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ON

PRODUCTION AND TRADE

1913 AND 1923-26

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PREFACE.

The first *Memorandum on Production and Trade* was published in October, 1926, as one of the preparatory documents for the World Economic Conference. That Conference expressed the wish that the work then undertaken should be continued; the indices of population, production and trade that the former Memorandum contained have accordingly been brought up to the end of 1926.

Some delay has been caused in the issue of the present edition by other calls on the time of those responsible for its preparation and by the fact that the basic data were not available so early in 1927 as they had been in the previous year.

The scope of the Memorandum has been somewhat enlarged by the addition of a chapter containing a preliminary investigation into the problem of the relative price movements in recent years of raw products and of manufactured articles.

The detailed figures on which the various indices of production are computed will be published shortly in the *International Statistical Year-Book, 1927*, and in the *Memorandum on International Trade and Balances of Payments, 1912 to 1926*, will be found the detailed statistics of the international trade of the world.

A summary of the main conclusions that may be drawn from the present study will be found in the introductory section with which this Memorandum opens.

Geneva, January, 1928.

A. LOVEDAY.

MEMORANDUM ON PRODUCTION AND TRADE 1913 and 1923-26.

INTRODUCTORY.

In the first edition of this Memorandum an attempt was made to answer the following questions :

1. What changes have taken place in the population of the world since 1913 and in the territorial distribution of that population ?
2. What changes have taken place in the production of basic raw materials and foodstuffs in the world as a whole and in the main divisions into which the world naturally falls ?
3. What changes have taken place in the quantum of world trade and in its distribution ?

The years then considered were 1913, 1923, 1924 and 1925. In the present edition the data for 1926 are summarised. In addition, a preliminary analysis of the problem of price relations is attempted and an endeavour made to answer the following question :

4. Does a unit of manufactured commodities purchase to-day a greater or less quantity of raw materials and foodstuffs than before the war ?

For population, only two years, 1913 and 1926, are considered, as the data available are not sufficiently accurate to render the apparent annual changes in world population significant. For trade, the years 1913 and 1925-26 are considered, and for production 1913 and 1923-26. In the case of crop statistics, in view of the influence of chance meteorological conditions, the average annual production during the period 1909-13 is employed. No attempt has been made to bridge the ten-year gap from 1913-23, to analyse the causes which produced the slump of 1921 or to consider the factors which have contributed to the recovery therefrom.

So little information is available concerning industrial production that it is quite impossible to make any direct estimate of the output of industry in the world as a whole. For this reason, the section on production is confined to basic raw materials and foodstuffs.

The general character of the results obtained may with advantage be indicated at once. In the sections that follow, the processes by which these results are

reached are explained and certain of the qualifications to which they are subject are recorded.

In Table I below, the most important indices relating to population, the production of raw materials and foodstuffs and the quantum of trade are set out in parallel columns. The indices for both production and trade are quantitative, changes in value having been eliminated by processes of analysis described later. The world has been divided into seven continental groups and Europe into four sub-groups.

TABLE I.

Continental Groups	Population	Production of raw materials and foodstuffs ¹			Quantum of trade		
	1926	1924	1925	1926	1924	1925	1926
	As percentage of that in 1913						
(a) Eastern and Central Europe :							
Excluding Russia (U.S.S.R.) ²	104	83/6	97/9	92/5	73	84	83
Including Russia (U.S.S.R.) ²	101	81/2	101	102	64	75	75
(b) Rest of Europe	106	101/2	105/7	93/6	97	100	99
Europe, excluding Russia (U.S.S.R.) ²	105	92/4	101/3	92/5	90	95	95
Europe, including Russia (U.S.S.R.) ²	103	89/90	102/3	98/00	85	91	90
North America	123	117/9	127/8	131/2	127	139	150
Caribbean ³	105	169/78	166/73	157/62	133	133	133
South America	129	117	125	129/31	91	103	104
Africa	109	135/8	144/5	139/41	97	108	112
Asia, excluding Asiatic Russia	105	117/9	121/4	121/7	124	144	153
Oceania	120	120/1	117/8	127	119	132	135
WORLD	106	107/8	116/8	116/8	99	107	110

¹ The double figures shown for production result from different methods of calculation that are explained below. For the purposes of the general conclusions here drawn, too much emphasis should not be laid on the precise figure or figures given, but attention should be paid rather to their general order of magnitude; the approximate mean of the range given may be adopted.

² Union of Socialist Soviet Republics, i.e., including Asiatic Russia.

³ Central America, Mexico and all islands in the Caribbean Sea.

The evidence afforded by the table points to the following general conclusions, certain of which will require subsequent interpretation and qualification :

(a) By 1926, world production of basic raw materials and foodstuffs was about 17 per cent greater than before the war, world trade about 10 per cent greater and world population about 6 per cent greater.

The world is accordingly richer per head of population and there is a greater international exchange of goods.

(b) The production of foodstuffs has not grown so rapidly as that of industrial raw materials. In 1926, the foodstuffs index was 109/10 and the raw materials index about 127 per cent.

(c) The harvest in Europe in 1926 was less abundant than in 1925 and general economic conditions were further adversely affected by the British coal dispute. As a result, the European production index fell from two points above to one or two points below the pre-war level, and the trade index dropped one point to exactly 10 per cent below that of 1913.

(d) The British coal dispute naturally influenced most the Western and Maritime group of European countries, in which the United Kingdom is included. In consequence, the production index of the Central and Eastern countries (exclusive of Russia), although lower than in 1925, was practically equal to that of the rest of Europe. The quantum of trade of these countries remained, as in 1925, about one-sixth short of what it had been in 1913.

(e) The trade of Eastern and Central Europe, including Russia, was likewise the same in 1925 and 1926, and, owing largely to the great decrease in post-war Russian trade, 25 per cent below the 1913 level.

(f) But, on the basis of the available published information, the effect of the inclusion of Russia is to raise the production index of this group of countries from 92/5 to 102 — a result due largely to an apparent enormous increase in the Russian potato crop.

(g) Progress in the rest of the world in recent years has been much more rapid than in Europe, though certain countries, more especially in Central America and Africa, were affected by the fact that the 1926 harvest was considerably smaller than that of 1925.

(h) In North America the population is between one-fifth and one-fourth, the production of raw materials and foodstuffs not far from one-third and the foreign trade one-half, greater than in 1913.

(i) The population of South America has grown slightly more rapidly than that of North America. The indices of raw-materials and foodstuffs production of these two continents are about the same. But South American trade is only 4 per cent greater than in 1913.

(j) The group of Caribbean countries present a remarkable contrast, for their population has only increased by some 5 per cent, while foreign trade is 33 and production 60 per cent higher.

(k) The growth of production in Oceania is of the same order of magnitude as that of South America. The increase in the foreign trade of Oceania slightly exceeds that of the Caribbean group and its population has grown by one-fifth.

(l) The growth of population in Asia (5 per cent) and Africa (9 per cent) has been much less rapid than in America and Oceania. But the production of Asia is one-fifth to one-quarter greater¹ and its trade is half as large again as it was in 1913. In Africa production has risen by 40 per cent and trade by 12 per cent.

The above production indices must not be presumed to measure either the absolute industrial progress in the world as a whole or the relative industrial progress in different parts of the world. There can be no doubt that, with the improvements in the methods of treating raw materials and the growth of economy in use, greater services are now rendered available from a given supply of raw materials than was possible thirteen years ago. The development of industry has been more rapid than the growth in the production of raw materials. Thus, the net value added to manufactures, in terms of pre-war prices, in the United States of America was approximately 70 per cent greater in 1925 than in 1914; in Canada, it was over 40 per cent greater in 1924 than in 1910; in South Africa, it was roughly 100 per cent greater in 1923-24 than in 1915-16; in Australia, about 40 per cent greater in the financial year 1924-25 than in 1913; and in New Zealand, in the same financial year, it was 88 per cent greater than in 1911.

The rapid development in the production and exchange of commodities in America, Asia and elsewhere has resulted in important changes in the relative shares contributed by the different groups of countries to the world totals. Thus Europe's share in the international trade of the world has fallen by 18 per cent (from 58.5 per cent to 47.9 per cent of the total). The share of North America has risen by 36 per cent, that of the whole American continent by 23 per cent and that of Oceania likewise by 23 per cent. But the share of Asia has increased most, namely, by 39 per cent, while that of Africa remains practically unchanged.

The changes in the contributions of the various continents to the total production of the goods here considered are less marked. The share of Europe has shrunk by 15 per cent, that of the American continent and the joint share of Africa and Oceania have each increased by a little less than 15 per cent and that of Asia by about 5 per cent.

¹ This is exclusive of the foodstuff production of China.

The changes that have taken place in the distribution of the population of the world are negligible.

Such are the broad general results to which this analysis has led. They are based on statistics that are in some cases defective and of doubtful comparability, seldom so comprehensive or so exact as to render it possible to draw conclusions of mathematical accuracy or incontrovertible finality from any single series of figures. For this reason, importance should be attached not so much to the absolute magnitude of this or that figure as to the direction towards which the whole mass of accumulated data tends to point.

The detailed figures on which the population and production tables of this memorandum are based will be published shortly in the *International Statistical Year-Book 1927*, and the trade tables are taken from the *Memorandum on International Trade and Balances of Payments, 1912 to 1926*. The figures for 1926 are still in part preliminary. Corrections in the figures for 1925 and occasionally for the years 1913, 1923 and 1924, as well as certain additions to the production index, account for such minor discrepancies as exist between indices in the present and those which were published in the first edition of this Memorandum.

In a study covering so wide a field as this, it is not possible or desirable to indicate on each occasion the limitations to the exactitude, completeness or comparability of the statistics. Allusion is, however, made to certain of the more important qualifications that have to be borne in mind, and further information with reference thereto will be found in the various *Memoranda* published by the League of Nations¹.

I. POPULATION.

It is not necessary to consider in any great detail the demographic statistics of the world. They are important in this connection in order to compare with the growth of population that of the production of raw materials and foodstuffs and that of the international trade of the world as a whole and of the large continental groups into which the world may be divided.

The territorial groups selected are shown in the following table together with the percentage growth of the population in each group since 1913 and the percentage distribution of the world population in 1913 and 1926.

¹ More especially as regards the section on trade in the *Memorandum on International Trade and Balances of Payments, 1912-26*, and as regards problems connected with changes in values, indices of prices, etc., in the *Memoranda on Currency and on Currency and Central Banks*.

TABLE II.

CHANGES IN THE POPULATION OF THE WORLD IN THE 13-YEAR PERIOD 1913-26.

Continental Groups	Population (000,000's)		Percentage movement		Percentage distribution	
	1913	1926	1913	1926	1913	1926
(a) Central and Eastern Europe :						
Excluding Russia (U.S.S.R.)	165.6	171.4	100	103.5	9.1	8.9
Including Russia (U.S.S.R.)	313.6	317.7	100	101.3	17.3	16.5
(b) Rest of Europe	184.5	195.4	100	105.9	10.2	10.1
Europe, excluding Russia (U.S.S.R.)	350.1	366.8	100	104.8	19.3	19.0
Europe, including Russia (U.S.S.R.)	498.1	513.0	100	103.0	27.5	26.6
America :						
North America	104.3	127.8	100	122.5	5.8	6.6
Caribbean	30.1	31.5	100	104.7	1.7	1.6
South America	56.1	72.3	100	128.7	3.1	3.7
Africa	134.5	146.2	100	108.7	7.4	7.5
Asia, excluding Asiatic Russia..	979.4	1,028.0	100	104.9	54.1	53.4
Oceania	7.6	9.2	100	120.2	0.4	0.5
WORLD	1,810.1	1,928.0	100	106.5	100	100

The group of Central and Eastern European countries here and elsewhere in this Memorandum consists of Albania, Austria, Bulgaria, Czechoslovakia, Estonia, Germany, Greece, Hungary, Latvia, Lithuania, Poland, Roumania, Russia, the Kingdom of the Serbs, Croats and Slovenes and European Turkey in recent years and of Austria-Hungary, Bulgaria, Germany, Greece, Roumania, Russia, Serbia and European Turkey in 1913.

The Caribbean group comprises the continental States from Mexico in the north to Panama in the south and all the islands in the Gulf; the North American is composed of Alaska, Canada, Labrador, Newfoundland and the United States.

The figures on which the calculations are based are frequently open to doubt. In many Asiatic and certain other countries no regular census of population is taken, and even the census figures of the native population in Africa, South America and other parts of the world are often conjectural in character. Moreover, censuses are not taken in the same year in all countries, so that the majority of

the figures are official or unofficial intercensal estimates¹. The shifting of European populations since the war, especially the immigration into France and the refugee movement, have caused considerable difficulty in the framing of such estimates. It is reckoned that the 1913 population in European territories that became detached after 1918 from the sovereign States of which they had previously formed a part amounted to nearly 73 millions.

