | 1,663                       | 84               | 80    |
| 1937.....   | 152,154    | 2,737                       | 89               | 87    |
| 1938 *..... |            |                             |                  |       |

\*Not available.

<sup>2</sup> Not reported separately.

<sup>3</sup> May include negligible exports to countries listed above, since certain types of bran are not allocated by markets.

<sup>4</sup> Not over \$500.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=0.0011023 short tons; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0580.

#### Trade barriers, competitive conditions, and prices.

In the reorganization of agriculture which took place following the World War of 1914-18, practically every European country encouraged the production of wheat within its own borders through various types of government aid; they also placed increased restrictions on imports of foreign wheat and flour. Most of the principal exporting countries have also directly or indirectly subsidized their production and export of the cereal.

Import restrictions generally take the form of high tariffs and quota and milling restrictions <sup>4</sup> such as those prevailing in France, Germany, and Italy. The United Kingdom alone, among the im-

<sup>4</sup> Milling restrictions customarily require that a stipulated proportion of domestic wheat be used in the milling of flour.

portant European countries, admits wheat free of duty,<sup>5</sup> but even in that country the domestic wheat producer is subsidized and supported by milling restrictions; moreover, imports have been subject to licenses and strict governmental control since the outbreak of war in September 1939.

Wheat imported into the United States is dutiable at 42 cents per bushel of 60 pounds, and wheat flour at \$1.04 per 100 pounds.<sup>6</sup> Wheat unfit for human consumption, and bran, shorts, and byproduct feeds obtained in milling wheat, pay a duty of 5 percent ad valorem.<sup>7</sup> For some time exports of wheat from the United States, especially from the Pacific coast, have been subsidized.

The production of all classes of wheat in the United States in 1938 was 931 million bushels, of which 63 percent consisted of hard spring and hard winter varieties. About 9 percent of production was exported and 51 percent was milled for flour; there was a large carry-over. Inasmuch as the United States is usually a large exporter of wheat, its imports of that commodity are customarily very small. Only in a few recent seasons of limited domestic production have imports for consumption of wheat fit for human food been substantial. Imports which enter the United States (nearly all from Canada) usually consist of insignificant quantities of very hard varieties of wheat unfit for human consumption (used for feed), and of wheat imported in bond for milling and export.

Even in 1936, when this country imported for consumption 34 million bushels of wheat fit for human food, only 95,000 bushels came from Argentina. Fourteen thousand bushels of wheat unfit for human consumption were also imported during that year. For most other years in the period 1929-38, no wheat entered from Argentina, and no wheat flour has been imported into the United States from Argentina since 1928.

Only negligible quantities of wheat or flour have been exported from the United States to Argentina in recent years. Under ordinary conditions, hard and semihard wheats are the principal types exported from Argentina; the United States is also an exporter of these types. There was often competition between United States and Argentine wheat in certain European countries where there was an increasing demand for the hard varieties to blend with the soft varieties which they produce.

Increasing trade barriers, greater production, and mounting stocks of wheat, coupled with general adverse economic conditions, caused a decline in world prices on the free market in the early 1930's to the lowest level in the century. As a result, extensive government programs were developed for the control of prices in many wheat-producing and wheat-consuming countries. These programs affecting the importation, exportation, and production of wheat have included increased tariffs, mixing regulations, quota controls, exchange controls, clearing and barter agreements, price fixing, export subsidies, and the restriction and subsidization of production. Different countries have employed different devices, and there has developed a wide disparity in wheat prices throughout the world. The average

<sup>5</sup> For some years prior to January 1, 1939, wheat entering the United Kingdom from foreign countries was subject to a duty of 2 shillings per quarter of 480 pounds, whereas wheat from Empire countries was admitted free of duty. As a result of the United States-United Kingdom agreement this preference was removed and wheat from all sources was made free of duty.

<sup>6</sup> Tariff Act of 1930, par. 729.

<sup>7</sup> Tariff Act of 1930, paragraphs 729 and 730, as modified by the second trade agreement with Canada, effective January 1, 1939. Prior to this agreement the rate had been 10 percent ad valorem.

price for wheat in the United States in the crop year 1936-37 was \$1.17 per bushel; in Argentina it was \$1.06; in the United Kingdom, \$1.20; in France, \$1.91; in Italy, \$1.95; and in Germany, \$2.24. (See tables 8 and 9.)

In the crop year 1929-30 the average price in the United States of No. 2 hard winter wheat was \$1.30 per bushel; in the crop year 1932-33, it was only \$0.54 per bushel. Thereafter the price rose, being affected by droughts and by the Government's agricultural policy, and reached \$1.18 per bushel in 1937-38. In the following crop year, the price declined sharply but advanced, after the outbreak of war in Europe, to \$1.06 in March 1940.

Prices in Argentina followed a trend similar to that in the United States, as did prices in the United Kingdom, but the recovery of prices in these two countries occurred at a later date than in the United States. Moreover, prices in Argentina did not rise sharply after the war began. French prices in the period 1928-39 reached a high point (\$2.12 per bushel) in the crop year 1933-34. Prices in Germany were quoted at more than \$2.20 per bushel in 1934-35 and did not decline from that high level. Italian prices were also high throughout the period 1934-39. In fact, the price of wheat in Germany and Italy was higher in the crop year 1938-39 than in 1928-29.

Prices in Hungary, Yugoslavia, and Rumania, wheat-exporting countries of central Europe, recorded trends somewhat similar to that in the United Kingdom; in certain years, however, trends in the last two countries deviated sharply from that of world prices as recorded by the unit values of imports into the United Kingdom. All three countries experienced lower prices in 1938-39 than in the previous year (see table 9). In most years, prices in these central European countries approximated those in the United Kingdom, but were considerably less than prices prevailing in France, Italy, and Germany where special efforts were made to encourage the domestic production of wheat.

TABLE 8.—Wheat: Prices at Chicago and Buenos Aires, 1928-29 to 1938-39, and by months, July 1939-March 1940

| Year beginning July | No. 2<br>Hard winter<br>at<br>Chicago | No. 2<br>Semi-hard<br>at Buenos<br>Aires | Ratio of<br>Argentine<br>price to<br>price in<br>United States |
|---------------------|---------------------------------------|--|--|
|                     |                                       |  | Percent  |
| 1928-29.....        | \$1.17                                | \$1.15                                   | 98.3   |
| 1929-30.....        | 1.30                                  | 1.17                                     | 90.0   |
| 1930-31.....        | .84                                   | .66                                      | 78.6   |
| 1931-32.....        | .63                                   | .47                                      | 88.7   |
| 1932-33.....        | .53                                   | .44                                      | 83.0   |
| 1933-34.....        | .94                                   | .56                                      | 59.6   |
| 1934-35.....        | 1.02                                  | .61                                      | 59.8   |
| 1935-36.....        | 1.04                                  | .82                                      | 78.4   |
| 1936-37.....        | 1.17                                  | 1.06                                     | 90.6   |
| 1937-38.....        | 1.18                                  | 1.12                                     | 94.9   |
| 1938-39.....        | .70                                   | .61                                      | 87.1   |
| 1939:               |                                       |  |  |
| July.....           | .68                                   | .59                                      | 86.8   |
| August.....         | .67                                   | .59                                      | 88.1   |
| September.....      | .88                                   | .53                                      | 60.2   |
| October.....        | .85                                   | .50                                      | 58.8   |
| November.....       | .90                                   | .50                                      | 55.6   |
| December.....       | .99                                   | .62                                      | 62.6   |
| 1940:               |                                       |  |  |
| January.....        | 1.04                                  | .63                                      | 60.5   |
| February.....       | 1.05                                  | .58                                      | 55.2   |
| March.....          | 1.06                                  | .60                                      | 56.6   |

Source: U. S. Department of Agriculture, *Agricultural Statistics*, 1939: monthly data from U. S. Bureau of Agricultural Economics.

TABLE 9.—Wheat: Prices of imported and of domestic wheat in Europe, 1928-29 to 1938-39

[In U. S. cents per bushel]<sup>1</sup>

| Year (August-July) | Prices of imported wheat in United Kingdom |                              |                             |                             |                             |                         |
|--------------------|--|------------------------------|-----------------------------|-----------------------------|-----------------------------|-------------------------|
|                    | All imports <sup>2</sup>                   | British parcels <sup>3</sup> | No. 1 Manitoba <sup>4</sup> | No. 3 Manitoba <sup>4</sup> | Argentine Rosa <sup>4</sup> | Australian <sup>4</sup> |
| 1928-29            | 132  | 129                          | 147                         | 138                         | 128                         | 140                     |
| 1929-30            | 130  | 127                          | 148                         | 137                         | 122                         | 133                     |
| 1930-31            | 79   | 76                           | 82                          | 77                          | 72                          | 78                      |
| 1931-32            | 57   | 59                           | 68                          | 62                          | 56                          | 61                      |
| 1932-33            | 56   | 56                           | 61                          | 53                          | 56                          | 58                      |
| 1933-34            | 68   | 69                           | 83                          | 77                          | 67                          | 71                      |
| 1934-35            | 77   | 80                           | 97                          | 88                          | 75                          | 79                      |
| 1935-36            | 88   | 91                           | 101                         | 95                          | 94                          | 93                      |
| 1936-37            | 126  | 129                          | 142                         | 136                         | 129                         | 133                     |
| 1937-38            | 126  | 122                          | 155                         | 136                         | 125                         | 117                     |
| 1938-39            | 69   | 68                           | 82                          | 75                          | 67                          | 70                      |

## Prices of domestic wheat

| Year (August-July) | United Kingdom <sup>5</sup> | France (Paris) <sup>6</sup> | Germany (Berlin) <sup>6</sup> | Italy (Milan) <sup>6</sup> | Hungary (Budapest) <sup>10</sup> | Yugoslavia (Novi-sad) <sup>11</sup> | Rumania <sup>11</sup> (Brails) <sup>12</sup> |
|--------------------|-----------------------------|-----------------------------|-------------------------------|----------------------------|----------------------------------|-------------------------------------|--|
| 1928-29            | 127                         | 167                         | 142                           | 187                        | 118                              |                                     |  |
| 1929-30            | 120                         | 147                         | 165                           | 187                        | 109                              |                                     |  |
| 1930-31            | 81                          | 184                         | 168                           | 156                        | 72                               | 79                                  | 55   |
| 1931-32            | 61                          | 172                         | 152                           | 149                        | 59                               | 77                                  | 49   |
| 1932-33            | 56                          | 124                         | 135                           | 151                        | 70                               | 77                                  | 97   |
| 1933-34            | 64                          | 212                         | 191                           | 189                        | 77                               | 64                                  | 100  |
| 1934-35            | 66                          | 165                         | 222                           | 220                        | (13)                             | 77                                  | 118  |
| 1935-36            | 81                          | 159                         | 225                           | 249                        | (14)                             | 95                                  | 97   |
| 1936-37            | 120                         | 191                         | 224                           | 195                        | 103                              | 102                                 | 97   |
| 1937-38            | 112                         | 164                         | 224                           | 200                        | 117                              | 118                                 | 104  |
| 1938-39            | 60                          | 152                         | 225                           | 212                        | 111                              | 96                                  | 81   |

<sup>1</sup> Basic data partly from official sources and partly from trade journals. Annual averages are arithmetic averages of monthly data. Conversions of foreign prices at par when exchanges were near par, otherwise at current exchange rates.