The table shows that world population has grown by a little over 6 per cent in thirteen years. The rate of growth has, however, varied very widely in different parts of the world. In the continents of North and South America and in Oceania, the growth has been rapid. In the U.S.S.R., according to the preliminary results of the last Russian census (December 1926), the population, which was greatly reduced in the early post-war years by famine and disease, has now nearly, but not quite, attained its pre-war figure. In Asia, excluding Russia, and in the Caribbean, there appears to have been an increase of nearly 5 per cent, in Africa of almost 9 per cent and in Europe as a whole, including Russia, of only 3 per cent. There is, in fact, a rough correspondence between the growth of wealth and the growth of population, and, despite the restrictions imposed on immigration, the movement tends to be directed to those quarters of the world where money can most rapidly be made. The direction of the streams of emigration has been modified and some of those streams have dried up, but the current has been sufficiently strong during the last thirteen years to account in large measure for the contrast between the growth of the population in the American continent by over one-third, and in Oceania by one-fifth, and the modest change which has taken place in Europe.

The figures upon which these population indices are based are, of course, in many cases official or unofficial estimates. The present Caribbean population may be somewhat under-estimated, but it is known that, as a consequence of the last land reform, there has been and is an emigration from Mexico, so considerable that the Mexican population is probably smaller now than it was in 1913. The Caribbean population, excluding that of Mexico, increased by 17 per cent during the period under review.

Lack of exact information concerning the movement of the population in China necessarily renders the calculations for Asia open to doubt. It has, in point of fact, been assumed that the generally accepted view that the Chinese population is increasing at a very slow rate is correct. If China be excluded, the Asiatic index for 1926 would be raised to 107.4. As the population of China represents 44 per cent of that of Asia and the population of Russia (U.S.S.R.) 28 per cent of that of Europe, these two countries have a predominant influence on the continental indices.

The demographic statistics in certain South American countries are confessedly imperfect, and it is almost certain that the very large apparent increase in the population of that continent — almost 29 per cent by 1926 — is due in some

¹ For methods employed in the compilation of intercensal estimates, see League of Nations *Monthly Bulletin of Statistics*, No. 7, 1924.

measure to improved censal administration in recent years. The 1913 population was under-estimated. Exactly what deduction should be made from the index on this account it is impossible to guess. But, in any case, the error involved cannot affect to any appreciable extent the general index for the world as a whole, as the population of all the States of South America together constitutes less than 4 per cent of that of the world. There is, indeed, no reason to doubt that the estimate of the population of the world at the end of 1926 as being a little over 6 per cent greater than in 1913 is of the right order of magnitude.

That the world index is so low is due primarily to the fact that Asia and Europe, where the growth of numbers has been least, account for approximately 80 per cent of the population of the world.

It will be observed that, owing to the relative smallness of the population of America, Africa and Oceania, changes in the continental distribution, despite very considerable variations in the rates of increase, are slight.

II. PRODUCTION.

Very few countries publish regular information concerning the output of industry, and it is impossible from the fragmentary evidence available to obtain any accurate conception of the changes which have taken place in world industrial capacity or productivity. It is therefore necessary to approach the question indirectly and consider the figures of the production of raw materials and foodstuffs in order to form an estimate of industrial activity. Changes in the volume of raw materials produced, however, are not necessarily coincident with changes in the volume of industrial output. The science of industrial production is concerned largely with the discovery of means by which equal services may be rendered with a smaller consumption of crude products. Moreover, there remained after the war and after the slump of 1921 very large accumulations of certain metals and other raw materials, which have been gradually absorbed by industry. These stocks have been steadily reduced in the last few years, so that actual consumption, especially in the earlier post-war years covered by the index, may have been slightly greater than is indicated by the production tables given below.

Owing to the multiplicity and variety of goods that it is necessary to consider in order to answer by this indirect method the second question with which this Memorandum is concerned, the indices based on weight or volume statistics of production must be rendered comparable by expressing them in terms of some common denominator. The purchasing power of gold and of all forms of money has undergone too radical a change to render a comparison of the pre- and post-war values of much significance. It has been necessary, therefore, to calculate a quantitative index. For this purpose, the relative values of the various commodities, calculated on the basis of representative price quotations in a defined period, have been utilised as constant weights.

In view of the changes that have taken place in relative values, it has been considered desirable to make double calculations, using as coefficients both the prices ruling in 1913 — the base year — and those of 1926, the last post-war year considered. The conclusions to which the two methods of procedure lead are not in any serious antagonism. It is sufficient, therefore, to consider here the results obtained by employing 1926 values as weights. But in one or two of the smaller groups of commodities, composed of articles whose relative prices have been radically modified, more important discrepancies occur, and for this reason complete comparative figures are given in the appendices.

The prices employed are annual averages of actual quotations for medium qualities of the various articles in leading producing countries and may be considered fairly representative of relative values on the world market. The index is calculated by the aggregative system; a further explanation of the procedure adopted will be found in Annex II, which should be consulted.

The following sixty-four commodities are taken into consideration:

LIST OF COMMODITIES INCLUDED IN THE PRODUCTION INDEX

Wheat	Ground nuts	Pig-iron and ferro-alloys
Rye	Copra	Steel (ingots and castings)
Barley	Palm and palm-kernel	Copper
Oats	oil (raw)	Lead
Maize	Olive oil (raw)	Zinc
Rice	Cotton	Tin
Potatoes	Flax	Aluminium
Beet-sugar	Hemp	Nickel
Cane-sugar	Manila hemp	Silver
Beef and veal	Jute	Natural phosphates
Pork	Wool	Potash
Mutton and lamb	Raw silk	Sulphur
Coffee	Artificial silk	Natural guano
Cocoa	Cattle hides and calf	Chilian nitrate of soda
Tea	skins	Norwegian nitrate of lime
Hops	Goat skins	Cyanamide of calcium
Tobacco	Sheep and lamb skins	Sulphate of ammonia
Cotton-seed	Raw rubber	Superphosphates of lime
Linseed	Mechanical pulp	Basic slag
Rape-seed	Chemical pulp	Sulphate of copper
Hemp-seed	Coal	
Sesame-seed	Lignite	
Soya beans	Petroleum	

Sub-indices have been calculated for the following groups of products: (1) Cereals; (2) Cereals and other vegetable foodstuffs; (3) Meat; (4) Colonial produce; (5) Vegetable oil materials; (6) Textile materials; (7) Hides and skins; (8) Rubber; (9) Wood pulp; (10) Fuels; (11) Metals; (12) Chemicals (fertilisers). The second group includes the same cereals as the first and also rice, raw sugar and potatoes.

Owing to the absence of complete or sufficiently representative data, certain classes of products have had to be omitted, the most important being dairy produce, timber and certain other materials of importance for the building industry, such as cement and brick. In the metal group, gold has been omitted, as the greater part of the production is used for monetary purposes. The production of certain other metals likewise excluded is too unimportant to have any noticeable effect upon the index. For China, no comprehensive statistics of the production of cereals and other foodstuffs exist.

The following table shows the general index weighted by 1926 prices for the world as a whole and each of the territorial divisions employed in Table I above:

TABLE III.

PRODUCTION INDICES WEIGHTED BY 1926 PRICES.

	1913	1923	1924	1925	1926	
(a) Eastern and Central Europe:						
Excluding Russia (U.S.S.R.)...	100	78	85	98	91	
Including Russia (U.S.S.R.)...	100	77	81	101	102	
(b) Rest of Europe	100	96	101	105	93	
Europe, excluding Russia (U.S.S.R.)..	100	87	93	102	93	
Europe, including Russia (U.S.S.R.)..	100	84	89	102	98	
North America	100	129	119	128	132	
Caribbean	100	164	178	173	162	
South America	100	123	117	125	131	
Africa	100	123	135	144	139	
Asia, excluding Asiatic Russia	100	110	117	121	122	
Oceania	100	104	120	117	127	
WORLD	General Index	100	106	107	116	119
	Foodstuffs	100	103	101	111	106
	Raw materials	100	110	114	122	125

The results obtained by weighting on 1913 prices are shown in the footnote below¹. They differ but slightly from those given above, though the total index for each year is a few points higher, as it is influenced by certain goods the relative prices of which have fallen owing to the rapid increase in their production.

The figures indicate that the production of raw materials and foodstuffs in the world as a whole was 16 to 18 per cent greater both in 1925 and 1926 than immediately before the war. It was greater in 1926 than in 1925 in North and South America, Asia and Oceania, but it was less in Europe, the Caribbean countries and Africa. The indices of the two last-mentioned territorial groups, however, remained in 1926 higher than those of any other part of the world.

The reduction in the volume of European production in 1926 as compared with 1925 was due both to smaller crops and to a decline in the output of industrial raw materials consequent upon the British coal conflict. As a result of these two factors, the general production index for Western and Maritime Europe fell to the level of that for Central and Eastern Europe, excluding Russia.

Attention was drawn last year to the gradual restoration of the economic equilibrium between these two divisions of the Continent. The revival of activity in the Central and Eastern countries has continued, and, as is shown in Table IV, the production of industrial raw materials in 1926 was 4 to 5 per cent greater than in 1913. Unfortunately, however, it is impossible to speak of equilibrium in the year under review, for, with the protracted stoppage in the United Kingdom, the raw-material production of Western and Maritime Europe, which in 1925 exceeded the pre-war amount, dropped to 9 per cent below it, and to this serious contraction in supply must be attributed in part the extent of the recovery elsewhere. In particular, coal-mining in Germany and Poland was benefited.

¹ PRODUCTION INDICES WEIGHTED BY 1913 PRICES.

	1913	1923	1924	1925	1926
(a) Eastern and Central Europe:					
Excluding Russia (U.S.S.R.).....	100	78	86	99	95
Including Russia (U.S.S.R.).....	100	78	82	101	102
(b) Rest of Europe.....	100	96	102	107	96
Europe, excluding Russia (U.S.S.R.).....	100	87	94	103	95
Europe, including Russia (U.S.S.R.).....	100	85	90	103	100
North America.....	100	127	117	127	131
Caribbean.....	100	153	169	166	157
South America.....	100	128	117	125	129
Africa.....	100	123	138	145	141
Asia, excluding Asiatic Russia.....	100	113	119	124	127
Oceania.....	100	106	121	118	127
WORLD					
General Index.....	100	106	108	118	118
Foodstuffs.....	100	103	102	112	110
Raw materials.....	100	111	116	126	129

Of all the European indices shown, that for Eastern and Central Europe, including Russia, works out the highest. This is largely due to the enormous apparent increase in the Russian potato crop, which averaged 202 million quintals in 1909-13 and was estimated at 508 millions in 1926.

The official post-war Russian crop returns have given rise to considerable discussion, and it is not impossible that the figures for Central and Eastern Europe, including the U.S.S.R., are inflated.

But too much importance should not be attached to the figures for a single year which was clearly abnormal for reasons quite temporary in character. Available data for 1927 would appear to indicate that the European production in that year was appreciably greater than in 1925 and that the curve of recovery since 1923, temporarily broken in 1926, continues once more its upward course.

There is a striking contrast, however, between the belated recovery of Europe and the development of production in all other parts of the world. The indices for 1926 of the other territorial groups vary from 122 for Asia to 162 for the Caribbean countries. The latter extremely high figure is due largely to the growing petroleum output. It should not be interpreted as representing the general progress achieved in that quarter of the globe; more representative probably is the international trade index, which, as is shown in the following section, amounted to 133, though this too is, of course, directly affected by petroleum exports.

In 1926, the production of foodstuffs and raw materials in the world apart from Europe was 29 to 30 per cent greater than in 1913, which is equivalent to a growth of 2.2 per cent per annum throughout the whole period. The continental indices naturally fluctuate a good deal from year to year as crops vary. But the growth of production in both North and South America tends slightly to exceed the average; in Africa, it is distinctly above and in Oceania a little below the average. The Asiatic general index in both 1925 and 1926 just exceeded 120.

The evidence as a whole leaves little room for doubting the reality of the advance that has been made. It must not be forgotten that the basic period for all the goods comprised in the general index, with the exception of agricultural produce, was 1913, a year of great prosperity, in which the world production of almost all raw materials exceeded that of any of the four preceding years. The indices of the agricultural products have all been based on averages for the quinquennium 1909-13 in the northern and 1909-10—1913-14 in the southern hemisphere. If the average production of the last pre-war quinquennium had been taken as a basis in the case of all products, the index for the post-war years under review would have been appreciably higher.

Further, as explained in the introductory section, industrial production has developed more rapidly than that of raw materials and raw material production than that of foodstuffs. In the following table are shown the indices for the raw-material group exclusive of foodstuffs. The double figures show the results obtained by the two different systems of weighting.

TABLE IV.

RAW-MATERIAL PRODUCTION INDICES (FOODSTUFFS EXCLUDED) · WEIGHTED BY
1913 AND 1926 PRICES.