<sup>2</sup> Based on data from *Accounts and Papers Relating to Trade and Navigation of the United Kingdom*; declared values of all imported wheat divided by quantities imported.

<sup>3</sup> Based on data from *Grain, Seed, and Oil Reporter* (London); averages of all sales of wheat parcels (exclusive of French denatured wheat in March-May 1935) on British markets.

<sup>4</sup> Based on data from *Corn Trade News*; averages of Tuesday quotations of parcels afloat or for early shipment, mainly to Liverpool. Argentine prices from Nov. 17, 1932, through December 1938, include the duty of 2 shillings per quarter (4-6 cents per bushel). Australian prices from 1931-32 are averages of low quotations.

<sup>5</sup> Prices missing for some weeks.

<sup>6</sup> Averages of weekly Gazette prices from the official *Agricultural Market Report*.

<sup>7</sup> Averages of daily prices (marché libre) from *Bulletin des Halles*. Fixed prices from August 1936.

<sup>8</sup> Based on data from *Wirtschaft und Statistik*. Minimum or fixed prices to producers from October 1933.

<sup>9</sup> Based on data from *International Institute of Agriculture, Yearbook of Agricultural Statistics and Monthly Crop Report and Agricultural Statistics*. Prices are for soft wheat. Fixed prices from August 1936.

<sup>10</sup> Prices of Tisza wheat through 1929-30 from *Bulletin statistique mensuel hongrois*, thereafter from U. S. Department of Agriculture.

<sup>11</sup> Data from U. S. Department of Agriculture.

<sup>12</sup> Because of the nominal character of exchange quotations, conversion to U. S. cents is unsatisfactory.

<sup>13</sup> Average for 7 months.

## Effects of the war.

Exports of wheat from the Western Hemisphere to Europe customarily range from 300 to 400 million bushels, the equivalent of about 20 percent of European consumption.

Prior to the outbreak of war, the proportion of Argentine exports of wheat and wheat products customarily shipped to Latin American countries approximated 60 percent. These markets are not likely to be adversely affected by the war. The European market, however, which usually took about 40 percent of Argentine exports, has been severely disrupted.

Imports of Argentine wheat into continental European countries are likely to be severely restricted for the duration of the war. Moreover, the United Kingdom may reduce its purchases of Argentine wheat in favor of wheat from Empire countries. Should such a diversion of trade occur, Argentina may be able to supply some of the markets, other than the United Kingdom, formerly supplied by Canada and Australia.

The problem with respect to wheat flour is similar to that associated with wheat. Exports of bran may be affected even more seriously than those of wheat or wheat flour, inasmuch as the markets for bran are almost entirely in Europe.

## WOODS

The classifications of "timber and wood" as used in the trade statistics of various countries cover a wide range of products, from logs, firewood, poles, posts, and other unmanufactured forms, to boards, large and small squares, framing items, ties, and other sawmill products. It is possible that the trade statistics of some Latin American countries even may extend the terms to include such items as cooperage stock, box shooks, plywood, and veneer. As far as available data will permit, the term is here used in the more restricted sense, to include logs and basic sawmill products.

### **Position of Latin America in world production.**

Of approximately 7.5 billion acres of forest land in the world, about 30 percent is reported to be in Latin America; this is equivalent to approximately 40 percent of the total land area of that region. Although unsurpassed in forest area, Latin America annually produces not more than 5 to 7 percent of the world output of sawn timber. In comparison, North America has less than one-fifth of the world forest area, but accounts for almost 60 percent of the sawn-timber output.

The relatively minor position of Latin America as a producer in proportion to its large forest area is due principally to the character of the forests and to the limited demand in that region for timber and wood. Approximately 90 percent of the total forest area is in hardwoods, while the principal need is for softwoods which lend themselves readily to construction and industrial uses. Latin American softwood stands, constituting less than 10 percent of the total forest area, are localized; Mexico and Brazil produce the predominant share of the total output, although scattered production occurs in several other Latin American countries. The lumber produced from Latin American softwoods is suitable chiefly for such purposes as boxes, crates and packing cases, and for minor items of construction. Latin American countries depend almost entirely on outside sources, chiefly the United States and Canada, for the high-grade lumber and timber used in construction.

The situation with respect to potential and actual output of timber and other wood varies in the different Latin American countries. Reserves are large in proportion to land area in several of the countries, but because of the dearth of skilled labor, the state of industrial development, and the lack of transportation facilities, the sawmill industry in most Latin American countries has not been greatly developed; Brazil, Chile, and Mexico are the principal exceptions. Natural barriers to timber exploitation occur in some countries; in Peru, for example, the mining and other large consuming industries are located along the coast, separated from the forest areas by the Andes.

The timber industry throughout Latin America is relatively primitive. Small portable mills and even pit (hand) sawing are common. With some exceptions, involving particular woods, especially pine and cabinet woods, production is largely for local consumption, or



for nearby over-the-border trade. This includes the important production of fuel wood, posts, ties, and lumber for minor construction items, and for packing rubber, fruits, and canned goods. Several woods, however, are produced for export, especially pine and cabinet woods. Production of these woods is commonly conducted on a large scale, and standard United States equipment and methods are in use, especially in Mexico and Brazil, where several modern steam sawmills are in operation.

In the absence of production data to indicate the rank of the producing countries, reliance must be placed on estimates. Brazil and Mexico probably are the leading producers; their important stands of pine and cabinet woods place these countries in a position to furnish the kinds of wood in chief demand. Other countries, such as Nicaragua, Honduras, Guatemala, and Cuba are substantial producers of mahogany and Spanish cedar; Nicaragua, in addition, produces pine. Chile owes its importance as a producer to the hardwoods available in the southern part of the country. Several other countries of Latin America are also producers of timber. Ecuador possesses extensive timber reserves of soft and hard woods, which supply internal requirements, but the only export trade of any consequence is that in balsa in the log. (See table 5.) Venezuela and Colombia have timber resources beyond their present needs, but except for a small export trade in cabinet woods, the timber produced in these countries is almost entirely consumed locally. Argentina, Uruguay, and Paraguay are importers of timber and other wood.

#### Latin American exports.

The timber and wood export trade of Latin American countries is chiefly in cabinet and specialty woods (the latter including balsa and *lignum vitae*) which prior to 1940 went to the United States and Europe, and in softwoods and utility hardwoods, to adjacent or nearby countries. In recent years, however, the trade in pine and hardwoods to Europe increased, particularly from Brazil, Chile, Cuba, and Nicaragua. (See tables at the end of this section.) Brazil is an important exporter. The major portion (probably 65 percent) of the total lumber and timber exports from this source is pine, and the remainder is cabinet woods. It is estimated that in 1938 more than 75 percent of the exports of Brazilian pine went to Argentina, chiefly as box material; other markets were Portugal, Uruguay, and Germany. Exports of cabinet woods from Brazil went largely to the United States; Europe, especially the United Kingdom, ranked second. Mexico exports "ordinary woods," such as pine, and "cabinet woods" such as mahogany and *prima vera*. In 1938 the United States was the outstanding foreign market for both types; France, Germany, and the Netherlands were of less importance. A substantial export trade exists with respect to cabinet-wood logs from Mexico to British Honduras for reexport chiefly to the United States. Exports from Chile are predominantly of *rauli* and laurel, although other hardwoods enter the trade in less important quantities. Available export statistics indicate that in 1938, 46 percent of the Chilean trade was with Germany and 52 percent with the bordering countries, Argentina, Peru, and Bolivia.

With the exception of balsa exported from Ecuador, chiefly to the United States, cabinet woods constitute the predominant share of

the remainder of the Latin American export trade. This includes mahogany and Spanish cedar from Cuba, greenheart from British Guiana, and prima vera from Venezuela.<sup>1</sup>

TABLE 1.—Lumber and timber:<sup>1</sup> Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929             | 1932             | 1936    | 1937    | 1938    |
|--|------------------|------------------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |                  |                  |         |         |         |
| Total, all countries.....                                | 280,469          | 223,091          | 421,270 | 575,526 | 664,416 |
| Argentina.....   | 203,526          | 168,072          | 304,809 | 399,127 | }       |
| Portugal.....  | 24,620           | 15,920           | 34,362  | 32,691  |         |
| Germany.....   | 2,565            | 1,105            | 25,632  | 25,046  |         |
| United Kingdom.....                                      | 4,416            | 3,956            | 5,921   | 24,802  |         |
| Uruguay.....   | 35,080           | 20,986           | 2,462   | 20,506  |         |
| UNITED STATES.....                                       | 5,014            | 6,341            | 19,717  | 15,506  |         |
| Italy.....   | ( <sup>2</sup> ) | 3                | 15,271  | 8,411   |         |
| France.....  | 3,459            | 1,376            | 2,836   | 3,119   |         |
| All other.....   | 1,789            | 5,332            | 10,560  | 46,318  |         |
| Percentage to the United States.....                     | 1.8              | 2.8              | 4.7     | 2.7     |         |
| Value (1,000 milreis)                                    |                  |                  |         |         |         |
| Total, all countries.....                                | 26,662           | 21,673           | 42,904  | 65,117  | 76,907  |
| Value (1,000 U. S. dollars)                              |                  |                  |         |         |         |
| Total, all countries.....                                | 3,149            | 1,543            | 2,805   | 4,445   | 4,461   |
| Argentina.....   | 2,107            | 1,079            | 1,976   | 3,003   | }       |
| Portugal.....  | 328              | 159              | 234     | 242     |         |
| Germany.....   | 46               | 10               | 161     | 202     |         |
| United Kingdom.....                                      | 100              | 31               | 43      | 189     |         |
| Uruguay.....   | 401              | 134              | 15      | 149     |         |
| UNITED STATES.....                                       | 89               | 66               | 176     | 136     |         |
| Italy.....   | ( <sup>2</sup> ) | ( <sup>2</sup> ) | 82      | 65      |         |
| France.....  | 57               | 20               | 45      | 56      |         |
| All other.....   | 22               | 44               | 73      | 403     |         |
| Percentage to the United States.....                     | 2.8              | 4.3              | 6.3     | 3.1     |         |
| Unit value per pound of total exports <sup>4</sup> ..... | \$0.011          | \$0.007          | \$0.007 | \$0.008 | \$0.007 |

<sup>1</sup> In 1936 over 73 percent, and in 1937 over 75 percent of the total value was composed of "Pine."

<sup>2</sup> Not reported separately.

<sup>3</sup> Not over \$500.

<sup>4</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 paper milreis=1920, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0560.

<sup>1</sup> Exports of woods from several Latin American countries are expressed in terms of weight rather than board or cubic feet. The ratio of weight to board or cubic feet varies widely according to the density of the wood. It has seemed impracticable, therefore, to express the quantity figures appearing in the tables in this section in terms of board feet.