	1913	1923	1924	1925	1926
(a) Eastern and Central Europe :					
Excluding Russia (U.S.S.R.) ..	100	67/8	88/9	98/00	104/5
Including Russia (U.S.S.R.) ..	100	64/5	82/3	95/6	101/3
(b) Rest of Europe.....	100	94	103/4	102/4	86/91
Europe, excluding Russia (U.S.S.R.).....	100	83/4	97/8	100/2	93/7
Europe, including Russia (U.S.S.R.).....	100	80	93/4	98/00	93/6
North America	100	127/8	120/1	133	144
Caribbean	100	172/99	168/93	164/83	161/75
South America.....	100	122/6	121/2	128/30	133/8
Africa	100	134/5	154	165/6	161
Asia, excluding Asiatic Russia...	100	127/37	138/49	147/61	150/70
Oceania	100	95/6	108	113/4	116/7
WORLD	100	110/1	114/6	122/6	125/9

The world's production of raw materials was thus 25 to 29 per cent greater in 1926 than in 1913, and has grown steadily year by year since 1923. But European production contracted and was some 5 per cent below that of 1913. In the rest of the world there has been a growth of 45 to 50 per cent. This means that the rate of growth in the whole world has been about 2 per cent per annum, and that outside Europe it has amounted to 3.1 to 3.4 per cent per annum.

Raw-material production in the various continents has not developed *pari passu* with that of foodstuffs. The raw material indices of North and South America are both below the average, though the North American is nearer to it than the South. The Caribbean and Asiatic indices are the highest. The latter is, of course, affected by the very great increase in the production of plantation rubber and of natural silk, and the former by the growing importance of petroleum. The increase in the African production of raw materials is also very great — had gold been included the African index would have worked out at 147 instead of 161. Owing mainly to the fact that the wool supply has remained almost stationary, the Oceanic index only amounts to 116/7.

In contrast to raw materials, the production of vegetable and animal foodstuffs in 1925 and 1926 only averaged some 10 to 11 per cent more in the world as a whole, exclusive of China, than during the period 1909-13, and therefore it is probable that it did not much exceed the simultaneous increase in population. As already

mentioned, the growth of the world population outside of China between the end of 1913 and the end of 1926 was about 8 per cent. In Europe, including the U.S.S.R., population and foodstuff production were both 3 per cent greater in 1926 than in 1913. In the other parts of the world, the production of foodstuffs in 1925 and 1926 exceeded the average for 1909-13 by 16 per cent while, between 1913 and 1926, the population grew by 11 per cent.

The indices of the commodity group are shown below :

TABLE V.
PRODUCTION INDICES WEIGHTED BY 1926 PRICES¹

	1913	1923	1924	1925	1926
Cereals	100	101	89	106	104
Cereals and other food crops	100	103	100	112	109
Meat	<i>100</i>	<i>101</i>	<i>109</i>	<i>108</i>	<i>110</i>
Colonial produce, etc.	100	121	122	125	127
Vegetable oil materials	100	119	135	142	138
Textiles	100	97	112	126	128
Hides and skins	<i>100</i>	<i>97</i>	<i>104</i>	<i>108</i>	<i>111</i>
Rubber	100	328	356	447	564
Wood pulp	100	136	145	162	183
Fuels	100	116	115	116	116
Metals	100	101	102	115	119
Chemicals (fertilisers)	100	106	117	135	136
GENERAL INDEX	100	106	107	116	116
FOODSTUFFS	100	103	101	111	109
RAW MATERIALS	100	110	114	122	125

The indices for meat and for hides and skins are given in italics, as they are of conjectural accuracy. But they are probably of approximately the right order of magnitude in 1925 and 1926. They have been included on this occasion mainly with a view to Table VIII below, which shows the relative importance of the various groups of products. Their exclusion would not have affected the general production index for 1923 or 1924 at all, and would have affected those for 1925 and 1926 to the extent of raising them by one unit. The foodstuffs index would have been unchanged in 1923 and 1926, one unit higher in 1924 and one unit lower in 1925. The raw material index would likewise have been modified by one unit in some of the years considered.

¹ For the production indices of the various groups weighted by 1913 prices, see Annex III.

As already stated, the first index shown in the table is supplementary to the second, which includes, in addition to other cereals, rice, potatoes and raw sugar.

An inspection of Annex I will show that the commodities the production of which in 1926 was over 30 per cent above pre-war are: cane-sugar 65 per cent, cocoa 107, tobacco 37 and coffee 30 per cent; soya beans 152, ground nuts 133, copra 107 and palm and palm-kernel oil 61 per cent; artificial silk 666 per cent; natural silk 68 and hemp 32 per cent; rubber 464 per cent; chemical pulp 88 and mechanical pulp 70 per cent; petroleum 184 and lignite 44 per cent; aluminium 214, copper 47 and lead 37 per cent; cyanamide of calcium 439, Norwegian nitrate of lime 174, sulphate of ammonia 145, sulphur 137 and natural guano 88 per cent.

It will be observed that the largest increases outside the fertiliser group have been effected in connection with the relatively new industries, artificial silk, aluminium and motor transport, while the rapid advance in electric installations is reflected in the copper index. The dispersion of the various indices from their mean indicates, therefore, to a greater extent economic progress than failure of the world to recover its economic balance.

On the other hand, among the foodstuffs, barley and rye, in addition to beet-sugar, fail to reach the pre-war level, and the production of hops is greatly reduced. In the vegetable oil group, hemp-seed and sesamum show a decline compared with 1913, as also do flax in the textile group, coal in the fuel group and Chilean nitrate and basic slag in the chemical group. The production of wool has again just attained the pre-war level, as has also the output of pig-iron.

Of the foodstuffs, the cereals proper have increased the least. The 1927 harvest appears to be heavier than that of 1926, but probably not as big as that of 1925. The meat consumption per head of population in the world as a whole outside of China appears to be greater now than it was before the war. In a number of European countries the consumption of meat and of wheaten bread is greater than in 1913, these habits having been affected by the diet received by soldiers during the war. In North America, there has also been a change of taste in favour of meat, and these changes have no doubt affected the demand for rye, oats and maize.

On the other hand, the production of other vegetable foodstuffs, including rice, potatoes and raw sugar, was 21 per cent greater in 1925 and 15 per cent greater in 1926 than the average for 1909-13. The decline in 1926 was largely due to the restrictive policy adopted by the most important producers of cane-sugar. But there has also been a drop in the beet-sugar production and a still greater fall in the potato crop.

The group of colonial products is miscellaneous in character and requires further analysis. The weighted index for coffee, cocoa and tea fell from 126 in 1923 to 123 in 1925, but rose again in 1926 to 131. The pre-war tendency towards an increased consumption of non-alcoholic beverages thus continued and greatly affected hop-growing. The tobacco crop fluctuates from year to year, but the average for the years 1923-26 is more than one-third greater than the pre-war average.

In the absence of production figures for soya beans, copra, palm and palm-kernel oil, the export statistics of the various tropical and sub-tropical producing countries have been employed for the construction of this portion of the vegetable oil index.

The textile index is influenced by the inclusion of the generally accepted trade estimates for artificial silk, the production of which in 1926 is believed to have been over six and a half times greater than in 1913. According to the latest revised estimates by the United States Agricultural Department, the world production of raw wool was almost exactly the same in 1925 and 1926 as in the last pre-war quinquennium.

The rough index for hides and skins includes exports from China. It is in general agreement with the meat production index in 1925 and 1926, being largely based on the same slaughter statistics, but was appreciably lower in 1923 and 1924. The latter index comprises cattle, calves, pigs, sheep and lambs, the former cattle hides and calf skins, goat skins and sheep and lamb skins. A large proportion of the estimated production of meat and hides was, of course, devoted to local consumption, and the indices do not pretend to indicate changes in the visible commercial supply.

The world production of rubber is estimated somewhat varyingly by different authorities, but would appear in 1924 to have been more than two and a half times, in 1925 about three and a half times and in 1926 more than four and a half times as great as in 1913.

Although it has proved impossible to obtain exact information for all the years under review from all pulp-producing countries, the figures on which the indices for this product are based may be accepted as fully representative. They cover, it is believed, more than 95 per cent of the world output. The production of both mechanical and chemical pulp has developed rapidly in recent years, the output of the former being in 1926 almost 70 and of the latter 88 per cent greater than in 1913. Moreover, great progress has been made in the utilisation of the numerous by-products from the chemical pulp-production process.

The world production of coal in 1926 was 3 per cent less than in 1913 and fractionally lower than in 1925. It was, of course, seriously affected by the British coal dispute. The comparatively low level of the post-war coal consumption, especially in Europe, must be attributed in part to the depression in the heavy-metal and particularly the pig-iron industry, in part to the greater use of alternative forms of power and to a considerable extent to economy in use. The increase in the fuel index as given in Table V is, of course, due to the inclusion therein of crude petroleum. It will be noted that the index has remained almost stable since 1923.

The rise in the metal index in 1925 is striking and was continued for the world as a whole in 1926 in spite of the great reduction in the British output. This rise is mainly due to the recovery in pig-iron production, which touched the pre-war record, and the still greater increase in steel. The world output of steel in 1926 exceeded that of 1913 by more than one-quarter. But the production of all metals except tin rose in 1925 and 1926.

The group of heavy chemicals and fertilisers shows a similar though much more pronounced increase in recent years. Chilian nitrates, however, have suffered from the competition of synthetic fertilisers, and the production of basic slag still remains lower than in 1913 owing to the substitution for the Thomas process of other methods of production.

From the foregoing rapid survey of the progress attained in the production of foodstuffs and raw materials, it is clear that the world to-day is richer than it was in 1913, but that the geographical distribution of wealth has undergone changes of a radical character. It remains, therefore, to consider in greater detail the extent to which the different parts of the world have contributed to the results achieved. In Table VI on the following pages the various commodity indices are shown according to the same territorial groupings as have been employed in the other tables.

As already stated, China is omitted from the foodstuff groups. For tea, oil-seeds, soya beans and raw silk, her export figures have been employed, a practice that has also been adopted in connection with tropical products in the case of a few other countries whose exports are of world importance.

The vast majority of the indices for all continental groups except Europe show a material increase over pre-war conditions. Cereals are substantially lower in the Caribbean group and also in Asia; the wild-rubber extraction in Africa and Brazil has receded before the competition of the Asiatic plantation rubber; Chilian nitrates have been largely replaced by artificial fertilisers; certain crops have suffered normal fluctuations. But, apart from these few exceptions, all indices in America, Africa, Asia and Oceania are higher, in many cases very much higher than in 1913. Taken as a whole, the table affords a picture of general progress in which all continents except Europe have shared and to which all classes of commodities have contributed.

By 1925, Europe had just about regained the ground it had lost in the production of those commodities included in its index. The setback in 1926 affected the different divisions of the Continent unequally. The fuel index in Western and Maritime Europe fell as low as 62 and the metal index from 98 in 1925 to 93. But the aggregate production of foodstuffs was greater than in the last pre-war quinquennium. In Central and Eastern Europe, exclusive of Russia, the agricultural returns were rather less satisfactory, but a steady progress was made in other branches of economic activity. Wood-pulp production rose from 118 in 1925 to 136 in 1926, fuels from 95 to 106, and metals, which had been as low as 71 in 1924, from 88 to 90. The general raw-materials index of this part of Europe was 104. Thus not only was the pre-war figure surpassed but these countries attained a higher level of production than any other division of Europe in any post-war year.

In certain cases, the high indices of Asia and Africa, South and Central America reflect in part the development of European industry. Thus, although the United States of America are very much the biggest consumers of rubber, petroleum and certain metals, European consumption has likewise grown appreciably since 1913

TABLE VI.

PRODUCTION INDICES WEIGHTED BY 1926 PRICES: BY CONTINENTAL GROUPS.
1918=100

Groups of Products	Years	Eastern and Central Europe		Rest of Europe (Western and Maritime)	Europe		North America	Caribbean	South America	Africa	Asia	Oceania	World
		Excluding U.S.S.R.	Including U.S.S.R.		Excluding U.S.S.R.	Including U.S.S.R.							
Cereals	1923	83	77	100	90	83	126	84	148	113	99	133	101
	1924	70	67	91	79	74	108	85	116	109	87	163	89
	1925	92	94	109	99	98	119	75	135	115	87	115	106
	1926	88	97	97	92	97	114	72	143	112	88	159	104
Cereals and Other Food Crops	1923	86	85	97	90	88	126	148	157	119	102	128	103
	1924	83	80	97	89	85	109	181	130	121	106	156	100
	1925	101	106	111	105	107	118	176	147	126	107	128	112
	1926	89	103	99	93	102	114	162	154	117	106	163	109
Meat	1923	70	69	104	85	82	147	123	90	103	104	95	101
	1924	83	86	106	94	94	149	105	99	120	111	101	109
	1925	86	90	105	95	95	133	117	98	126	117	107	108
	1926	91	93	106	98	98	129	118	101	132	124	117	110
Colonial Produce, Tobacco, Hops, etc.	1923	81	83	82	82	82	127	112	138	288	108	145	121
	1924	107	102	140	120	114	110	111	123	332	115	158	122
	1925	92	114	125	105	117	121	118	119	344	118	139	125
	1926	91	110	106	97	109	117	108	137	328	118	142	127
Vegetable-oil Materials	1923	78	79	126	114	107	83	130	185	134	128	207	119
	1924	114	102	138	131	123	115	134	154	153	142	206	135
	1925	85	105	121	111	115	121	144	236	168	148	222	142
	1926	113	113	101	104	106	125	212	218	161	145	235	138
Textiles	1923	105	86	110	108	107	83	84	113	107	108	88	97
	1924	117	96	125	122	121	108	97	110	121	118	104	112
	1925	131	117	144	139	144	127	104	115	134	128	107	126
	1926	123	111	152	141	143	141	211	108	125	125	108	128
Hides and Skins	1923	83	82	100	92	89	131	101	99	101	92	92	97
	1924	96	95	101	99	98	138	95	113	118	92	98	104
	1925	93	97	103	98	99	145	118	111	124	99	102	108
	1926	92	98	104	98	100	146	119	114	128	106	111	111
Rubber	1923	—	—	—	—	—	—	—	56	22	676	—	328
	1924	—	—	—	—	—	—	—	58	22	737	—	358
	1925	—	—	—	—	—	—	—	71	33	925	—	447
	1926	—	—	—	—	—	—	—	67	45	1,186	—	564

TABLE VI (continued).

PRODUCTION INDICES WEIGHTED BY 1926 PRICES: BY CONTINENTAL GROUPS.
1913=100

Groups of Products	Years	Eastern and Central Europe		Rest of Europe (Western and Maritime)	Europe		North America	Caribbean	South America	Africa	Asia	Oceania	World
		Excluding U.S.S.R.	Including U.S.S.R.		Excluding U.S.S.R.	Including U.S.S.R.							
Wood-pulp	1923	81	81	122	102	102	171	—	—	—	588	—	136
	1924	99	100	141	121	121	167	—	—	—	626	—	145
	1925	118	121	152	136	137	183	—	—	—	730	—	162
	1926	136	140	167	152	154	207	—	—	—	888	—	183
Fuels	1923	65	63	96	84	82	140	543	418	143	157	100	116
	1924	90	85	97	94	92	126	512	631	150	167	110	115
	1925	95	91	91	93	91	130	430	1,012	158	159	110	116
	1926	106	103	62	79	80	143	346	1,699	168	157	110	116
Metals	1923	54	46	81	70	65	137	143	348	743	140	107	101
	1924	71	62	97	87	81	118	140	338	984	158	120	102
	1925	88	79	98	94	90	137	148	349	983	161	137	115
	1926	90	85	93	91	89	146	158	374	993	163	139	119
Chemicals (Fertilisers)	1923	101	99	107	104	104	164	246	71	116	184	100	106
	1924	117	115	120	119	118	145	236	89	139	210	113	117
	1925	152	150	128	138	138	172	234	93	153	232	155	135
	1926	157	155	133	143	142	178	306	74	175	285	197	136
<i>Total Production</i>	1923	78	77	96	87	84	129	164	123	123	110	104	106
	1924	85	81	101	93	89	119	178	117	135	117	120	107
	1925	98	101	105	102	102	128	173	125	144	121	117	116
	1926	94	101	93	93	98	132	162	131	139	122	127	116
Foodstuffs	1923	83	82	98	89	87	129	144	121	114	102	115	103
	1924	83	81	99	90	86	117	169	113	121	107	134	101
	1925	98	103	110	103	105	120	166	121	126	108	120	111
	1926	89	101	101	94	101	117	155	126	121	108	139	109
Raw Materials	1923	67	64	94	83	80	128	199	126	135	127	95	110
	1924	88	82	103	97	93	121	193	122	164	138	108	114
	1925	98	95	102	100	98	133	183	130	166	147	114	122
	1926	104	101	86	93	93	144	175	138	161	150	116	125

with the development of the motor industry, electrical engineering, etc. Moreover, the prices of raw materials and foodstuffs have not risen to the same extent as those of manufactured articles, and Europe reaps an advantage from the fact that it can purchase a greater quantity of foodstuffs or raw materials with a given quantity of finished goods than it could before the war.

On the other hand, the increased production of many raw materials elsewhere reflects not only no industrial growth in Europe, but, on the contrary, an increase in the productive capacity of other territorial groups and a contraction of demand for European goods.

Naturally, those continental areas with the most highly developed economic organisation show a more even rate of progress than lands in which new fields of enterprise have quite recently been opened up. Thus, the highest index in North America in 1926 is 207 for wood pulp, compared with 1,699 for fuels in South America, 1,186 for rubber in Asia and 993 for metals in Africa. The three last-mentioned figures have, in point of fact, a very limited significance. The production of fuels in South America and of metals in Africa is small and the very great relative increase is almost wholly due to the opening up of new petroleum wells in Venezuela and new coppermines in Belgian Congo. The rubber production in Asia has likewise developed from very small beginnings in 1913, and practically the whole production is exported in crude form for treatment and use elsewhere.

In order to determine the real significance of some of the figures given in Table VI, it is necessary to show the importance of the contributions of each continent to the world production of each group of commodities and the importance of each group of commodities to the total production. This is done in Table VII (pages 28 and 29) and Table VIII (pages 30 to 33).

The data are, of course, far from being sufficiently complete for Table VII to give an exact picture of the contribution of each continental group to the total supply of raw materials and foodstuffs. The omission of China from the cereals and other foodstuffs groups, the omission of dairy produce, of timber and of building materials, to quote the most important gaps in the statistics, and the fact that, for some products and certain countries, exports have had to be substituted for production, set obvious limitations to the conclusions that can be drawn.

Table VII is important, however, because, when read in conjunction with Table VI, it becomes possible to distinguish between those changes which are of real and immediate importance in the general economic equilibrium of the world and those which, though individually striking, are not far-reaching in their effects. Thus the growth in the importance of South America and Oceania as cereal producers and the drop in the North American cereal index from 126 in 1923 to 114 in 1926 are significant and important, for these three continents are the main granaries of the world. But the total South American and Oceanic crop in 1926 was under $7\frac{3}{4}$ per cent of the world supply. Significant too are the almost stationary slaughter figures for South America, the steady decline in the North American meat index, and the growing importance of Africa.

The textile index is higher in all parts of the world, and the generality of this progress is the result largely of a common endeavour by consuming countries to render themselves more independent of the too-restricted sources of supply of vegetable textiles both by the starting of new cotton plantations and by the development of the silk and artificial-silk industries. Despite this endeavour however, the contribution of North America to the total world production of textiles rose from 30 per cent in 1923 to 33 per cent in 1926. Table VII brings out perhaps even more clearly than the others the shift in the centre of productive activity from Europe west to the United States and Canada and beyond them to Japan, China and the Malay. This shift is more marked in industry than in the production of raw materials, and least marked in the case of foodstuffs. Thus Europe's share in the production of raw materials has fallen from 39 to 29 per cent; North America's has risen from 35 to 40 per cent; Asia's from 15 to 18 per cent.

Much less marked are the changes in the relative importance of the various territorial divisions as sources of foodstuff supply. The European contribution has dropped from 45.6 before the war to 42.3 per cent; the North American shares have increased from 19.6 to 20.9 per cent, the South American from 5.3 to 6.1 per cent, the Asiatic from 24.1 to 25.9 per cent.

Europe has ceded to North America the leading position in the industrial raw-material production which it held before the war. Indeed, even in 1925, its share had contracted in seven out of the nine raw material groups shown. In textiles it has been little affected thanks to the rapid development in its artificial-silk production. In heavy chemicals, the only group in which it now controls more than one-half of the world output, it has gained new ground, as have also all the other continental groups, except South America, at the cost of the Chilian nitrates.

The most important changes have taken place in connection with fuels and metals. Europe in 1913 contributed 48 per cent of the world's fuel supply; in 1925 less than 38, and in 1926 33 per cent. The contribution of every other continent except Oceania increased. This change in the sources of supply must be attributed largely to the discovery of new oilfields. But it cannot be attributed wholly to that fact. In the production of coal alone Europe's share sank from 50 per cent in 1913 to 46 per cent in 1925 (39 per cent in 1926).

Similarly, in the case of metals, the importance of every continent other than Europe has grown. The position of Europe and North America has, in fact, been almost exactly reversed. In 1913, Europe produced 52 per cent and North America over 41 per cent; in 1926, Europe 39 per cent and North America 51 per cent.

Table VIII, on pages 30 to 33, shows the relative importance in terms of aggregate value at (a) 1913 prices and (b) 1926 prices of each group of commodities. Its accuracy is, of course, limited by the incompleteness of the data to which attention has already been drawn and to the fact that the average world prices employed as weights are necessarily somewhat arbitrary. Despite these reservations, it is not uninformative.

If the results obtained from the calculations based on pre-war prices be compared with those based on 1926 prices, the approximate changes that have

TABLE VII.

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION.

Groups of Products	Years	Eastern and Central Europe		Rest of Europe (Western and Maritime)	Europe		North America	Caribbean	South America	Africa	Asia	Oceania	World
		Excluding U.S.S.R.	Including U.S.S.R.		Excluding U.S.S.R.	Including U.S.S.R.							
Cereals	1913	19.5	37.8	14.4	33.9	52.2	30.7	0.9	4.2	2.3	8.4	1.3	100.
	1923	16.0	28.9	14.3	30.3	43.2	38.2	0.8	6.2	2.5	7.4	1.7	100
	1924	15.4	28.5	14.8	30.2	43.3	37.0	0.9	5.5	2.8	8.2	2.3	100
	1925	17.0	33.7	14.9	31.9	48.6	34.5	0.7	5.4	2.5	6.9	1.4	100
	1926	16.4	35.2	13.4	29.8	48.6	33.5	0.7	5.8	2.4	7.1	1.9	100
Cereals and Other Food Crops	1913	20.3	33.5	12.7	33.0	46.2	19.6	1.8	3.0	2.0	26.3	1.1	100
	1923	16.9	27.5	11.9	28.8	39.4	23.8	2.5	4.6	2.3	26.0	1.4	100
	1924	17.0	26.9	12.3	29.3	39.2	21.4	3.2	3.9	2.4	28.1	1.8	100
	1925	18.3	31.6	12.5	30.8	44.1	20.6	2.7	4.0	2.2	25.1	1.3	100
	1926	16.5	31.8	11.5	28.0	43.3	20.5	2.6	4.3	2.1	25.6	1.6	100
Meat	1913	18.8	27.7	15.6	34.4	43.3	19.3	1.4	14.7	3.5	14.7	3.1	100
	1923	12.9	19.0	16.2	29.1	35.2	28.1	1.7	13.3	3.5	15.3	2.9	100
	1924	14.3	21.9	15.3	29.6	37.2	26.5	1.3	13.4	3.8	14.9	2.9	100
	1925	15.0	23.0	15.2	30.2	38.2	23.8	1.5	13.4	4.1	15.9	3.1	100
	1926	15.5	23.3	15.1	30.6	38.4	22.6	1.5	13.5	4.2	16.5	3.3	100
Colonial Produce, Tobacco, Hops, etc.	1913	6.7	9.3	4.4	11.1	13.7	14.6	7.6	25.5	3.0	35.4	0.2	100
	1923	4.5	6.3	3.0	7.5	9.3	15.4	7.1	29.2	7.1	31.7	0.2	100
	1924	5.9	7.8	5.0	10.9	12.8	13.1	6.9	25.7	8.1	33.1	0.3	100
	1925	4.9	8.4	4.4	9.3	12.8	14.0	7.2	24.2	8.2	33.4	0.2	100
	1926	4.8	8.0	3.7	8.5	11.7	13.4	6.5	27.5	7.7	33.0	0.2	100
Vegetable-oil Materials	1913	4.8	9.1	13.5	18.3	22.6	18.0	0.4	4.9	11.1	42.4	0.6	100
	1923	3.2	6.0	14.3	17.5	20.3	12.5	0.4	7.6	12.5	45.6	1.1	100
	1924	4.0	6.8	13.8	17.8	20.6	15.4	0.4	5.5	12.6	44.5	1.0	100
	1925	2.9	6.8	11.4	14.3	18.2	15.4	0.4	8.0	13.0	44.0	1.0	100
	1926	3.9	7.4	9.8	13.7	17.2	16.2	0.6	7.8	12.8	44.3	1.1	100
Textiles	1913	4.1	10.4	6.5	10.6	16.9	30.2	0.5	5.5	5.1	33.9	7.9	100
	1923	4.5	9.2	7.4	11.9	16.6	25.7	0.5	5.7	6.4	37.9	7.2	100
	1924	4.4	8.9	7.3	11.7	16.2	29.1	0.5	5.4	5.6	35.9	7.3	100
	1925	4.2	9.7	7.5	11.7	17.2	30.5	0.4	5.1	5.5	34.6	6.7	100
	1926	4.0	9.0	7.7	11.7	16.7	33.1	0.9	4.6	5.0	33.1	6.6	100
Hides and Skins	1913	12.1	21.4	14.3	26.4	35.7	10.0	1.6	15.4	6.6	26.3	4.4	100
	1923	10.3	18.0	14.9	25.2	32.9	13.5	1.7	15.8	6.9	25.0	4.2	100
	1924	11.2	19.6	14.0	25.2	33.6	13.2	1.5	16.8	7.4	23.4	4.1	100
	1925	10.4	19.3	13.7	24.1	33.0	13.4	1.8	15.9	7.5	24.3	4.1	100
	1926	10.1	18.9	13.4	23.5	32.3	13.2	1.7	15.8	7.6	25.0	4.4	100
Rubber	1913	—	—	—	—	—	—	—	39.4	15.8	44.8	—	100
	1923	—	—	—	—	—	—	—	6.7	1.1	92.2	—	100
	1924	—	—	—	—	—	—	—	6.4	1.0	92.6	—	100
	1925	—	—	—	—	—	—	—	6.3	1.2	92.5	—	100
	1926	—	—	—	—	—	—	—	4.7	1.2	94.1	—	100

TABLE VII (continued).