TABLE 2.—Wood, unmanufactured—Rauli: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 27, 778 | 4, 000  | 13, 741 | 20, 597 | 23, 581 |
| Germany.....   | (1)     | 37      | 36      | 6, 355  | 13, 383 |
| Argentina.....   |         | 2, 250  | 7, 455  | 6, 513  | 5, 157  |
| Bolivia.....   |         | 338     | 1, 846  | 2, 420  | 1, 858  |
| Peru.....  |         | 1, 170  | 3, 985  | 6, 022  | 3, 126  |
| All other.....   |         | 206     | 419     | 282     | 67      |
| Value (1,000 gold pesos)                                 |         |         |         |         |         |
| Total, all countries.....                                | 5, 182  | 181     | 813     | 1, 441  | 2, 026  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 631     | 22      | 167     | 297     | 417     |
| Germany.....   | (1)     | (2)     | 1       | 119     | 242     |
| Argentina.....   |         | 12      | 92      | 83      | 116     |
| Bolivia.....   |         | 2       | 25      | 36      | 31      |
| Peru.....  |         | 7       | 44      | 55      | 27      |
| All other.....   |         | 1       | 5       | 4       | 1       |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.023 | \$0.006 | \$0.012 | \$0.014 | \$0.018 |

<sup>1</sup> Not separately reported.<sup>2</sup> Not over \$500.<sup>3</sup> See footnote 4, table 1.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1929, \$0.1217; 1932, \$0.1217; 1936, \$0.2060; 1937, \$0.2060; 1938, \$0.2060.

TABLE 3.—Wood, unmanufactured—Lauvel: Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929 | 1932    | 1936    | 1937    | 1938    |
|--|------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |      |         |         |         |         |
| Total, all countries.....                                | (1)  | 5, 750  | 8, 176  | 20, 425 | 20, 002 |
| Germany.....   | (1)  | 2, 929  | 39      | 10, 045 | 13, 395 |
| Argentina.....   |      | 1, 461  | 3, 926  | 5, 173  | 4, 504  |
| Peru.....  |      | 1, 073  | 3, 912  | 4, 570  | 1, 621  |
| Bolivia.....   |      | 152     | 37      | 174     | 395     |
| All other.....   |      | 135     | 262     | 463     | 87      |
| Value (1,000 gold pesos)                                 |      |         |         |         |         |
| Total, all countries.....                                |      | 156     | 262     | 947     | 1, 157  |
| Value (1,000 U. S. dollars)                              |      |         |         |         |         |
| Total, all countries.....                                | (1)  | 19      | 54      | 195     | 238     |
| Germany.....   | (1)  | 10      | (2)     | 109     | 156     |
| Argentina.....   |      | 5       | 27      | 40      | 60      |
| Peru.....  |      | 3       | 25      | 39      | 15      |
| Bolivia.....   |      | 1       | (2)     | 2       | 6       |
| All other.....   |      | (1)     | 2       | 5       | 1       |
| Unit value per pound of total exports <sup>3</sup> ..... |      | \$0.003 | \$0.007 | \$0.010 | \$0.012 |

<sup>1</sup> Not separately reported.<sup>2</sup> Not over \$500.<sup>3</sup> See footnote 4, table 1.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1932, \$0.1217; 1936, \$0.2060; 1937, \$0.2060; 1938, \$0.2060.

TABLE 4.—*Cabinet woods—Mahogany: Exports from CUBA to principal markets, in specified years, 1929 to 1938*

| Country   | 1929             | 1932             | 1936    | 1937    | 1938            |
|---|------------------|------------------|---------|---------|-----------------|
| Quantity (1,000 cubic feet) <sup>1</sup>                      |                  |                  |         |         |                 |
| Total, all countries.....                                     | 2,793            | 320              | 175     | 190     | 125             |
| UNITED STATES.....  | 81               | 48               | 113     | 115     | 53              |
| Puerto Rico.....  |                  | ( <sup>2</sup> ) | 5       | 2       | 20              |
| Denmark.....  | ( <sup>3</sup> ) |                  | 15      | 24      | 14              |
| Germany.....  | 255              | 1                | 7       | 11      | 13              |
| Italy.....  | 85               | 2                | -----   | -----   | 4               |
| United Kingdom.....   | 341              | 7                | 2       | 1       | 3               |
| France.....   | 293              | -----            | 2       | 2       | 1               |
| Canary Islands.....   | 1                | 9                | 4       | 1       | -----           |
| Spain.....  | 1,531            | 196              | 11      | -----   | -----           |
| All other.....  | 206              | <sup>4</sup> 57  | 16      | 34      | <sup>4</sup> 17 |
| Percentage to the United States <sup>5</sup> .....            | 2.9              | 15.0             | 67.0    | 61.4    | 58.0            |
| Value (1,000 U. S. dollars) <sup>7</sup>                      |                  |                  |         |         |                 |
| Total, all countries.....                                     | 406              | 60               | 195     | 227     | 161             |
| UNITED STATES.....  | 88               | 13               | 128     | 142     | 65              |
| Puerto Rico.....  |                  | ( <sup>2</sup> ) | 4       | 2       | 24              |
| Denmark.....  | ( <sup>3</sup> ) | ( <sup>2</sup> ) | 15      | 26      | 16              |
| Germany.....  | 37               | 1                | 10      | 16      | 22              |
| Italy.....  | 14               | 1                | -----   | -----   | 6               |
| United Kingdom.....   | 47               | ( <sup>2</sup> ) | 3       | 1       | 4               |
| France.....   | 46               | -----            | 1       | 2       | 2               |
| Canary Islands.....   | 2                | 9                | 4       | 2       | -----           |
| Spain.....  | 139              | 26               | 11      | -----   | -----           |
| All other.....  | 33               | <sup>4</sup> 10  | 19      | 36      | <sup>4</sup> 22 |
| Percentage to the United States <sup>5</sup> .....            | 21.7             | 22.3             | 67.6    | 63.1    | 55.2            |
| Unit value per cubic foot of total exports <sup>8</sup> ..... | \$0.145          | \$0.189          | \$1.113 | \$1.195 | \$1.263         |

<sup>1</sup> Beginning in 1936, the classification "Mahogany" was divided into "Mahogany, sawn," and "Mahogany in the log." The quantity for "Mahogany, sawn," is now stated in superficial feet which have been converted to cubic feet at 12 superficial feet to 1 cubic foot. The high unit values in 1936-38 are doubtless explained by the increased proportion of sawn mahogany in Cuban exports.

<sup>2</sup> Not over 500.

<sup>3</sup> Not reported separately.

<sup>4</sup> Includes 30,150 cubic feet, valued at \$2,975, exported to Belgium.

<sup>5</sup> Includes 9,878 cubic feet, valued at \$13,228, exported to the Netherlands.

<sup>6</sup> Includes Puerto Rico.

<sup>7</sup> One peso=1 U. S. dollar (all years).

<sup>8</sup> See footnote 4, table 1.

Source: Compiled by the United States Tariff Commission from official trade statistics of Cuba.

TABLE 5.—*Balsa, in the log and sawn: Exports from ECUADOR to principal markets, in specified years, 1929 to 1938*

| Country  | 1929             | 1932             | 1936                | 1937                 | 1938    |
|--|------------------|------------------|---------------------|----------------------|---------|
| Quantity (1,000 pounds)                                  |                  |                  |                     |                      |         |
| Total, all countries.....                                | 3,642            | 1,054            | 2,546               | 2,798                | 3,324   |
| UNITED STATES.....                                       | 3,611            | 934              | 2,085               | 2,023                | 2,207   |
| United Kingdom.....                                      | 6                | 33               | 260                 | 249                  | 306     |
| Germany.....   | 8                |                  | ( <sup>1</sup> ) 48 | ( <sup>1</sup> ) 112 | 224     |
| France.....  |                  | 5                |                     |                      | 213     |
| Japan.....   |                  | 23               | 25                  | ( <sup>1</sup> ) 113 | 110     |
| Netherlands.....   |                  | 4                | 21                  | 61                   | 45      |
| All other.....   | 17               | 55               | 107                 | 220                  | 219     |
| Percentage to the United States.....                     | 99.1             | 88.6             | 81.9                | 72.3                 | 66.4    |
| Value (1,000 sucres)                                     |                  |                  |                     |                      |         |
| Total, all countries.....                                | 548              | 176              | 1,057               | 1,264                | 1,780   |
| Value (1,000 U. S. dollars)                              |                  |                  |                     |                      |         |
| Total, all countries.....                                | 110              | 29               | 101                 | 115                  | 133     |
| UNITED STATES.....                                       | 109              | 27               | 83                  | 84                   | 92      |
| United Kingdom.....                                      | ( <sup>2</sup> ) | 1                | 10                  | 9                    | 10      |
| Germany.....   | ( <sup>2</sup> ) |                  | 2                   | 6                    | 10      |
| France.....  |                  | ( <sup>3</sup> ) |                     |                      | 8       |
| Japan.....   |                  | ( <sup>3</sup> ) | ( <sup>1</sup> ) 1  | ( <sup>1</sup> ) 4   | 4       |
| Netherlands.....   |                  | ( <sup>3</sup> ) | 1                   | 4                    | 3       |
| All other.....   | 1                | ( <sup>3</sup> ) | 4                   | 8                    | 6       |
| Percentage to the United States.....                     | 99.5             | 92.1             | 82.3                | 72.7                 | 69.0    |
| Unit value per pound of total exports <sup>4</sup> ..... | \$0.030          | \$0.028          | \$0.040             | \$0.041              | \$0.040 |

<sup>1</sup> Not separately reported.<sup>2</sup> Not over \$500.<sup>3</sup> See footnote 4, table 1.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Ecuador and monthly economic reports, U. S. Consul General, Guayaquil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds, gross; 1 sucre=1929, \$0.2000; 1932, \$0.1667; 1936, \$0.0962; 1937, \$0.0910; 1938 \$0.0746.

TABLE 6.—*Timber and wood: Total exports from MEXICO, in specified years, 1929 to 1938*

[In thousands of U. S. dollars]

| Type of wood                   | 1929  | 1932 | 1936             | 1937 | 1938 <sup>1</sup> |
|--------------------------------|-------|------|------------------|------|-------------------|
| Cabinet woods, in the log..... | 1,559 | 66   | 346              | 604  | 497               |
| Ordinary wood, sawed.....      | 372   | 13   | 59               | 46   | 42                |
| Ordinary wood, in the log..... | 186   | 1    | ( <sup>2</sup> ) | 46   | 19                |
| Cabinet woods, sawed.....      | 567   | 12   | 9                | 17   | 3                 |
| Total woods listed.....        | 2,684 | 92   | 414              | 713  | 561               |

<sup>1</sup> Preliminary.<sup>2</sup> Not available.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Mexico. Converted to U. S. currency by applying the following factors: 1 peso=1929, \$0.4818; 1932, \$0.3185; 1936, \$0.2776; 1937, \$0.2775; 1938, \$0.2212.

TABLE 7.—Lumber—Pine: Exports from NICARAGUA to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 board feet)                                   |         |         |         |         |         |
| Total, all countries.....                                     | 9,683   | 724     | 1,191   | 5,129   | 6,337   |
| United Kingdom.....   |         |         |         |         | 3,031   |
| UNITED STATES.....  | 1,020   | 99      | 1,127   | 4,409   | 2,514   |
| Panama.....   | 2,125   |         | 7       | 232     | 184     |
| Honduras.....   | 3,487   | 527     | 37      | 185     | 305     |
| Jamaica.....  | 1,611   |         |         |         | 44      |
| All other.....  | 1,440   | 98      | 20      | 303     | 259     |
| Percentage to the United States.....                          | 10.5    | 13.7    | 94.6    | 86.0    | 39.7    |
| Value (1,000 U. S. dollars) <sup>1</sup>                      |         |         |         |         |         |
| Total, all countries.....                                     | 423     | 16      | 24      | 80      | 96      |
| United Kingdom.....   |         |         |         |         | 45      |
| UNITED STATES.....  | 41      | 3       | 23      | 67      | 38      |
| Panama.....   | 98      |         | (?)     | 5       | 3       |
| Honduras.....   | 154     | 11      | 1       | 3       | 2       |
| Jamaica.....  | 72      |         |         |         | 1       |
| All other.....  | 58      | 2       | (?)     | 5       | 7       |
| Percentage to the United States.....                          | 9.6     | 17.7    | 93.4    | 83.1    | 39.5    |
| Unit value per board foot of total exports <sup>2</sup> ..... | \$0.044 | \$0.023 | \$0.020 | \$0.016 | \$0.015 |

<sup>1</sup> 1 cordoba=1 U. S. dollar (all years).<sup>2</sup> Not over \$500.<sup>3</sup> See footnote 4, table 1.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Nicaragua.

TABLE 8.—Wood, unmanufactured—Mahogany: Exports from NICARAGUA to principal markets, in specified years, 1929 to 1938

| Country   | 1929    | 1932    | 1936    | 1937    | 1938    |
|---|---------|---------|---------|---------|---------|
| Quantity (1,000 board feet)                                   |         |         |         |         |         |
| Total, all countries.....                                     | 8,099   | 12      | 81      | 1,327   | 1,633   |
| UNITED STATES.....  | 8,085   | 12      | 18      | 1,202   | 1,541   |
| Germany.....  |         |         | 5       | 24      | 23      |
| Peru.....   | 11      |         | 25      |         | 38      |
| Japan.....  |         |         | 28      | 101     | 13      |
| All other.....  |         |         | 5       |         | 18      |
| Percentage to the United States.....                          | 99.9    | 100.0   | 22.7    | 90.6    | 94.4    |
| Value (1,000 U. S. dollars) <sup>1</sup>                      |         |         |         |         |         |
| Total, all countries.....                                     | 641     | (?)     | 3       | 92      | 97      |
| UNITED STATES.....  | 640     | (?)     | 1       | 86      | 91      |
| Germany.....  |         |         | (?)     | 1       | 2       |
| Peru.....   | (?)     |         | (?)     |         | 2       |
| Japan.....  |         |         | 2       | 5       | 1       |
| All other.....  |         |         | (?)     |         | 1       |
| Percentage to the United States.....                          | 99.9    | 100.0   | 16.5    | 93.0    | 94.2    |
| Unit value per board foot of total exports <sup>2</sup> ..... | \$0.079 | \$0.020 | \$0.041 | \$0.070 | \$0.059 |

<sup>1</sup> One cordoba=1 U. S. dollar (all years).<sup>2</sup> Not over \$500.<sup>3</sup> See footnote 4, table 1.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Nicaragua.

**Trade barriers and competitive conditions.**

A complete discussion of the import barriers affecting timber and wood exported from Latin American countries would involve detailed consideration of the tariff schedules of a large number of countries. A general survey of these schedules, however, indicates that such exports encounter a minimum of trade barriers.

Exports to the United States are predominantly of cabinet woods in the log and sawed forms; logs and some sawed forms are admitted free of duty, but most sawed cabinet woods are dutiable and all sawed lumber is subject to an import excise tax of \$3 per thousand board feet.<sup>2</sup> Available information indicates that there are no trade barriers to cabinet woods in European markets, although since the outbreak of war in September 1939, most European countries have exercised rigid control over imports. In some instances, exchange considerations and barter arrangements with European countries have in the past stimulated Latin American exports of lumber.

Some Latin American countries accord preferences to imports of timber and other wood from other Latin American countries. These preferences are often determined by the phraseology of the tariff classification, for example, an exemption from duty if imported from a Latin American country for a given purpose, or the establishment of dimensions which do not conform to sizes commonly accepted in world trade as standard, or they may result from exclusive bilateral trade agreements.

Available information indicates that Latin American woods do not encounter severe competition in their principal markets. Exports of softwoods from Brazil, chiefly of box grades and less important construction members, can be placed in the nearby Rio de la Plata markets under more favorable conditions than similar stock from the United States and Scandinavia. The United States has an advantage over Brazil in the larger construction items, however, owing to differences in the character of the timber of the respective countries. Brazil is at a distinct disadvantage in the markets of Central America because of competition from local production and imports from the United States. Chilean hardwoods have an advantage in the nearby markets of Argentina, Peru, and Bolivia because of conditions similar to those favoring Brazilian softwoods.

The competition offered Latin American cabinet woods occurs almost entirely in North American and European markets and is centered predominantly on mahogany. African mahogany enters the same use-classes as the American, and is competitive with it. Competition from this source is probably less severe in the United States market than in Europe. In 1938, 75 percent of the total imports of mahogany into the United States were from Latin America.<sup>3</sup>

**Effects of the war.**

The principal need<sup>4</sup> in Latin America is for softwoods, ranging from boxboard grades to heavy construction timbers. Argentina, Peru,

<sup>2</sup> Imposed by the Revenue Act of 1932. In trade agreements with Canada and Ecuador, this tax was reduced on all types of lumber to \$1.50 per thousand board feet. The tax on most cabinet-wood lumber, however, was restored to \$3 per thousand board feet as a result of the second trade agreement with Canada, effective Jan. 1, 1939. Cabinet-wood lumber from Cuba is taxable at \$2.40 per thousand board feet, except mahogany which, under the terms of the trade agreement with Cuba, is taxable at \$1.20.

<sup>3</sup> Representative prices for mahogany and other cabinet woods are not available, inasmuch as the value of each in individual shipment is determined by its quality. The sharp increase in the unit value of exports of mahogany from Cuba (see table 4) in recent years is doubtless the result of shift in the form of such exports from logs to selected lumber.

Uruguay, and Venezuela are the principal importers in South America, and the war should not affect the shipment of box-grade stock and minor construction items from nearby sources to these markets. Cuba, Mexico, and Panama are large markets for softwoods (chiefly of box grade), but these countries depend on the United States for their principal supply, rather than on Brazil and other South American sources. It is probable that the small overseas trade in Latin American softwoods will be greatly curtailed for the duration of the war, as will the movement of cabinet woods from Latin American countries to Europe. Unless there is a scarcity of cargo ships, the movement of cabinet woods from Latin America to the United States should be unaffected by war conditions except that the demand may be stimulated by the armament and shipbuilding programs in this country.



## WOOL

Wool varies in fineness from the extremely coarse to the extremely fine fiber. The price of wool generally varies with its fineness, which largely determines the use to which it is put.

The coarse native, or "unimproved" wools, grown chiefly in Asia, are used principally in carpets and rugs. Certain of these also are frequently blended with coarse "improved" or apparel wools in the manufacture of special fabrics. Coarse apparel wools are frequently blended with carpet wools in making floor coverings, but their principal use is in blankets and the less expensive woven fabrics and knit goods. Coarse apparel wools having some lustre are also blended with mohair for the weaving of lightweight summer suitings and dress goods, and for upholstery (pile) fabrics. Apparel wools of medium fineness are used principally in the manufacture of suitings and dress goods; the United States is a large producer of such wools. The fine apparel wools grown chiefly in Australia are occasionally blended with the finer animal hairs, but their predominant use is in the manufacture of clothing and knit goods, the value of which usually increases directly with the fineness of the wool. This results in part from the fact that as wools increase in fineness they generally become softer, and the fabrics made from them have more acceptable draping properties. All grades of short wools may be used in felts, ranging from the finest billiard, piano, and hat felts to those made from the coarsest short wools, whether of carpet or apparel types and animal hair.

### **Position of Latin America in world production.**

In general, wools grown in South America are somewhat coarser than those produced in most other important wool-exporting regions. Comparatively little merino (fine) wool is produced, except in certain sections of Peru and Argentina. Much of the South American wool is deficient in certain desirable characteristics, and for that reason is usually blended with other wools. Argentina is by far the principal producer of the coarser apparel wools which are blended with the true carpet wools in the manufacture of floor coverings. Argentina also produces a considerable quantity of unimproved or true carpet wools.

There is also a limited production in Latin America, chiefly in Peru, of hair from animals related to the camel, such as the alpaca, llama, vicuna, huarizo (cross of the male llama and the female alpaca) and misti (cross of the male alpaca and the female llama). All these are specialty hairs produced only in the Andean regions of South America. Alpaca is by far the most important. Llamas are used chiefly as beasts of burden; consequently their hair becomes so worn as to be unfit for most manufacture. Vicuna hair, the finest animal fiber known, is produced in very limited amounts, since the wild animals must be slaughtered to obtain it. Stringent conservation measures have been imposed in recent years to prevent extinction of the species. These animal hairs, other than vicuna, are usually blended with wools in textile manufacture.

Wool production in Latin America (including the foregoing specialty hairs) has customarily amounted to about one-sixth of world produc-

tion; in 1938 Latin American production was 627 million pounds, or 16.4 percent of the estimated world production of 3,830 million pounds. (See table 1.) Argentina, Uruguay, Brazil, Chile, and Peru in that year accounted for 93 percent of the total wool production in Latin America. Argentina and Uruguay alone accounted for 80 percent. About 30 percent of the total Latin American production is used by domestic industries or native craftsmen; the remainder is exported.

TABLE 1.—Wool: Production in principal producing countries, in specified years, 1929 to 1938

| Country   | 1929                              | 1933         | 1936         | 1937         | 1938         |
|---|-----------------------------------|--------------|--------------|--------------|--------------|
|   | Quantity (millions of pounds)     |              |              |              |              |
| Argentina.....                                    | 323                               | 348          | 350          | 380          | 385          |
| Uruguay.....                                      | 135                               | 101          | 112          | 128          | 121          |
| Chile.....  | 33                                | 32           | 25           | 34           | 31           |
| Other Latin American countries.....               | 56                                | 54           | 85           | 84           | 90           |
| <b>Total, Latin America.....</b>                  | <b>547</b>                        | <b>535</b>   | <b>572</b>   | <b>626</b>   | <b>627</b>   |
| Australia.....                                    | 925                               | 847          | 990          | 1,014        | 938          |
| UNITED STATES.....                                | 363                               | 429          | 426          | 433          | 436          |
| New Zealand.....                                  | 222                               | 279          | 295          | 314          | 305          |
| Union of South Africa.....                        | 312                               | 255          | 251          | 230          | 240          |
| Canada and Newfoundland.....                      | 21                                | 19           | 19           | 19           | 19           |
| Europe <sup>1</sup> .....                         | 913                               | 638          | 655          | 783          | 837          |
| Asia <sup>2</sup> .....                           | 230                               | 223          | 316          | 310          | 314          |
| Africa <sup>3</sup> .....                         | 88                                | 69           | 115          | 121          | 115          |
| <b>Estimated total world production.....</b>      | <b>3,620</b>                      | <b>3,294</b> | <b>3,639</b> | <b>3,850</b> | <b>3,830</b> |
|   | Percent of total world production |              |              |              |              |
| <b>Latin American countries listed above.....</b> | <b>15.1</b>                       | <b>16.2</b>  | <b>15.7</b>  | <b>16.3</b>  | <b>16.4</b>  |

<sup>1</sup> Including the Soviet Union in Europe and Asia.