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION.

Groups of Products	Years	Eastern and Central Europe		Rest of Europe (Western and Maritime)	Europe		North America	Caribbean	South America	Africa	Asia	Oceania	World
		Excluding U.S.S.R.	Including U.S.S.R.		Excluding U.S.S.R.	Including U.S.S.R.							
Wood-pulp	1913	25.9	26.5	28.8	54.7	55.3	43.9	—	—	—	0.8	—	100
	1923	15.3	15.7	25.8	41.1	41.5	55.2	—	—	—	3.3	—	100
	1924	17.6	18.3	27.9	45.5	46.2	50.5	—	—	—	3.3	—	100
	1925	18.9	19.8	27.2	46.1	47.0	49.6	—	—	—	3.4	—	100
	1926	19.2	20.3	26.3	45.5	46.6	49.7	—	—	—	3.7	—	100
Fuels	1913	16.8	20.5	27.5	44.3	48.0	44.9	0.8	0.1	0.6	4.6	1.0	100
	1923	9.4	11.1	22.8	32.2	33.9	54.4	3.4	0.4	0.7	6.3	0.9	100
	1924	13.2	15.2	23.2	36.4	38.4	49.3	3.3	0.5	0.8	6.7	1.0	100
	1925	13.8	16.1	21.7	35.5	37.8	50.6	2.7	0.8	0.8	6.3	1.0	100
	1926	15.2	18.2	14.8	30.0	33.0	55.3	2.2	1.4	0.9	6.2	1.0	100
Metals	1913	18.6	23.2	28.9	47.5	52.1	41.5	1.3	0.5	0.1	3.4	1.1	100
	1923	9.9	10.6	23.2	33.1	33.8	56.3	1.9	1.6	0.5	4.8	1.1	100
	1924	12.9	14.0	27.4	40.3	41.4	48.0	1.8	1.6	0.6	5.3	1.3	100
	1925	14.2	16.0	24.7	38.9	40.7	49.6	1.7	1.4	0.5	4.8	1.3	100
	1926	14.0	16.6	22.5	36.5	39.1	51.1	1.7	1.5	0.5	4.8	1.3	100
Chemicals (Fertilisers)	1913	23.2	23.6	31.3	54.5	54.9	15.1	0.02	24.3	2.0	1.9	1.8	100
	1923	21.9	22.0	31.5	53.4	53.5	23.3	0.05	16.1	2.1	3.3	1.7	100
	1924	23.2	23.3	32.0	55.2	55.3	18.7	0.1	18.5	2.3	3.4	1.7	100
	1925	26.3	26.5	29.7	56.0	56.2	19.4	0.04	16.8	2.2	3.3	2.1	100
	1926	26.9	27.1	30.6	57.5	57.7	19.9	0.05	13.3	2.5	4.0	2.6	100
<i>Total Production</i>	1913	17.2	26.3	16.4	33.6	42.7	26.1	1.5	5.1	2.3	20.4	1.9	100
	1923	12.7	19.1	14.9	27.6	34.0	31.8	2.4	5.9	2.7	21.3	1.9	100
	1924	13.7	20.0	15.5	29.2	35.5	29.0	2.5	5.6	3.0	22.3	2.1	100
	1925	14.6	22.7	14.9	29.5	37.6	28.6	2.3	5.5	2.9	21.2	1.9	100
	1926	13.9	23.0	13.2	27.1	36.2	29.7	2.2	5.7	2.8	21.4	2.0	100
Foodstuffs	1913	20.0	32.4	13.2	33.2	45.6	19.6	1.7	5.3	2.2	24.1	1.5	100
	1923	16.2	26.0	12.7	28.9	38.7	24.6	2.3	6.2	2.5	24.0	1.7	100
	1924	16.5	25.9	12.9	29.4	38.8	22.4	2.8	5.9	2.7	25.4	2.0	100
	1925	17.7	30.0	13.0	30.7	43.0	21.2	2.5	5.7	2.6	23.4	1.6	100
	1926	16.3	30.1	12.2	28.5	42.3	20.9	2.4	6.1	2.5	23.9	1.9	100
Raw Materials	1913	13.4	17.8	20.8	34.2	38.6	35.1	1.3	4.8	2.5	15.3	2.4	100
	1923	8.2	10.4	17.7	25.9	28.1	41.1	2.4	5.5	3.0	17.8	2.1	100
	1924	10.3	12.7	18.6	28.9	31.3	37.1	2.3	5.2	3.3	18.6	2.2	100
	1925	10.7	13.7	17.2	27.9	30.9	38.0	2.0	5.2	3.3	18.4	2.2	100
	1926	11.1	14.4	14.3	25.4	28.7	40.3	1.9	5.3	3.2	18.4	2.2	100

TABLE VIII.

IMPORTANCE OF EACH GROUP OF COMMODITIES.
According to (a) 1913 Prices ; (b) 1926 Prices.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
35.9	33.7	17.7	16.8	21.7	23.0	25.0	26.8	10.2	11.4	17.7	18.9	27.5	28.3
34.8	32.9	9.5	8.7	26.0	27.8	23.0	24.6	8.2	9.2	22.7	24.2	26.1	26.9
31.6	30.3	8.9	8.0	21.0	22.8	20.5	21.6	7.5	8.5	23.7	25.7	22.6	23.5
33.0	31.4	7.9	7.3	23.4	24.9	20.0	21.4	7.3	8.3	17.2	18.7	24.7	25.7
30.5	29.1	8.0	7.5	23.9	25.2	20.4	21.7	7.2	8.2	21.9	23.8	24.3	25.4
3.1	2.9	38.1	36.6	5.0	5.0	13.1	12.9	51.1	49.2	11.6	9.5	21.0	19.8
2.9	2.7	44.0	39.5	8.2	7.9	13.9	13.7	47.7	46.9	13.1	10.8	21.0	19.8
3.3	3.1	50.8	46.3	8.5	8.3	13.9	13.9	47.5	46.8	13.7	11.1	22.4	21.1
2.5	2.3	51.1	47.0	8.4	8.2	13.6	13.5	46.0	45.7	15.6	12.7	21.7	20.6
2.6	2.4	49.3	45.8	8.1	7.9	11.8	11.7	44.6	44.8	13.2	10.7	20.6	19.6
8.4	8.5	9.9	10.0	32.1	32.0	16.9	16.3	9.1	8.0	19.0	18.4	12.0	11.3
9.7	9.6	7.8	7.5	24.4	23.5	14.4	13.6	8.2	7.6	17.7	16.8	11.3	10.7
10.7	10.5	6.1	5.9	28.0	27.0	15.3	14.5	8.2	7.6	16.8	15.6	12.0	11.5
9.0	8.8	7.1	6.7	25.9	25.2	15.1	14.3	8.3	7.7	17.8	17.0	11.0	10.5
8.5	8.2	7.5	7.3	25.8	24.8	16.3	15.5	8.6	8.1	17.7	17.1	11.2	10.7
1.7	1.9	13.8	16.0	13.6	16.2	4.6	4.2	4.1	5.6	0.2	0.3	2.8	3.3
1.8	1.9	10.3	10.9	15.5	18.2	11.0	9.7	3.9	5.5	0.3	0.5	3.4	3.8
1.7	1.7	9.2	10.0	14.4	17.2	11.4	10.2	3.9	5.5	0.3	0.5	3.3	3.8
1.7	1.7	9.9	10.9	13.0	15.4	11.1	9.9	4.0	5.5	0.3	0.4	3.1	3.5
1.6	1.7	9.6	10.6	14.3	17.0	11.0	9.8	3.8	5.5	0.3	0.4	3.2	3.6
1.9	1.8	0.6	0.6	2.3	2.4	11.3	11.7	5.0	5.1	1.2	0.9	2.6	2.5
1.2	1.2	0.5	0.5	3.6	3.6	12.3	12.7	5.6	6.0	2.3	1.7	2.9	2.9
1.9	1.7	0.5	0.5	3.0	3.1	12.6	13.3	5.9	6.3	2.0	1.5	3.3	3.2
1.8	1.7	0.5	0.5	4.4	4.5	13.0	13.7	5.8	6.3	2.0	1.7	3.2	3.1
1.8	1.7	0.8	0.8	3.9	4.0	12.8	13.6	5.6	6.1	2.2	1.6	3.1	3.0
9.8	9.5	2.5	2.8	6.6	8.6	15.3	17.5	11.9	13.2	28.9	33.7	7.7	8.1
6.5	6.1	1.4	1.4	6.4	8.0	13.2	15.2	11.4	13.0	24.3	28.6	7.0	7.4
9.1	8.6	1.4	1.5	6.5	8.2	13.4	15.6	11.8	13.4	24.8	29.1	8.1	8.5
10.0	9.5	1.6	1.7	6.4	8.0	14.2	16.3	12.3	14.1	26.4	31.1	8.4	8.8
10.8	10.2	3.4	3.6	5.7	7.1	13.5	15.8	11.7	13.7	24.7	28.8	8.6	9.0
1.1	0.6	2.5	1.5	7.5	4.5	6.4	4.1	3.2	1.9	5.7	3.5	2.7	1.5
1.1	0.6	1.7	0.9	6.2	3.6	5.3	3.4	2.6	1.6	5.2	3.1	2.5	1.4
1.3	0.7	1.5	0.8	7.3	4.3	5.7	3.6	2.5	1.5	4.9	2.8	2.6	1.4
1.3	0.6	1.8	1.1	6.7	4.0	5.6	3.5	2.6	1.6	5.1	3.0	2.5	1.4
1.2	0.7	2.0	1.1	6.7	3.9	6.0	3.8	2.7	1.7	5.1	3.0	2.6	1.5
—	—	—	—	3.7	1.9	3.2	1.6	1.1	0.5	—	—	0.5	0.3
—	—	—	—	1.7	0.8	0.6	0.3	6.6	3.2	—	—	1.6	0.8
—	—	—	—	1.8	0.9	0.5	0.3	6.7	3.3	—	—	1.7	0.8
—	—	—	—	2.1	1.0	0.8	0.4	8.1	4.0	—	—	2.0	0.9
—	—	—	—	1.9	0.9	1.0	0.5	10.2	5.1	—	—	2.5	1.2

TABLE VIII (continued).