<sup>2</sup> Excluding the Soviet Union in Europe and Asia.

<sup>3</sup> Excluding the Union of South Africa.

NOTE.—The statistics for Latin American countries include the various related specialty hairs.

SOURCE: Bulletins of the National Association of Wool Manufacturers.

#### Latin American exports.

Australia is by far the world's largest wool-exporting country; Argentina ranks second, followed by New Zealand, the Union of South Africa, and Uruguay. Wool-exporting countries in Latin America, other than Argentina and Uruguay, are Chile, Peru, and Brazil. These five Latin American countries together have customarily accounted for more than 20 percent of total world exports; Argentina alone has usually supplied about 15 percent. In recent years, exports of wool from Latin America have averaged about 450 million pounds as compared with exports from Australia of 820 million pounds and with a world total of 2,100 million pounds (see table 2).

Prior to 1940 most of the world's exports of wool went to European countries. The United States was formerly a large importer, but with increased domestic production, its imports (other than the carpet wool) have been small, except in periods of unusually high activity (as in 1937 and 1941) in the wool-manufacturing industry.

TABLE 2.—Wool, raw:<sup>1</sup> Exports from principal producing countries of Latin America and of the world, in specified years, 1929 to 1938

| Country   | 1929  | 1932        | 1936        | 1937        | 1938        |
|---|---|-------------|-------------|-------------|-------------|
|   | Quantity (1,000 pounds)                     |             |             |             |             |
| Argentina.....  | 284, 313                                    | 289, 878    | 307, 762    | 255, 956    | 334, 830    |
| Uruguay.....  | 112, 619                                    | 95, 139     | 101, 379    | 90, 970     | 117, 352    |
| Chile.....  | 23, 449                                     | 25, 058     | 21, 528     | 27, 287     | 22, 108     |
| Peru.....   | 10, 574                                     | 9, 213      | 13, 199     | 12, 347     | 12, 317     |
| Brazil.....   | 11, 392                                     | 3, 907      | 13, 704     | 6, 397      | 11, 839     |
| Total exports from Latin American countries listed above..... | 442, 347                                    | 423, 195    | 457, 572    | 392, 937    | 498, 446    |
| Australia.....  | 764, 760                                    | 851, 637    | 836, 093    | 771, 729    | 849, 607    |
| New Zealand.....  | 234, 956                                    | 238, 179    | 314, 408    | 282, 352    | 271, 280    |
| Union of South Africa.....                                    | 286, 874                                    | 372, 661    | 213, 944    | 237, 307    | 244, 404    |
| Belgium and Luxemburg <sup>1</sup> .....                      | 35, 711                                     | 58, 309     | 106, 087    | 113, 041    | 75, 713     |
| British India.....  | 67, 063                                     | 35, 724     | 58, 713     | 58, 902     | 56, 362     |
| France <sup>2</sup> .....                                     | 61, 363                                     | 37, 335     | 64, 368     | 69, 190     | 49, 332     |
| United Kingdom:   |   |             |             |             |             |
| Domestic.....   | 51, 984                                     | 41, 911     | 58, 500     | 45, 549     | 42, 403     |
| Reexports.....  | 330, 629                                    | 318, 136    | 264, 944    | 220, 551    | 256, 719    |
| All other <sup>3</sup> .....                                  | 233, 148                                    | 106, 174    | 198, 580    | 207, 708    | 137, 893    |
| Total world exports <sup>4</sup> .....                        | 2, 081, 132                                 | 2, 069, 481 | 2, 137, 792 | 1, 996, 494 | 2, 100, 395 |
|   | Percent of total world exports <sup>4</sup> |             |             |             |             |
| Latin American countries listed above.....                    | 21.3  | 20.4        | 21.4        | 19.7        | 23.7        |

<sup>1</sup> Includes washed, unwashed, scoured, pulled wool, slipe; and for various countries hair of the camel, mohair, Angora goat, Cashmere goat, and alpaca. The following items have been considered as not within this classification: Carded, combed, dyed wool, flecks; sheep, lamb and goat skins with the hair on, mill waste, noils, and tops.

<sup>2</sup> Believed to be principally reexports.

<sup>3</sup> Believed to include some reexports.

<sup>4</sup> Exclusive of exports from France, Belgium, and Luxemburg, and reexports from the United Kingdom.

Source: Compiled by the United States Tariff Commission from official trade statistics of the exporting countries. World total from the *International Yearbook of Agricultural Statistics*.

Carpet wools exported from Latin America compete chiefly with wools from Asia, and the apparel wools with those from South Africa, Australia, and New Zealand. About 25 percent of the exports of non-Latin American wool consists of native or carpet wools, whereas such fiber probably constitutes not over 7 percent of the movement from Latin America. Exports of apparel wools from all net exporting countries average about 1,835 million pounds. Of this quantity, about 415 million pounds, or 23 percent, is exported from Latin America, as compared with 1,375 million, or nearly 75 percent, from British Empire countries.

Before the war the principal markets for Argentine wools were the United Kingdom, France, Germany, the United States, Belgium, and Italy. For Uruguayan wools the principal destinations were the United States, Italy, Belgium, and Japan. Chilean wools were taken principally by the United Kingdom, Germany, and Japan, while Peruvian wools went chiefly to the United Kingdom and Germany. Animal hair from the Andean countries—predominantly alpaca—was exported largely to the United Kingdom, the United States, Germany, Belgium, and France. Exports of wool from the principal producing countries of Latin America to principal markets, in specified years, 1929 to 1938, are shown in tables 4 to 11 at the end of this section.

**Trade barriers, competitive conditions, and prices.**

Wools (and hair) from the Latin American countries enter all the important importing countries, except the United States, free of duty. In the United States the basic duty ranges from 13 cents to 34 cents per pound of clean content,<sup>1</sup> and applies to all wools imported for consumption except carpet wools and wools not finer than 40s imported under bond for specified uses.<sup>2</sup>

In the period 1936-38, United States imports averaged annually about 70 million pounds of wool and 2 million pounds of alpaca and similar hair from South America, but the figure for 1937 was much higher than that for either 1936 or 1938. About one-half of the imports, however, have been carpet wools entered free of duty under bond. Most of the imported apparel wools have come from Australia, New Zealand, and South Africa.

The price of wool is greatly influenced by the degree of industrial activity. In 1929 the average price of domestic wool (fine territory staple) at Boston was 98.2 cents per pound; thereafter it declined sharply to 47.3 cents in 1932. The average price rose in 1933 and 1934, declined somewhat in 1935, and rose again in 1936 and 1937. In 1937 it stood at 99.8 cents per pound, a higher figure than that in 1929, but declined in 1938 and 1939 to approximately 71 cents per pound. With the outbreak of war in Europe, the price of wool rose abruptly, reaching a peak of \$1.11 in October 1939; later it declined and in March 1940 was quoted at 91 cents per pound (see table 3).

The price of imported wool (fine colonial) ex duty at Boston has followed a trend similar to that of prices of comparable domestic wool (fine territory staple), although fluctuations in the price of the imported product have been more pronounced. The price of imported wool (exclusive of duty) has regularly been lower than that of comparable domestic grades. During the period 1929-40, the prices of fine colonial wool (imported, ex duty) ranged from 83 percent to 65 percent of the price of domestic fine territory staple. The duty-paid price, however, has regularly been higher than the domestic price.

The average price quotation for Cordoba wool, class III, from Argentina was 25.5 cents per pound in 1929 and 8.2 cents in 1933. Thereafter it rose to 25.8 cents per pound in 1937 and declined to 14.8 cents in 1939. With the outbreak of war in Europe the monthly price quotation rose from 13 cents per pound in September 1939 to 23 cents in February 1940. Wool of this type is coarser than 99 percent of the wool produced in the United States; it is used principally in the manufacture of carpets and for that purpose enters the United States in bond, free of duty.

<sup>1</sup> The basic rates of duty on wools not finer than 44s were reduced substantially in the trade agreement with Argentina, effective November 15, 1941.

<sup>2</sup> Carpet wools (not grown in the United States) and other wools not finer than 40s are granted free entry (under bond) for certain specified uses, predominantly in floor coverings, in which they do not compete with United States wools. When devoted to other than specified uses, the basic rate of 24 cents per pound of clean content is levied on such fiber. On apparel wools finer than 40s but not finer than 44s, the basic duty is 29 cents per pound. Imports of these coarse wools do not constitute over 1 percent of total United States production. On wools finer than 44s the basic duty is 34 cents per pound (Tariff Act of 1930, pars. 1101 and 1102).

TABLE 3.—Wool: Wholesale prices and quotations at Boston, 1929-39, and August 1939-March 1940

[Cents per pound]

| Year or month  | Domestic<br>fine territory<br>staple | Imported<br>fine colonial<br>ex duty | Cordoba<br>class III <sup>1</sup><br>(ex duty) |
|----------------|--------------------------------------|--------------------------------------|--|
| 1929.....      | 98.2                                 | 81.7                                 | 25.5   |
| 1930.....      | 75.9                                 | 59.0                                 | 17.9   |
| 1931.....      | 62.6                                 | 45.3                                 | 13.2   |
| 1932.....      | 47.3                                 | 32.1                                 | 8.8  |
| 1933.....      | 64.5                                 | 43.7                                 | 8.2  |
| 1934.....      | 82.5                                 | 62.3                                 | 11.7   |
| 1935.....      | 75.9                                 | 51.4                                 | 12.2   |
| 1936.....      | 91.1                                 | 68.7                                 | 14.3   |
| 1937.....      | 99.8                                 | 73.9                                 | 25.6   |
| 1938.....      | 70.8                                 | 54.8                                 | 16.2   |
| 1939.....      | 170.9                                | 148.8                                | 14.8   |
| 1939:          |                                      |                                      |  |
| August.....    | 72.5                                 | 47.7                                 | 13-14  |
| September..... | 72.5                                 | 47.7                                 | 13-14  |
| October.....   | 111.0                                | 79.3                                 | 17-18  |
| November.....  | 104.5                                | 73.2                                 | 19-20  |
| December.....  | 105.5                                | 72.8                                 | 19-20  |
| 1940:          |                                      |                                      |  |
| January.....   | 105.5                                | 72.8                                 | 21-22  |
| February.....  | 95.5                                 | 70.2                                 | 23-24  |
| March.....     | 91.0                                 | 70.2                                 | 23-24  |

<sup>1</sup> Annual prices are the unweighted average of the monthly quotations reported in the first issue of each month of the Commercial Bulletin, Boston; monthly prices are the quotations reported in the first issue of each month.

<sup>2</sup> 8-month average.

Source: United States Tariff Commission, *Wool Prices*, Report No. 120, and current data; for Cordoba wool, class III (from Argentina), *The Commercial Bulletin*, Boston.

#### Effects of the war.

Total consumption of wool in Europe (exclusive of the Soviet Union) amounts to approximately 2 billion pounds annually, of which imports supply about 75 percent. Of the total imports, approximately one-fourth is obtained from the Western Hemisphere and two-thirds from Australia, New Zealand, and South Africa. Asia is a minor source.

As a result of the war, Latin American countries appear likely to lose, at least temporarily, a substantial part of their European market for wool. This loss, however, will be covered, in whole or in part, by increased sales to other countries, especially the United States.

With the outbreak of the war, the United Kingdom commandeered, at fixed prices, all of the wool in Australasia, and announced that it would release only 60s and finer wools to neutral countries. Minimum prices have also been guaranteed by the United Kingdom for South African wools. The exports of Indian (carpet) wools to non-Empire users have been curtailed, and the acquisition of Turkish (carpet) wools has been restricted. With Japan controlling most of the exports of Chinese wools, United States users of both carpet and apparel wools will be forced to depend more largely on Latin American and (subject to the minimum prices guaranteed by the United Kingdom) on South African markets for their requirements of imported wools.

TABLE 4.—Wool, unwashed: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 264,997 | 267,209 | 260,956 | 213,709 | 285,063 |
| United Kingdom.....                                      | 40,525  | 80,219  | 75,411  | 45,549  | 77,256  |
| France.....  | 45,201  | 58,191  | 41,561  | 31,413  | 55,119  |
| Germany.....   | 64,575  | 42,313  | 35,964  | 24,370  | 56,156  |
| UNITED STATES.....                                       | 35,428  | 10,875  | 47,143  | 47,419  | 39,125  |
| Belgium.....   | 48,045  | 32,615  | 19,061  | 17,482  | 15,289  |
| Italy.....   | 20,690  | 28,415  | 8,450   | 23,979  | 12,037  |
| All other.....   | 10,533  | 14,581  | 33,367  | 23,497  | 30,081  |
| Percentage to the United States.....                     | 13.4    | 4.1     | 18.1    | 22.2    | 13.7    |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 144,769 | 65,776  | 125,165 | 135,837 | 122,754 |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 60,596  | 16,913  | 36,523  | 41,919  | 36,496  |
| United Kingdom.....                                      | 9,352   | 5,192   | 10,093  | 8,631   | 9,769   |
| France.....  | 10,293  | 3,677   | 5,801   | 6,144   | 6,992   |
| Germany.....   | 14,564  | 2,630   | 5,156   | 4,692   | 7,640   |
| UNITED STATES.....                                       | 8,058   | 664     | 6,084   | 3,331   | 4,664   |
| Belgium.....   | 11,044  | 1,995   | 2,755   | 3,473   | 1,871   |
| Italy.....   | 4,747   | 1,798   | 1,257   | 4,842   | 1,482   |
| All other.....   | 2,538   | 957     | 5,377   | 4,806   | 4,077   |
| Percentage to the United States.....                     | 13.3    | 3.9     | 16.7    | 22.3    | 12.8    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.229 | \$0.063 | \$0.140 | \$0.196 | \$0.128 |

<sup>1</sup> For 1929 and 1932, the U. S. dollar value has been converted from the gold-peso value. One gold peso = 2.272727 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; and 1932, \$0.5844.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina; converted to U. S. weights and currency by applying the following factors: 1 metric ton = 2204.6 pounds, 1 peso = 1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 5.—Wool, cleaned and washed: Exports from ARGENTINA to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 19,316  | 22,669  | 46,806  | 42,247  | 49,761  |
| United Kingdom.....                                      | 9,468   | 9,842   | 14,081  | 14,281  | 15,692  |
| France.....  | 1,332   | 2,726   | 6,175   | 3,146   | 7,346   |
| UNITED STATES.....                                       | 3,267   | 512     | 9,691   | 12,906  | 7,952   |
| Belgium.....   | 1,163   | 2,822   | 2,817   | 3,600   | 3,481   |
| Czechoslovakia.....                                      |         |         | 1,411   | 1,250   | 2,266   |
| Netherlands.....   | 166     | 440     | 571     | 461     | 1,991   |
| Chile.....   | 108     |         | 853     | 256     | 1,206   |
| Yugoslavia.....  |         |         | 694     | 719     | 1,592   |
| Union of South Africa.....                               | 4       | 35      | 1,662   | 1,667   | 1,806   |
| Austria.....   |         |         | 278     | 344     | 1,246   |
| Italy.....   | 1,578   | 2,672   | 2,412   | 990     | 295     |
| Germany.....   | 1,630   | 3,023   | 2,392   | 481     | 278     |
| All other.....   | 580     | 697     | 3,769   | 2,146   | 4,616   |
| Percentage to the United States.....                     | 16.9    | 2.3     | 20.7    | 30.5    | 16.0    |
| Value (1,000 paper pesos)                                |         |         |         |         |         |
| Total, all countries.....                                | 13,538  | 9,883   | 26,240  | 35,351  | 30,998  |
| Value (1,000 U. S. dollars) <sup>1</sup>                 |         |         |         |         |         |
| Total, all countries.....                                | 5,667   | 2,541   | 7,657   | 10,909  | 9,216   |
| United Kingdom.....                                      | 2,264   | 1,012   | 1,723   | 3,105   | 2,273   |
| France.....  | 392     | 314     | 1,115   | 934     | 1,542   |
| UNITED STATES.....                                       | 1,010   | 61      | 1,506   | 3,480   | 1,328   |
| Belgium.....   | 407     | 292     | 492     | 998     | 718     |
| Czechoslovakia.....                                      |         |         | 262     | 336     | 466     |
| Netherlands.....   | 61      | 53      | 93      | 120     | 376     |
| Chile.....   | 50      |         | 248     | 107     | 355     |
| Yugoslavia.....  |         |         | 159     | 201     | 347     |
| Union of South Africa.....                               | 1       | 4       | 207     | 338     | 310     |
| Austria.....   |         |         | 55      | 82      | 305     |
| Italy.....   | 654     | 331     | 536     | 365     | 80      |
| Germany.....   | 615     | 374     | 380     | 134     | 47      |
| All other.....   | 223     | 100     | 680     | 709     | 1,049   |
| Percentage to the United States.....                     | 17.8    | 2.4     | 19.7    | 31.9    | 14.4    |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.293 | \$0.112 | \$0.164 | \$0.258 | \$0.185 |

<sup>1</sup> For 1929 and 1932, the U. S. dollar value has been converted from the gold-peso value. One gold peso = 2.27277 paper pesos. The conversion rates for the gold peso are as follows: 1929, \$0.9513; 1932, \$0.6644.

<sup>2</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 net kilo = 2.2046 pounds; 1 metric ton = 2204.6 pounds; 1 peso = 1929, \$0.4186; 1932, \$0.2571; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

TABLE 6.—Wool: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 11,392  | 3,907   | 13,704  | 6,397   | 11,839  |
| Germany.....   | 6,995   | 1,906   | 12,126  | 5,959   | } (1)   |
| Belgium and Luxemburg.....                               | 233     | 5       | 558     | 361     |         |
| Uruguay.....   | 2,921   | 1,479   | 528     | .....   |         |
| All other.....   | 1,243   | 517     | 492     | 77      |         |
| Value (1,000 milreis)                                    |         |         |         |         |         |
| Total, all countries.....                                | 30,401  | 6,277   | 47,851  | 26,342  | 40,462  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 3,590   | 447     | 3,128   | 1,798   | 2,347   |
| Germany.....   | 2,199   | 242     | 2,806   | 1,691   | } (1)   |
| Belgium and Luxemburg.....                               | 73      | 1       | 108     | 90      |         |
| Uruguay.....   | 921     | 145     | 105     | .....   |         |
| All other.....   | 397     | 59      | 109     | 17      |         |
| Unit value per pound of total exports <sup>1</sup> ..... | \$0.315 | \$0.114 | \$0.228 | \$0.281 | \$0.198 |

<sup>1</sup> Not available.<sup>2</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo, gross=2.2046 pounds; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06537; 1937, \$0.06826; 1938, \$0.0580.

TABLE 7.—Wool: <sup>1</sup> Exports from CHILE to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 23,449  | 25,040  | 20,970  | 26,586  | 21,487  |
| United Kingdom.....                                      | } (1)   | 23,173  | 9,338   | 10,562  | 12,854  |
| Germany.....   |         | 617     | 8,538   | 13,422  | 7,665   |
| Japan.....   |         | 164     | 2,660   | 2,272   | 947     |
| UNITED STATES.....                                       |         | 184     | 210     | 282     | 20      |
| All other.....   |         | 902     | 224     | 48      | 1       |
| Percentage to the United States.....                     | .....   | 0.7     | 1.0     | 1.1     | 0.1     |
| Value (1,000 pesos)                                      |         |         |         |         |         |
| Total, all countries.....                                | 56,255  | 24,711  | 25,447  | 43,185  | 25,346  |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 6,846   | 3,007   | 5,242   | 8,896   | 5,221   |
| United Kingdom.....                                      | } (1)   | 2,831   | 2,147   | 3,051   | 2,821   |
| Germany.....   |         | 36      | 2,380   | 5,222   | 2,183   |
| Japan.....   |         | 25      | 602     | 538     | 212     |
| UNITED STATES.....                                       |         | 13      | 33      | 72      | 4       |
| All other.....   |         | 102     | 80      | 13      | 1       |
| Percentage to the United States.....                     | .....   | 0.4     | 0.6     | 0.8     | 0.1     |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.292 | \$0.120 | \$0.250 | \$0.335 | \$0.243 |

<sup>1</sup> Principally unwashed wool.<sup>2</sup> Not available.<sup>3</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Chile. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 gold peso=1929, \$0.1217; 1932, \$0.1217; 1936, \$0.2060; 1937, \$0.2060; 1938, \$0.2060.