SHOWING CHANGES IN THE RELATIVE
Percentages of Aggregate Values

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(a)	(b)	(a)	(b)			(a)	(b)	(a)	(b)
Wood-pulp	1913	0.9	1.0	0.6	0.7	1.1	1.2	1.0	1.2	0.8	0.9
	1923	0.9	1.1	0.6	0.7	1.4	1.5	1.2	1.3	1.0	1.1
	1924	1.1	1.2	0.8	0.9	1.5	1.7	1.3	1.5	1.1	1.2
	1925	1.1	1.3	0.7	0.8	1.6	1.8	1.3	1.5	1.1	1.2
	1926	1.3	1.5	0.8	0.9	1.9	2.2	1.6	1.8	1.2	1.4
Fuels	1913	11.9	14.4	9.5	11.5	21.5	25.6	16.5	19.8	14.0	16.8
	1923	9.7	11.9	7.6	9.3	21.1	25.2	15.7	19.0	13.4	16.2
	1924	12.3	15.3	9.7	12.0	20.1	24.3	16.4	20.0	14.2	17.3
	1925	11.4	14.0	8.5	10.4	18.1	21.9	14.7	17.9	12.2	14.9
	1926	13.2	16.2	9.6	11.7	13.9	17.0	13.5	16.6	11.1	13.6
Metals	1913	10.0	9.1	8.1	7.3	15.9	14.2	12.8	11.5	11.1	9.9
	1923	7.0	6.4	5.0	4.5	14.0	12.5	10.7	9.6	8.8	7.9
	1924	8.4	7.6	6.2	5.6	15.6	14.1	12.2	11.0	10.2	9.3
	1925	8.9	8.1	6.4	5.8	15.3	13.8	12.1	11.0	9.9	8.9
	1926	9.7	8.8	7.0	6.2	16.1	14.8	12.8	11.7	10.3	9.3
Chemicals (Fertilisers)	1913	2.1	1.5	1.4	1.0	3.3	2.2	2.7	1.8	2.1	1.4
	1923	2.7	1.9	1.8	1.3	3.5	2.4	3.1	2.2	2.5	1.8
	1924	2.9	2.1	2.0	1.4	3.8	2.5	3.3	2.3	2.8	1.9
	1925	3.3	2.3	2.1	1.5	3.8	2.6	3.6	2.5	2.8	1.9
	1926	3.6	2.5	2.2	1.5	4.4	3.1	4.0	2.8	3.0	2.1
<i>Total Production</i>	1913 and 1923-26	100	100	100	100	100	100	100	100	100	100
Foodstuffs	1913	69.7	68.9	73.3	73.1	49.6	49.2	60.1	59.4	64.3	64.0
	1923	73.2	73.0	77.1	77.2	49.9	49.4	60.8	60.6	65.5	65.4
	1924	68.1	67.4	72.6	72.4	48.1	47.9	57.7	57.1	62.1	61.7
	1925	69.1	68.9	74.2	74.4	50.4	50.6	59.8	59.8	64.9	65.2
	1926	65.7	65.3	72.6	72.7	51.8	52.8	59.0	59.2	65.1	65.5
Raw Materials	1913	30.3	31.1	26.7	26.9	50.4	50.8	39.9	40.6	35.7	36.0
	1923	26.8	27.0	22.9	22.8	50.1	50.6	39.2	39.4	34.5	34.6
	1924	31.9	32.6	27.4	27.6	51.9	52.1	42.3	42.9	37.9	38.3
	1925	30.9	31.1	25.8	25.6	49.6	49.4	40.2	40.2	35.1	34.8
	1926	34.3	34.7	27.4	27.3	48.2	47.2	41.0	40.8	34.9	34.5

TABLE VIII (continued).

IMPORTANCE OF EACH GROUP OF COMMODITIES.
according to (a) 1913 Prices ; (b) 1926 Prices.

North America		Caribbean		South America		Africa		Asia		Oceania		World	
(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
1.0	1.2	—	—	—	—	—	—	—	—	—	—	0.6	0.7
1.4	1.6	—	—	—	—	—	—	0.1	0.1	—	—	0.8	0.9
1.4	1.6	—	—	—	—	—	—	0.1	0.1	—	—	0.8	0.9
1.5	1.7	—	—	—	—	—	—	0.1	0.2	—	—	0.8	1.0
1.6	1.8	—	—	—	—	—	—	0.1	0.2	—	—	0.9	1.1
20.8	25.9	4.5	6.9	0.2	0.3	2.8	3.7	2.5	3.3	6.9	7.9	11.9	14.8
22.6	28.2	15.8	22.9	0.7	0.9	3.2	4.3	3.5	4.7	6.5	7.6	12.7	16.2
21.8	27.2	13.5	20.0	1.0	1.5	3.0	4.1	3.5	4.7	6.3	7.2	12.4	15.9
20.8	26.4	11.5	17.2	1.5	2.2	3.0	4.1	3.1	4.3	6.4	7.5	11.4	14.7
22.3	28.0	9.8	14.7	2.4	3.6	3.3	4.5	3.1	4.3	5.9	6.9	11.5	14.8
15.4	13.4	10.4	8.8	1.3	0.9	0.4	0.3	1.7	1.7	7.2	5.9	9.2	8.3
16.7	14.4	9.0	7.7	3.8	2.7	2.2	1.7	2.0	2.0	6.4	6.7	9.1	8.1
16.0	13.8	8.1	7.0	3.9	2.8	2.7	2.0	2.1	2.1	6.0	5.5	9.1	8.2
17.1	15.0	8.6	7.6	3.7	2.7	2.6	1.9	2.1	2.1	7.1	6.5	9.4	8.5
17.7	15.3	9.6	8.6	3.9	2.7	2.7	2.0	2.1	2.1	6.5	6.1	9.7	8.8
0.9	0.6	—	—	6.0	5.2	1.0	0.9	0.1	0.1	1.6	1.0	1.5	1.1
1.3	0.8	—	—	3.5	3.0	0.9	0.8	0.2	0.2	1.5	1.0	1.6	1.1
1.2	0.8	—	—	4.6	3.9	1.0	0.9	0.3	0.2	1.5	1.0	1.7	1.2
1.3	0.9	—	—	4.5	3.9	1.0	1.0	0.3	0.2	2.1	1.4	1.8	1.3
1.4	0.9	—	—	3.4	2.9	1.2	1.1	0.3	0.2	2.5	1.6	1.8	1.3
100	100	100	100	100	100	100	100	100	100	100	100	100	100
47.4	45.1	65.7	63.4	58.7	60.0	55.0	56.0	70.4	68.6	48.3	46.8	60.5	59.4
47.4	45.2	61.3	55.7	58.6	59.2	51.3	51.9	64.1	63.7	53.5	51.8	58.4	57.4
45.6	43.9	65.8	60.2	57.5	58.1	49.7	50.0	63.2	62.9	54.2	52.4	57.0	56.1
44.5	42.5	66.1	61.0	57.7	58.3	48.7	49.2	61.6	61.7	50.6	48.4	57.4	56.8
41.6	39.7	64.8	60.5	57.8	57.9	48.5	48.9	60.4	61.1	52.8	51.6	56.1	55.7
52.6	54.9	34.3	36.6	41.3	40.0	45.0	44.0	29.6	31.4	51.7	53.2	39.5	40.6
52.6	54.8	38.7	44.3	41.4	40.8	48.7	48.1	35.9	36.3	46.5	48.2	41.6	42.6
54.4	56.1	34.2	39.8	42.5	41.9	50.3	50.0	36.8	37.1	45.8	47.6	43.0	43.9
55.5	57.5	33.9	39.0	42.3	41.7	51.3	50.8	38.4	38.3	49.4	51.6	42.6	43.2
58.4	60.3	35.2	39.5	42.2	42.1	51.5	51.1	39.6	38.9	47.2	48.4	43.9	44.3

taken place in the relative aggregate costs of the different groups of commodities may be ascertained. These changes may result either from variations in supply or variations in price. An increase in the production of any particular commodity may cause a fall in its relative price so great that its contribution to the aggregate of the values of all the commodities becomes less and not greater. A decrease in its production may have the reverse effect. From an inspection of the table it is possible to ascertain the extent to which changes in quantities have been counterbalanced by changes in prices.

The following summary figures show that in Europe, where economic progress has been slowest, the relative importance of foodstuffs and raw materials has scarcely changed, and if imported goods could be included, the change would prove to be still slighter. In North America, a greater proportion of total expenditure is devoted to the production of raw materials; a still greater proportion is, in point of fact, devoted to their purchase at home and abroad, for the United States are relying more and more on outside sources of supply. It is indeed natural that, as any community becomes richer, it should devote a smaller fraction of its energies or its wealth to the production or purchase of food.

Table VIII may conveniently be summarised as follows :

PERCENTAGES OF AGGREGATE VALUES AT : (a) 1913 PRICES ; (b) 1926 PRICES

Territorial divisions	Foodstuffs		Raw materials		Total production	
	1913 or 1909-13	1925-26	1913 or 1909-13	1925-26	1913 or 1909-13	1925-26
	(a)	(b)	(a)	(b)	(a)	(b)
Europe, excluding Russia ..	60.1	59.5	39.9	40.5	100.0	100.0
North America	47.4	41.1	52.6	58.9	100.0	100.0
Rest of the world	68.8	64.1	31.2	35.9	100.0	100.0
TOTAL World	60.5	56.2	39.5	43.8	100.0	100.0

It will be seen that foodstuffs have lost everywhere in importance and most where general progress has been greatest. The last column of Table VIII, however, shows that expenditure on colonial products, which include tobacco, has increased. Of the raw materials, rubber and wood-pulp constitute appreciably higher proportions of aggregate values. Both the production and the price of wood-pulp have increased above the average. The cost of rubber, on the other hand, in terms of the other commodities shown was in 1926 less than one-half of what it had been in 1913, and even in 1925, when rubber was considered dear, it was in point of fact

appreciably lower than in 1913. Fuels, textiles, especially artificial and natural silk, and vegetable-oil materials have also all grown in importance. On the other hand, hides and skins show a drop of nearly 50 per cent on account of the fall that has taken place in prices. The aggregate cost of chemicals and metals is also lower, and chemical prices are practically at the pre-war level despite the drop in the value of gold. The most important metals, in 1926, are likewise either absolutely or relatively cheaper than before the war.

Had the Chinese production and dairy produce been included, it is probable that foodstuffs would have accounted for about two-thirds of the total values of all the goods considered in 1913 instead of the 60 per cent shown.

* * *

It is not the object of this Memorandum to discuss in detail the conditions of particular industries or to study the special problems appertaining to individual countries. But it may be useful to supplement the data already presented by a further analysis of the groups of products.

Foodstuffs, Beverages and Tobacco

The combined production of wheat, rye, barley, oats and maize in 1925 was 6 per cent and in 1926 4 per cent higher than the annual average during the quinquennium immediately preceding the war. Last year's wheat crop was a record, though in Europe smaller than in 1925, and in the other continents, save Oceania, somewhat smaller than in 1923. Less barley is being grown, especially in Europe. In 1926 both the area under barley and the crop in this continent were about 15 per cent below the average for the years 1909-13.

PRODUCTION INDICES.

	1913	1923	1924	1925	1926
I. Cereals :					
Wheat	100	101	90	105	108
Rye	100	97	81	104	97
Barley	100	89	79	96	92
Oats	100	97	93	103	102
Maize	100	109	92	112	107
II. Other food crops :					
Rice	100	103	111	110	109
Potatoes	100	106	109	126	115
Beet-sugar	100	76	104	104	98
Cane-sugar	100	153	167	178	165

	1913	1923	1924	1925	1926
III. <i>Meat:</i>					
Cattle, including calves.....	100	100	110	111	114
Pork	100	105	114	108	108
Mutton and lamb.....	100	84	87	94	101
IV. <i>Colonial produce, etc.:</i>					
Coffee	100	129	118	118	130
Cocoa	100	204	218	215	207
Tea	100	105	110	109	115
Hops	100	47	85	72	71
Tobacco	100	134	131	145	137

Table VI shows that the production of cereals in North and South America, Oceania and Africa in all the three years under review has exceeded, in some years greatly exceeded, the pre-war average; in Europe, Asia and the Caribbean countries it has remained constantly below that average. In 1925 and 1926, the aggregate cereal crop of Europe, including the U.S.S.R., was still slightly below the pre-war average. The indices of production of the various cereals for Europe, excluding Russia, were as follows:

	1923	1924	1925	1926
Wheat.....	92	77	102	89
Rye.....	85	67	97	77
Barley.....	96	83	100	99
Oats.....	93	84	92	98
Maize.....	79	99	105	112

The result of the relative falling-off in European cereal production has been to increase the net imports into Europe approximately as follows:

	Quintals (000,000's) (+ = net import; - = net export)				
	1910-13	1923	1924	1925	1926
Wheat.....	+74.5	+125.7	+137.4	+130.5	+109.3
Wheaten flour.....	+ 4.6	+ 11.7	+ 14.9	+ 15.3	+ 9.7
Rye.....	- 0.4	+ 6.2	+ 11.4	+ 11.0	+ 3.3
Barley.....	+ 5.8	+ 10.2	+ 19.4	+ 16.4	+ 14.0
Oats.....	+ 8.7	+ 8.5	+ 11.2	+ 15.6	+ 10.6
Maize.....	+37.8	+ 43.1	+ 45.9	+ 39.7	+ 48.6

The decline in the net imports in 1926 was, of course, due to the crop in 1925, which was more favourable than those in the preceding years.

The potato crop in Europe, excluding Russia, exceeded the pre-war average in 1925 by 14 and in 1926 by 8 per cent. The inclusion of the U.S.S.R. raises these figures, on the basis of available information, to 29 and 15 per cent.

According to the Russian agricultural statistics, the cultivation of potatoes in the U.S.S.R. has developed to a remarkable extent, the 1925 crop being stated to have been 119 per cent and that of 1926 151 per cent greater than the average crop in the same territory in 1909-13. This increase is ostensibly due in part to an extension of the area devoted to this cultivation, but mainly to higher yields per hectare. From the data published, the yield would appear to have averaged 69 quintals in 1909-13 and 96 in 1925.

During the period under review, the production of cane-sugar has developed with great rapidity, while the European beet-sugar output was in 1925, owing to the falling-off in Russia, only just up to the pre-war figure. In 1926, it again dropped below that figure.

The absolute and relative changes are shown below :

	1909-10 1913-14	1923-24	1924-25	1925-26	1926-27
<i>Actual production in metric tons (000's omitted).</i>					
Cane-sugar	9,624	14,706	16,052	17,082	15,875
Beet-sugar	7,959	6,015	8,275	8,313	7,768
<i>Indices of Production</i>					
Cane-sugar	100	153	167	178	165
Beet-sugar	100	76	104	104	98
Beet-sugar :					
Europe, including U.S.S.R.	100	69	97	101	93
Europe, excluding U.S.S.R.	100	80	113	109	101
U.S.S.R.	100	26	32	67	60
North America	100	145	182	145	153

The above statement shows that beet-sugar production has only gone down in Europe ; that production in Europe, excluding Russia, was in the last three years above the pre-war level ; and that the increase in North America has almost kept pace with the increase in the world production of cane-sugar. The recent decline in that production is the result, primarily, of the restrictive policy adopted by the Cuban authorities.

The meat indices are only intended to be illustrative of general tendencies. They cannot claim to measure with precision the actual development of production. The available slaughter or official meat-inspection statistics of some fifteen leading meat-producing countries in Europe, North and South America, Oceania and South Africa are accepted as reasonably representative for the meat production in those parts of the world. It has been found that these figures move in general sympathy with the live-stock figures for the same countries, even though the ratios

between the two series of figures vary from country to country and continent to continent. These ratios have been taken as a basis for estimating the slaughter in other countries in the same regions or continents for which live-stock but not slaughter statistics are given. All estimates have in principle been made conservatively. The slaughter figures have in their turn been converted into terms of meat.

The indices indicate that, in the world as a whole, the production of meat is greater than before the war, that that of beef and veal has increased more than that of pork and that the production of mutton and lamb only reached the pre-war level in 1926. From the more detailed production figures from which the indices are calculated, it appears that the increase in the production of beef and veal was general outside Europe, where the slaughter figures just attained the 1913 level in 1926. Europe, therefore, has had to cover the deficiency in its production by increased imports, as illustrated by the following figures for the meat exports from Argentine, Australia and New Zealand, which are mainly destined for European markets :

	<i>Exports.</i>				
	Average 1912 and 1913	Metric tons (000's omitted)			
		1923	1924	1925	1926
Argentine :					
Beef, frozen.....	325	215	368	297	227
Beef, chilled.....	30	327	364	372	431
Australia :					
Beef, frozen.....	82	69	48	129	97
Lamb and mutton.....	73	76	18	23	39
New Zealand :					
Meat (mainly lamb and mutton)	131	155	161	175	154
Total.....	641	842	959	996	948

The decline in the pork index since 1924 is largely due to a drop in North-American production, which has been only partly compensated by a simultaneous increase in other continents.

Of the colonial products, cocoa has increased the most, though production has gone back since 1924. If the tea exports of China, which in post-war years have dropped to little more than one-half of what they were in 1913, be left out of account, the index for that commodity would be raised to 121 in 1923, 128 in 1924, 126 in 1925 and 133 in 1926.

Too much reliance must not be placed on the tobacco statistics as, owing to lack of data, the Asiatic production has had to be very roughly estimated largely on the basis of figures of area under cultivation. There is no doubt, however, that the production and consumption of tobacco and of the colonial goods enumerated in the table on page 36 have materially increased.

Vegetable Oil Materials.

The individual production indices are:

	1913	1923	1924	1925	1926
Cotton-seed	100	89	112	126	128
Linseed.....	100	114	119	146	127
Rape-seed	100	95	89	97	79
Hemp-seed.....	100	89	87	134	124
Sesamum	100	95	98	78	77
Soya beans	100	208	251	217	252
Ground nuts	100	166	203	235	233
Copra	100	172	182	187	207
Palm and palm-kernel oil	100	142	159	171	161
Olive oil.....	100	116	134	111	104

The contribution of Asia and Africa to the total production of this group of commodities is understated, as no production figures are available for China and as it has proved necessary to employ export statistics of soya beans, copra, palm kernels and palm oil. Moreover, certain reservations should be made in regard to the ground nuts index, which is based on somewhat incomplete, though probably fairly representative, production statistics. There are reasons to believe, however, that the development of the industries in which these oils are employed is adequately represented by the figures given above.

Textiles.

By far the biggest increase in the production of textiles has been effected in artificial silk, the output of which was estimated at almost 87,000 tons in 1925 and a little more than 101,000 in 1926, compared with about 13,000 tons in 1913. More than two-thirds of the world's supply in 1926 was derived from European and a little more than one-quarter from American mills. Some artificial silk is also produced in Japan.

The following are the textile indices:

	1913	1914	1924	1925	1926
Cotton.....	100	88	111	126	126
Flax	100	69	81	101	94
Hemp	100	93	93	140	132
Manila hemp.....	100	122	128	117	124
Jute.....	100	99	96	106	128
Wool.....	100	91	97	100	100
Raw silk	100	138	150	167	168
Artificial silk.....	100	367	490	657	766

The statistics of wool production are of the nature of somewhat hazardous estimates. The supply in 1926 was greater in North America, Africa and Oceania than before the war, but it was less in all the other territorial groups. The European production, which represents to-day about a quarter of the world's total, is 9 per cent less than in 1913.

The main cause of the shrinkage in the flax crop is the partial drying-up of Russian supplies. But, in 1925, a marked recovery is stated to have been made in the Russian production, which rose to 91 per cent of the pre-war average, compared with 53 per cent in 1923 and 72 per cent in 1924. In 1926, it again declined to 86 per cent.

The raw silk index is misleading. Production figures for China, India, Indo-China, Persia and Turkestan do not exist, and in their stead export statistics have been utilised. According to rough trade estimates of the world production of raw silk before the war, based on similar estimates of cocoon production, the total supply of silk was about 95,000 to 100,000 tons, of which 90,000 to 95,000 were from Asiatic sources. These estimates, however, are scarcely of a reliable nature. Of this total, only 29,300 tons in 1913 are taken into account for the calculation of the index, and it is practically certain that the total production of silk did not increase in proportion to this fraction, which represents Western and Japanese production plus that part of other Eastern production which entered into international trade. On the assumption that the Chinese cocoon production remained stationary, the total world production of silk cocoons in 1926 would have been some 17 per cent greater than the pre-war. If the raw silk index in 1926 had been taken as 117, instead of 168 shown above, then the total textile index would have been about 124 instead of 128 when weighted by 1926 prices. This would have affected the total index for all commodities by about one-third of 1 per cent.

The increase in the cotton crop in recent years is striking. As the yield per hectare in the agricultural years 1925-27 was in all continents, though not in all countries, somewhat below the averages for the last pre-war quinquennium, the larger crop is due to an extension of the area under cultivation. The indices of area and crops for the three leading cotton-growing countries — the United States of America, British India and Egypt — for the rest of Asia and Africa and for the South American continent are given below :

	Averages for the period 1909-10—1913-14 = 100.			
	1923-24	1924-25	1925-26	1926-27
United States of America :				
Area	109	121	135	138
Crop	78	105	124	137
South America :				
Area	294	319	286	230
Crop	209	219	243	188

Averages for the period 1909-10—1913-14 = 100.				
	1923-24	1924-25	1925-26	1926-27
British India :				
Area	105	119	127	111
Crop	121	142	146	116
Rest of Asia :				
Area	91	111	116	99
Crop	73	87	94	78
Egypt :				
Area	102	106	115	106
Crop	93	104	114	103
Rest of Africa :				
Area	376	577	640	545
Crop	341	498	612	522
WORLD :				
Area	109	123	133	127
Crop	89	112	126	126

In the United States, both the area and the crop were greater in the cotton year 1926-27 than in the preceding year, the average yield per hectare being either greater than or practically equal to the pre-war average. The slight decline in the world crop was due to reductions in the area under cotton in the other producing countries.

Hides and Skins.

The indices of production of hides and skins are based on the same slaughter figures and supplementary estimates as have served for the construction of the meat production indices in the case of cattle and calves, sheep and lambs. For the index of goat and kid skins the available data proved to be very defective. To the production figures for hides and skins, the export figures for China have been added. The individual production indices are given below :

	1913	1923	1924	1925	1926
Cattle hides and calf skins	100	97	105	107	110
Goat and kid skins	100	101	95	111	112
Sheep and lamb skins	100	84	87	94	101

The second index is largely affected by Chinese exports, China being the most important producer of goat and kid skins in the world.

Rubber.

Estimates of rubber production vary to an appreciable extent. The figures adopted here are subject to revision and must not be considered official.

The increase in the world supplies has been wholly due to the development of the plantation industry; the quantity of Para and wild rubber sold in recent years is little more than one-half of what it was in 1913.

Indeed, while the production of Para and wild rubber constituted some 55 per cent of the world supplies in 1913, in the last three years it has represented only 6 to 9 per cent.

Wood-Pulp.

There has been a certain shift in recent years from the production of mechanical in favour of chemical pulp, which is used not only for paper but as the raw material of the artificial-silk industry. As the price of chemical is higher than that of mechanical pulp, the weighted indices of this group slightly exaggerate the increase in the absolute quantity of material available for paper-making. The unweighted quantity indices are:

	1913	1923	1924	1925	1926
Mechanical pulp	100	132	143	153	170
Chemical pulp.....	100	138	146	166	188
Total	100	135	145	160	180

For certain European countries statistics are lacking. Probably Europe to-day accounts for nearly one-half of the world output. Her share has, however, sunk by about 15 per cent, despite an increase of over 50 per cent in the actual quantities produced, on account of the enormous increase in the North American output of mechanical pulp mainly used in the newspaper trade. Of the chemical pulp Europe still produces over a half, and of the mechanical pulp North America nearly 60 per cent.

Fuels.

As stated above, the rise in the total fuel index is almost wholly due to the rapid increase in the world's supply of petroleum. The individual indices for the three types of fuel considered are:

	1913	1923	1924	1925	1926
Coal.....	100	99	98	97	97
Lignite	100	124	134	141	147
(Coal and Lignite).....	(100)	(100)	(99)	(99)	(99)
Petroleum	100	265	263	277	284

The coal index is influenced by the fact that production in the base year 1913 exceeded the annual average production in the period 1909-13 by 11 per cent.

Lignite is of quite minor importance as a fuel except in a few Central European countries. Measured in terms of coal, the world production of lignite before the war represented only a little over 2 per cent and in recent years somewhat more than 3 per cent of the combined production of coal and lignite.

Lignite-mining was given a stimulus by the success of the attempts made in Germany during and after the war to substitute lignite for coal for certain purposes. But the increase in lignite supplies has not been sufficient to counterbalance the drop in the world coal production from the exceptional level reached in 1913.

The drop in the coal index is wholly due to the reduced output in Europe. The following table shows the territorial group indices and the contribution of each group to total production.

PRODUCTION INDICES FOR COAL, INCLUDING LIGNITE, COUNTED IN TERMS OF COAL.

	Percentage distribution	Production in each year as percentage of 1913 production					Percentage distribution	
		1913	1923	1924	1925	1926	1925	1926
(a) Eastern and Central Europe :								
Including Russia (U.S.S.R.)	20.5	63	86	91	103	19.1	21.5	
Excluding Russia (U.S.S.R.)	18.1	65	90	95	105	17.6	19.4	
(b) Rest of Europe	30.4	96	97	91	62	28.2	19.4	
Europe, excluding Russia (U.S.S.R.)	48.5	84	94	93	78	45.8	38.8	
Europe, including Russia (U.S.S.R.)	50.9	83	93	91	79	47.3	40.9	
North America	42.7	115	100	101	116	44.0	50.4	
Caribbean	0.1	142	138	146	146	0.1	0.1	
South America	0.1	146	134	147	147	0.1	0.1	
Africa	0.6	139	146	153	164	1.0	1.1	
Asia, excluding Asiatic Russia	4.5	140	149	137	135	6.2	6.1	
Oceania	1.1	100	110	110	110	1.3	1.3	
WORLD	100	99.6	98.7	98.2	98.0	100	100	

European production in 1926 was, of course, seriously affected by the British coal dispute and none of the European indices for that year have much permanent significance. From the information published up to date, it would seem probable that European production in 1927 was higher than it has been since the war.

Metals.