TABLE 8.—Wool: Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 3,381   | 4,163   | 5,216   | 5,882   | 5,144   |
| UNITED STATES.....                                       | 984     |         | 21      | 2       |         |
| Germany.....   | 18      | 4       | 4,064   | 4,830   | 3,874   |
| United Kingdom.....                                      | 2,246   | 3,338   | 1,026   | 487     | 560     |
| Belgium.....   |         |         | 14      | 495     | 673     |
| Bolivia.....   |         | 570     | 60      | 26      | 37      |
| All other.....   | 133     | 251     | 31      | 42      |         |
| Percentage to the United States.....                     | 29.1    |         | 0.4     | (1)     |         |
| Value (1,000 soles)                                      |         |         |         |         |         |
| Total, all countries.....                                | 2,476   | 2,048   | 5,097   | 6,530   | 3,141   |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 990     | 436     | 1,269   | 1,645   | 704     |
| UNITED STATES.....                                       | 243     |         | 4       | 1       |         |
| Germany.....   | 4       | (2)     | 992     | 1,333   | 518     |
| United Kingdom.....                                      | 709     | 346     | 255     | 160     | 116     |
| Belgium.....   |         |         | 4       | 131     | 67      |
| Bolivia.....   |         | 70      | 6       | 6       | 3       |
| All other.....   | 34      | 20      | 8       | 14      |         |
| Percentage to the United States.....                     | 24.5    |         | 0.3     | (1)     |         |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.293 | \$0.105 | \$0.243 | \$0.280 | \$0.137 |

<sup>1</sup> Less than 1/10 of 1 percent.

<sup>2</sup> Not over \$500.

<sup>3</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 sol=1929, \$0.4000, 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 9.—Wool, "huarizo":<sup>1</sup> Exports from PERU to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 380     | 239     | 517     | 452     | 464     |
| UNITED STATES.....                                       | 11      |         | 34      | 84      | 11      |
| United Kingdom.....                                      | 351     | 190     | 481     | 335     | 176     |
| Belgium.....   |         |         |         | 11      | 121     |
| Germany.....   |         |         |         | 22      | 133     |
| All other.....   | 18      | 49      | 2       |         | 23      |
| Percentage to the United States.....                     | 2.9     |         | 6.6     | 18.5    | 2.4     |
| Value (1,000 soles)                                      |         |         |         |         |         |
| Total, all countries.....                                | 192     | 99      | 414     | 616     | 445     |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 77      | 21      | 103     | 155     | 100     |
| UNITED STATES.....                                       | 2       |         | 7       | 32      | 3       |
| United Kingdom.....                                      | 71      | 16      | 96      | 111     | 39      |
| Belgium.....   |         |         |         | 4       | 27      |
| Germany.....   |         |         |         | 8       | 26      |
| All other.....   | 4       | 5       | (?)     |         | 5       |
| Percentage to the United States.....                     | 2.9     |         | 6.9     | 20.6    | 2.4     |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.202 | \$0.088 | \$0.199 | \$0.343 | \$0.215 |

<sup>1</sup> The huarizo is a cross of the llama and the alpaca. The "wool" is really hair.

<sup>2</sup> Not over \$500.

<sup>3</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Peru. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 sol=1929, \$0.4000; 1932, \$0.2130; 1936, \$0.2490; 1937, \$0.2520; 1938, \$0.2242.

TABLE 10.—Wool, unwashed: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929             | 1932             | 1936    | 1937    | 1938    |
|--|------------------|------------------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |                  |                  |         |         |         |
| Total, all countries.....                                | 107,326          | 91,359           | 90,991  | 81,646  | 102,039 |
| Germany.....   | 29,825           | 25,941           | 12,874  | 11,227  | 40,078  |
| United Kingdom.....                                      | 9,432            | 15,975           | 20,376  | 17,077  | 23,137  |
| Italy.....   | 11,092           | 16,568           | 5,709   | 6,948   | 7,012   |
| France.....  | 21,577           | 18,892           | 5,716   | 3,687   | 5,983   |
| Czechoslovakia.....                                      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 2,414   | 1,440   | 4,595   |
| Japan.....   |                  |                  | 11,849  | 16,759  | 4,124   |
| Netherlands.....   | 2,708            | 6,208            | 1,371   | 714     | 3,002   |
| Belgium.....   | 12,874           | 7,172            | 5,156   | 2,312   | 2,094   |
| UNITED STATES.....                                       | 13,630           | 238              | 22,617  | 18,673  | 1,804   |
| All other.....   | 5,589            | 365              | 2,909   | 2,800   | 10,159  |
| Percentage to the United States.....                     | 12.7             | 0.3              | 24.9    | 22.9    | 1.9     |
| Value (1,000 pesos)                                      |                  |                  |         |         |         |
| Total, all countries.....                                | 27,294           | 17,932           | 27,250  | 39,998  | 35,243  |
| Value (1,000 U. S. dollars)                              |                  |                  |         |         |         |
| Total, all countries.....                                | 26,920           | 8,439            | 19,508  | 22,379  | 20,078  |
| Germany.....   | 7,580            | 2,397            | 2,767   | 3,232   | 8,218   |
| United Kingdom.....                                      | 2,319            | 1,468            | 4,404   | 4,368   | 4,458   |
| Italy.....   | 2,960            | 1,539            | 1,346   | 1,905   | 1,312   |
| France.....  | 5,339            | 1,747            | 1,039   | 632     | 1,121   |
| Czechoslovakia.....                                      | ( <sup>1</sup> ) | ( <sup>1</sup> ) | 444     | 339     | 890     |
| Japan.....   |                  |                  | 2,608   | 4,983   | 799     |
| Netherlands.....   | 657              | 572              | 313     | 197     | 622     |
| Belgium.....   | 2,279            | 457              | 927     | 470     | 366     |
| UNITED STATES.....                                       | 3,403            | 22               | 5,049   | 5,237   | 390     |
| All other.....   | 1,383            | 237              | 611     | 1,416   | 1,911   |
| Percentage to the United States.....                     | 12.6             | 0.3              | 25.9    | 23.4    | 1.9     |
| Unit value per pound of total exports <sup>2</sup> ..... | \$0.251          | \$0.092          | \$0.214 | \$0.274 | \$0.197 |

<sup>1</sup> Not shown separately.<sup>2</sup> See footnote 2, table 4.

Source: Compiled by the United States Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1929, \$0.9963; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5595; 1938, \$0.5697.

TABLE 11.—Wool, washed and semiwashed: Exports from URUGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                            |         |         |         |         |         |
| <b>Total, all countries</b> .....                  | 5,293   | 3,780   | 10,388  | 9,324   | 15,313  |
| United Kingdom.....                                | 1,768   | 861     | 2,202   | 2,370   | 3,042   |
| Belgium.....                                       | 958     | 963     | 1,902   | 1,736   | 2,193   |
| Poland and Danzig.....                             |         |         | 297     | 186     | 1,603   |
| Czechoslovakia.....                                |         |         | 1,668   | 1,408   | 1,650   |
| Netherlands.....                                   | 48      | 543     | 365     | 421     | 1,289   |
| France.....  | 616     | 255     | 727     | 412     | 1,239   |
| Italy.....   | 470     | 212     | 936     | 749     | 846     |
| Yugoslavia.....                                    |         |         | 17      | 36      | 512     |
| Germany.....                                       | 819     | 642     | 1,254   | 684     | 423     |
| UNITED STATES.....                                 | 323     | 64      | 421     | 587     | 94      |
| All other.....                                     | 293     | 240     | 599     | 735     | 2,422   |
| <b>Percentage to the United States</b> .....       | 6.1     | 1.7     | 4.1     | 6.3     | 0.6     |
| Value (1,000 pesos)                                |         |         |         |         |         |
| <b>Total, all countries</b> .....                  | 1,326   | 735     | 4,736   | 5,444   | 6,770   |
| Value (1,000 U. S. dollars)                        |         |         |         |         |         |
| <b>Total, all countries</b> .....                  | 1,308   | 346     | 2,480   | 3,046   | 3,857   |
| United Kingdom.....                                | 425     | 78      | 502     | 673     | 656     |
| Belgium.....                                       | 240     | 88      | 457     | 546     | 454     |
| Poland and Danzig.....                             |         |         | 81      | 73      | 449     |
| Czechoslovakia.....                                |         |         | 371     | 496     | 398     |
| Netherlands.....                                   | 11      | 50      | 92      | 145     | 327     |
| France.....  | 152     | 24      | 178     | 139     | 324     |
| Italy.....   | 119     | 19      | 252     | 305     | 243     |
| Yugoslavia.....                                    |         |         | 4       | 12      | 139     |
| Germany.....                                       | 207     | 59      | 302     | 189     | 113     |
| UNITED STATES.....                                 | 80      | 6       | 84      | 197     | 21      |
| All other.....                                     | 74      | 22      | 157     | 271     | 693     |
| <b>Percentage to the United States</b> .....       | 6.1     | 1.7     | 3.4     | 6.5     | 0.5     |
| <b>Unit value per pound of total exports</b> ..... | \$0.247 | \$0.092 | \$0.239 | \$0.327 | \$0.252 |

† See footnote 2, table 4.

Source: Compiled by the U. S. Tariff Commission from official trade statistics of Uruguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1929, \$0.9863; 1932, \$0.4706; 1936, \$0.5237; 1937, \$0.5596; 1938, \$0.5697.

## YERBA MATE

Yerba maté, or Paraguay tea, consists of the dried leaves and shoots of an evergreen tree commonly known as South American holly (*Ilex paraguensis*). A beverage prepared with powdered yerba maté and hot water is used by a great many persons in central and southern South America. Consumption of yerba maté is confined chiefly to the rural areas of South America, as the citizens of the larger towns and cities prefer coffee or tea when these are available. The stimulating quality of yerba maté is due to its content (about 1 percent) of the alkaloid caffeine. This is much less than the caffeine content of ordinary tea. The drink is usually taken by the natives from a hollow gourd, called a maté, and is sipped through a tube (known as a bombilla) which has a strainer on the lower end.

### Latin American production.

The production of this commodity is confined almost entirely to the basin of the upper Paraná River, in Brazil, Argentina, and Paraguay. In Brazil, the largest producer, and in Paraguay, yerba maté is obtained chiefly from wild trees. The Brazilian Government grants concessions in certain districts of yerba maté forests, or yerbales, to merchants who have the tea collected and dried by groups of native Indians. In Argentina, however, the production is principally from cultivated trees, which are smaller than the wild variety. This cultivation was originally undertaken by the Jesuits, who obtained a superior grade of tea by this means. About 95 percent of the yerba maté produced in Argentina is grown in Misiones Territory, which lies along the Paraná River between Brazil and Paraguay. Production of yerba maté in the principal producing countries, in specified years, 1929 to 1938, is shown in table 1.

Over half of the total production of yerba maté in South America is consumed by the people of Argentina.<sup>1</sup> The other principal consuming countries, in the order of their importance, are Brazil, Uruguay, Paraguay, and Chile. Consumption by all the remaining countries of the world is relatively unimportant, amounting to less than 1 percent of the total.

TABLE 1.—Yerba maté: Production in principal producing countries of Latin America, in specified years, 1929 to 1938

[In thousands of pounds]

| Country          | 1929      | 1933     | 1936       | 1937     | 1938     |
|------------------|-----------|----------|------------|----------|----------|
| Brazil .....     | 607, 257  | 175, 455 | 1 196, 820 | (?)      | (?)      |
| Argentina .....  | * 50, 706 | 112, 494 | 175, 601   | 234, 415 | 159, 919 |
| Paraguay † ..... | 22, 057   | 24, 015  | 45, 144    | 38, 409  | 31, 779  |

<sup>1</sup> Official estimate.

<sup>2</sup> Not available.

<sup>3</sup> Fiscal year ended July 31, 1929.

<sup>4</sup> Crop years.

Source: Pan American Union, Division of Economic Information.

<sup>1</sup> Consumption in Brazil must have been very large in 1929, inasmuch as production in that year was reported to be 607 million pounds, and exports were 190 million pounds. In 1936, production was only 197 million pounds, and exports were 147 million pounds.

**Latin American exports.**

The trade in yerba maté is chiefly between Latin American countries. Brazil is the principal exporter, accounting for over 90 percent of all such exports in 1938. Paraguay is the second most important exporting country. Exports from Argentina are very small. Indeed, exports of yerba maté from Uruguay in 1938 (the only recent year in which any such exports from Uruguay were recorded) were larger than those from Argentina. Amounting to 463,000 pounds, Uruguayan exports in 1938 went entirely to Chile.

In the past, Argentina usually imported half or more of its total requirements of yerba maté. About 90 percent of these imports came from Brazil, and the remainder from Paraguay. Since the adoption of a program designed to make Argentina independent of other countries for its supply of this commodity, the Argentine production has increased greatly. In the last few years, however, it has become apparent that overproduction is probable, and laws have been promulgated restricting the planting of additional trees.

**TABLE 2.—Yerba maté: Exports from BRAZIL to principal markets, in specified years, 1929 to 1938**

| Country   | 1929                        | 1932     | 1936     | 1937     | 1938     |
|---|-----------------------------|----------|----------|----------|----------|
|   | Quantity (1,000 pounds)     |          |          |          |          |
| <b>Total, all countries</b> .....                               | 189, 534                    | 179, 455 | 146, 829 | 144, 442 | 139, 421 |
| Argentina.....  | 136, 726                    | 116, 185 | 78, 167  | 74, 871  | (1)      |
| Uruguay.....  | 40, 414                     | 47, 915  | 50, 118  | 48, 706  |          |
| Chile.....  | 11, 600                     | 12, 188  | 17, 669  | 19, 443  |          |
| Germany.....  | 483                         | 2, 937   | 514      | 747      |          |
| All other.....  | 311                         | 230      | 361      | 675      |          |
|   | Value (1,000 milreis)       |          |          |          |          |
| <b>Total, all countries</b> .....                               | 106, 359                    | 86, 968  | 64, 074  | 66, 347  | 59, 378  |
|   | Value (1,000 U. S. dollars) |          |          |          |          |
| <b>Total, all countries</b> .....                               | 12, 561                     | 6, 194   | 4, 189   | 4, 529   | 3, 444   |
| Argentina.....  | 8, 581                      | 3, 656   | 2, 133   | 2, 116   | (1)      |
| Uruguay.....  | 3, 035                      | 1, 892   | 1, 466   | 1, 702   |          |
| Chile.....  | 881                         | 488      | 558      | 660      |          |
| Germany.....  | 36                          | 118      | 17       | 24       |          |
| All other.....  | 28                          | 10       | 13       | 27       |          |
| <b>Unit value per pound of total exports</b> <sup>1</sup> ..... | \$0.066                     | \$0.035  | \$0.029  | \$0.031  | \$0.025  |

<sup>1</sup> Not available.

<sup>2</sup> The unit values appearing in this and other tables should be interpreted with caution, especially when comparing the unit values of the exports of one country with those of another. Exports from the different Latin American countries, though of the same commodity, frequently are of different types or grades. Moreover, different methods of valuation are employed by the various countries and some countries have changed their method of valuation during the period 1929-38.

Source: Compiled by the United States Tariff Commission from official trade statistics of Brazil. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 milreis=1929, \$0.1181; 1932, \$0.0712; 1936, \$0.06337; 1937, \$0.06826; 1938, \$0.0580.

Exports of yerba maté from Brazil, Paraguay, and Argentina to principal markets, in specified years, 1929 to 1938, are shown in tables 2 to 4. Attempts by these three countries to build up an export trade for yerba maté outside of their continent have not been successful because of the general preference for tea or coffee. Exports to the United States increased from 39,000 pounds in 1932 to 422,000 pounds in 1935, but since that year have declined sharply; in 1938 they were less than 20,000 pounds. Germany was the most important European market for yerba maté, especially for that from Brazil; shipments to Germany, however, amounted to less than 1 percent of total Brazilian exports in 1937. The United Kingdom, France, and Syria together took substantial proportions of Argentine exports; in 1938 they accounted for about 30 percent of the small exports from Argentina.

TABLE 3.—Yerba maté: Exports from PARAGUAY to principal markets, in specified years, 1929 to 1938

| Country  | 1929    | 1932    | 1936    | 1937    | 1938    |
|--|---------|---------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |         |         |         |         |         |
| Total, all countries.....                                | 14,861  | 13,973  | 6,265   | 9,137   | 10,149  |
| Argentina.....   | (1)     | 13,894  | 5,933   | 9,082   | 9,958   |
| Uruguay.....   |         | 54      | 115     | 80      | 185     |
| All other.....   |         | 25      | 217     | 5       | 6       |
| Value (1,000 gold pesos)                                 |         |         |         |         |         |
| Total, all countries.....                                | 1,216   | 1,143   | 518     | 748     | 831     |
| Value (1,000 U. S. dollars)                              |         |         |         |         |         |
| Total, all countries.....                                | 1,156   | 668     | 344     | 526     | 570     |
| Argentina.....   | (1)     | 664     | 323     | 523     | 569     |
| Uruguay.....   |         | 3       | 7       | 8       | 11      |
| All other.....   |         | 1       | 14      | (2)     | (2)     |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.078 | \$0.048 | \$0.055 | \$0.058 | \$0.056 |

<sup>1</sup> Not available.

<sup>2</sup> Includes 10,802 pounds, valued at \$515, to Argentina in transit.

<sup>3</sup> No shipments were made to the United States except in 1936, when exports to this country amounted to 215,000 pounds, valued at \$14,000.

<sup>4</sup> Not over \$500.

<sup>5</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official statistics of Paraguay. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso=1939, \$0.9513; 1932, \$0.5944; 1936, \$0.6649; 1937, \$0.7036; 1938, \$0.5866.

TABLE 4.—*Yerba maté: Exports from ARGENTINA to principal markets, in specified years, 1933 to 1938*

| Country  | 1933 <sup>1</sup> | 1936    | 1937    | 1938    |
|--|-------------------|---------|---------|---------|
| Quantity (1,000 pounds)                                  |                   |         |         |         |
| Total, all countries.....                                | 436               | 312     | 287     | 403     |
| Syria.....   | 17                | 87      | 40      | 98      |
| Bolivia.....   | 242               | 88      | 131     | 151     |
| Chile.....   | 3                 | 27      | 10      | 42      |
| United Kingdom.....                                      | 17                | 15      | 14      | 19      |
| UNITED STATES.....                                       | 62                | 40      | 29      | 16      |
| France.....  | 4                 | 8       | 35      | 10      |
| All other.....   | 91                | 47      | 28      | 67      |
| Percentage to the United States.....                     | 14.2              | 12.9    | 10.1    | 3.9     |
| Value (1,000 paper pesos)                                |                   |         |         |         |
| Total, all countries.....                                | 101               | 78      | 90      | 114     |
| Value (1,000 U. S. dollars)                              |                   |         |         |         |
| Total, all countries.....                                | 32                | 23      | 28      | 34      |
| Syria.....   | 1                 | 6       | 5       | 11      |
| Bolivia.....   | 16                | 5       | 10      | 10      |
| Chile.....   | ( <sup>2</sup> )  | 2       | 1       | 3       |
| United Kingdom.....                                      | 2                 | 1       | 1       | 2       |
| UNITED STATES.....                                       | 6                 | 3       | 4       | 2       |
| France.....  | ( <sup>2</sup> )  | 1       | 4       | 1       |
| All other.....   | 7                 | 5       | 3       | 6       |
| Percentage to the United States.....                     | 16.9              | 14.3    | 14.7    | 6.4     |
| Unit value per pound of total exports <sup>3</sup> ..... | \$0.075           | \$0.073 | \$0.067 | \$0.064 |

<sup>1</sup> Not separately classified prior to 1933.<sup>2</sup> Not over \$500.<sup>3</sup> See footnote 2, table 2.

Source: Compiled by the United States Tariff Commission from official trade statistics of Argentina. Converted to U. S. weights and currency by applying the following factors: 1 kilo=2.2046 pounds; 1 peso = 1933, \$0.3213; 1936, \$0.2918; 1937, \$0.3086; 1938, \$0.2973.

#### Trade barriers, competitive conditions, and prices.

Yerba maté has been admitted free of duty in France, but in the United Kingdom it is dutiable at 10 percent ad valorem, and in Germany at 40 reichsmarks per 100 kilos. These European countries, however, now exercise such rigid control over imports that the dutiable status of commodities is, in most instances, no longer a factor of major significance. The Argentine duty on yerba maté is a compound rate, approximating 5 centavos (paper) per kilo. Crude yerba maté enters the United States free of duty.<sup>2</sup> On the prepared product, the rate is 5 percent ad valorem;<sup>3</sup> all United States imports enter in this form.

The trade in yerba maté is confined almost entirely to countries in central and southern South America. Exports to other markets have amounted to less than 1 percent of total exports from Brazil, Paraguay, and Argentina, the principal exporting countries.

Prices of yerba maté in recent years are not readily available. The unit values of exports from the principal producing and exporting countries are shown in table 5. These data must be interpreted with

<sup>2</sup> Tariff Act of 1930, par. 1602.<sup>3</sup> Tariff Act of 1930, par. 35. Prior to the trade agreement with Brazil, effective January 1, 1936, this rate had been 10 percent ad valorem.



caution, inasmuch as different grades and types of the commodity are exported from Brazil, Paraguay, and Argentina, moreover, methods of valuation are different in the three countries, and in at least one country (Argentina) the method has been changed during the period 1929-38.

Based on the data shown in table 5, exports from Argentina have a higher unit value than those from the other two countries, probably because of the special qualities of the cultivated yerba maté. For the exports from all three countries, unit values were higher in 1937 than in either 1936 or 1938, and the unit values of exports from Brazil and Paraguay were higher in 1929 than in any subsequent year.

TABLE 5.—*Yerba maté: Unit values of exports from selected countries, in specified years, 1929 to 1938*

[In cents per pound]

| Country        | 1929 | 1932 | 1936 | 1937 | 1938 |
|----------------|------|------|------|------|------|
| Argentina..... | (1)  | 7.5  | 7.3  | 9.7  | 8.4  |
| Brazil.....    | 6.6  | 3.5  | 2.9  | 3.1  | 2.5  |
| Paraguay.....  | 7.8  | 4.8  | 5.5  | 5.8  | 5.6  |

<sup>1</sup> Not available.

<sup>2</sup> Unit value of exports in 1933.

Source: See tables 2, 3, and 4.

#### Effects of the war.

Since exports of yerba maté go almost entirely to Latin American countries, the war will have little direct effect on exports of this commodity. The only European market of any importance was Germany. Exports from Argentina and Paraguay to this market were negligible, and those from Brazil in 1937 amounted to but 747,000 pounds as compared with total exports of 144 million pounds.