The smelter production of metals has been taken in preference to the output of ore, as the metal content of ore mined is not normally calculated, and the output of the smelter-works better reflects industrial activity. The system adopted has, of course, an important influence on the figures of national or continental distribution. Thus, the smelter production of both Europe and North America exceeds their ore production, while South American and Asiatic ore is exported for smelting elsewhere. As stated above, very large stocks of certain metals existed after the war. By the beginning of 1925 these stocks had been reduced to normal dimensions, a fact which points to a somewhat greater activity within the non-ferrous branches of the metal industry than is indicated by the index figures for the preceding years.

The individual indices of the world production of the metals considered are :

	1913	1923	1924	1925	1926
Pig-iron.....	100	89	87	98	100
Steel	100	102	103	118	122
Copper	100	124	134	141	147
Lead	100	102	112	130	137
Zinc.....	100	96	103	116	126
Tin	100	107	112	112	112
Aluminium.....	100	216	265	291	314
Nickel.....	100	100	114	119	113
Silver	100	109	107	109	111

The output of pig-iron in 1913 was 15 per cent and that of steel 17 per cent higher than the annual average production during the quinquennium 1909-13. The 1926 production of pig-iron likewise exceeded that average by 15 per cent and that of steel by 43 per cent. The increase is mainly due to the development of the industry in the United States of America, where, in 1926, over 43 per cent more pig-iron and 77 per cent more steel was turned out than in the pre-war quinquennium. European production of pig-iron in 1925 was 7 per cent lower and of steel 14 per cent higher than in this pre-war period. The alteration of

the balance between the production of pig-iron and steel is almost universal, and is to be attributed in part to the increased utilisation of scrap as raw material for steel production and in part to the substitution of cheap steel for wrought and cast iron. Of the pig-iron produced, more is accordingly converted into steel and less into iron products.

North America now produces more pig-iron and more steel than Europe. The drop in the European production in 1926 was surprisingly small considering the effects of the coal conflict upon the British output, the decline, as compared with 1925, being only 3 per cent for pig-iron and 1 per cent for steel. The 1926 pig-iron production of Europe, excluding Great Britain, exceeded the average for 1909-13 by 11 per cent, though it was still short of the 1913 figure by 7 per cent. The 1926 steel production of the same group of countries surpassed the pre-war average by 26 per cent and the 1913 record figure by 6 per cent.

The preliminary production figures available for 1927 indicate that European steel output, though not the pig-iron output, was greater than in 1913.

Compared with 1913, the European production of all the other metals considered, with the exception of aluminium and, in 1925, tin, likewise shows a very serious falling-off and the North American a uniform increase. The greater part of the tin ore smelted in Europe is derived from Asiatic mines. The following figures show how great is the contrast in the progress achieved East and West of the Atlantic.

SMELTER PRODUCTION INDICES.

1913=100.

	Europe				Europe, excluding Russia				North America			
	1923	1924	1925	1926	1923	1924	1925	1926	1923	1924	1925	1926
Pig-iron.....	57	73	80	77	61	78	84	79	129	100	117	126
Steel	70	87	96	95	76	93	101	97	142	119	143	152
Copper	51	55	63	73	60	65	73	81	126	136	143	149
Lead	46	54	66	68	46	54	66	68	139	157	181	191
Zinc	61	69	79	84	61	69	79	84	155	156	175	195
Tin.....	94	108	114	118	94	108	114	118	—	—	—	—
Aluminium.....	188	239	277	291	188	239	277	291	256	301	310	347
Nickel	No production								125	140	148	136
Silver.....	54	62	67	73	53	61	66	71	93	87	88	85

Chemicals (Fertilisers).

The indices for the eleven different types of fertilisers considered are :

	1913	1923	1924	1925	1926
Natural phosphates.....	100	98	108	124	130
Potash	100	117	100	145	127
Sulphur.....	100	248	167	185	237
Natural guano	100	235	295	263	188
Nitrate of soda (Chilian)	100	99	87	91	73
Nitrate of lime (Norwegian) .	100	255	223	299	274
Cyanamide of calcium.....	100	294	333	469	539
Sulphate of ammonia	100	168	194	222	245
Superphosphate of lime	100	91	101	115	116
Basic slag.....	100	55	81	90	94
Sulphate of copper	100	106	115	114	123

As already pointed out, the greatest progress has taken place in the manufactured azotic fertilisers, *i.e.*, cyanamide of calcium, Norwegian nitrate of lime and sulphate of ammonia. Europe has contributed to this progress quantitatively more than any other territorial group.

III. TRADE.

In order to compare the quantum of the world's trade in recent years with that before the war, it is necessary to estimate the average rise in the value of the goods constituting that trade. Such an estimate cannot, of course, be made with any close precision; but there are reasons for believing that the changes in prices in 1925 and 1926 were approximately of the following order of magnitude :

	1913	1925	1926
Imports	100	153	144
Exports	100	156	146.5
Total trade	100	154.5	145

It is not necessary here to discuss in detail the data upon which these estimates are based or the principles applied in framing them. The question is treated

in the companion publication to this¹. The procedure here adopted in order to ascertain the growth or contraction of world trade, however, differs from that employed in the preceding section in the case of raw materials. For raw materials, quantum indices, with prices in selected years as fixed weights, are employed. For trade, the actual values, as recorded in the official returns of the various countries, are first converted into their dollar equivalents and then divided by what are believed to be average increases in the prices ruling in the year in question — that is, by the indices just set out.

It may be noted in this connection that the general index of raw material and foodstuff prices for 1926 calculated in the following section works out at 144 if the 1913 quantities be used as weights and at 142 if weighted by the 1926 quantities. The discrepancy between these two figures is, of course, due to the fact that the latter is more influenced by those products the prices of which have fallen on account of a rapid increase in their output in post-war years.

In view of the fact that foodstuffs and raw materials in 1926 had fallen relatively more in price than manufactured articles which constitute a considerable portion of world trade, a somewhat greater discrepancy between the trade and the raw-materials price indices might have been expected. But one of the causes which has contributed to the high price of manufactured goods lies in the fact that Customs tariffs on finished articles have been raised considerably more than on raw materials and foodstuffs. Indeed, tariffs on the two latter classes of goods are generally lower than they were before the war. These high tariffs have tended to check trade in the goods on which they are imposed, and in consequence the average prices of goods constituting international trade are no doubt lower than the average prices of all goods. Goods the prices of which have been artificially raised fail to find foreign markets.

It will be shown below that the trade of the world as a whole has not increased to the same extent as has the production of raw materials. This dissimilarity of results is not, it is believed, due to any appreciable extent to differences in the systems of measurement utilised in calculating the production and trade indices, and indeed the aggregate trade and the aggregate production indices of the world, excluding Europe, are in good agreement.

But, before considering the causes to which the failure of world trade as a whole to keep pace with the growth in production may be due, the figures of that trade should be set out. The following table shows the percentage changes which have taken place in the imports, exports and total trade of the various groups of countries considered above. The trade of each country is converted into dollars and the results are divided by the price indices already quoted.

¹ See *Memorandum on International Trade and Balances of Payments, 1912-1926*.

TABLE IX.

PERCENTAGE CHANGES IN QUANTUM OF TRADE.

Continental Group	Imports			Exports			Total		
	1913	1925	1926	1913	1925	1926	1913	1925	1926
(a) Eastern and Central Europe : Excluding Russia (U.S.S.R.)	100	92.8	82.6	100	75.6	86.0	100	84.1	83.4
Including Russia (U.S.S.R.)	100	83.7	74.3	100	66.7	75.1	100	75.1	74.5
(b) Rest of Europe *	100	101.3	102.8	100	98.1	94.2	100	100.3	99.3
Europe, excluding Russia (U.S.S.R.) *	100	98.7	96.5	100	90.4	90.8	100	95.1	94.5
Europe, including Russia (U.S.S.R.) *	100	95.4	93.1	100	85.9	86.7	100	90.6	90.3
North America	100	139.9	158.3	100	137.8	142.0	100	138.5	149.7
Caribbean	100	132.0	129.9	100	133.3	135.2	100	132.7	133.1
South America	100	102.6	104.2	100	102.6	103.8	100	102.9	104.1
Africa	100	113.7	120.1	100	103.2	103.8	100	108.1	111.7
Asia	100	130.1	145.8	100	157.1	159.7	100	143.7	153.1
Oceania	100	130.1	136.8	100	133.3	131.1	100	132.0	134.5
WORLD	100	107.8	111.1	100	107.1	108.5	100	107.4	110.3

Note. — In the case of a few countries, the figures include bullion and specie or relate to general trade.

The table requires careful interpretation. The trade of each group of countries has been divided by the same price index, irrespective of the actual prices at which the goods handled by any particular country may have been actually bought or sold. This procedure has been adopted for the following reasons. If the average prices of the goods composing world trade are those given, then any particular country or group of countries may have gained or lost status in the whole catena of trading countries, or, in other words, the purchasing power of its foreign trade in relation to that of other countries may equally well have increased or decreased, through the sale of an unchanged quantity of goods at different average prices or a different quantity of goods at unchanged prices. The price and quantum factors must here be treated as equal, because, although they may

* Excluding the Netherlands owing to incomparability of pre- and post-war statistics.

be separable for a restricted number of countries for which special indices have been calculated, they are not distinguishable for the vast majority of States. But the table, as has been pointed out above, is not identical with that showing the production indices; and, although the difference of methods employed may have a negligible effect so far as the world as a whole is concerned or even in the case of the continental groups, it may not be without importance when smaller groups of countries are considered. It is probable, for instance, that the trade of Central and Eastern Europe is conducted on the average at a lower level of prices than that of the world in general and that, in so far as those States trade *inter se* at a lower price level, the utilisation of the world index has tended to exaggerate the contraction of their activities. For this reason, the percentage figures from which Table IX is derived are given below in a footnote¹. The table should be studied with these considerations in mind.

It will be seen that world trade in 1925 was about 7 per cent and, in 1926, 10 per cent greater than in 1913. The calculations upon which this estimate is made have, step by step, been conservative in character and are likely to understate rather than exaggerate the magnitude of international trade in recent years. On the other hand, it must be remarked in this connection that in certain cases, in

¹ PERCENTAGE CHANGES IN WORLD TRADE BY CONTINENTAL GROUPS (1913 = 100).

(Basis : Recorded Values, reduced to dollars)
Special Trade, Merchandise only.

Continental Groups	Imports				Exports				Total			
	1913	1924	1925	1926	1913	1924	1925	1926	1913	1924	1925	1926
(a) Eastern and Central Europe :												
Excluding Russia (U.S.S.R.)	100	117	142	119	100	98	118	126	100	108	130	121
Including Russia (U.S.S.R.)	100	102	128	107	100	86	104	110	100	94	116	108
(b) Rest of Europe *	100	144	155	148	100	144	153	138	100	144	155	144
Europe * (excluding Russia)	100	136	151	139	100	129	141	133	100	133	147	137
Europe, including Russia (U.S.S.R.) *	100	130	146	134	100	121	134	127	100	130	140	131
North America	100	183	214	228	100	193	215	208	100	183	214	217
Caribbean	100	179	202	187	100	213	208	198	100	179	205	193
South America	100	123	157	150	100	147	160	152	100	123	159	151
Africa	100	144	174	173	100	144	161	152	100	144	167	162
Asia	100	175	199	210	100	192	245	234	100	175	222	222
Oceania	100	176	199	197	100	177	208	192	100	176	204	195
WORLD	100	144	165	160	100	148	167	159	100	144	166	160

Note. — In the case of a few countries the figures include bullion and specie or relate to general trade.

* Excluding the Netherlands, owing to incomparability of pre- and post-war statistics.

default of 1926 data, it has proved necessary to interpolate in that year figures for 1925. In view of the general fall in world prices in 1926 as compared with 1925, these interpolated figures might slightly affect the index in the opposite direction.

The fact that the total recorded international trade has increased does not prove that the interchange of commodities in the world has grown to an equivalent extent, for the number of trading nations is now greater than it was in 1913. Actually, however, there can be little doubt that the trade of the world was greater in 1926 than in 1913 ; for that part of the trade of countries with modified frontiers or of newly founded States which might before have been domestic is by itself less than 4.5 per cent of world trade and from it must be deducted the trade which used to cross a Customs frontier and does so no longer.

The total trade of Europe still remains some 10 per cent below the 1913 level. But the results for 1926 are in certain respects more favourable than those for 1925. In spite of the losses involved by the British coal dispute, exports increased. Imports in 1925 were largely influenced by the purchase of goods with the proceeds of foreign loans, especially by Germany. With the gradual utilisation of those loans, they shrank slightly in 1926 and a more normal trade equilibrium was thus established.

The total trade of all other parts of the world, except South America, is appreciably greater than before the war, and in North America, Africa, Asia and Oceania there has been a steady progress from year to year. North American and Asiatic trade have both increased by about a half, Central American and Oceanic by about a third. The fall in the purchasing power of gold has adversely affected African exports, while South America, which is using more of its own raw materials and foodstuffs, shows a growth of exports of less than 5 per cent.

The total trade index for the world, excluding Europe, in 1926 was as high as 141, or considerably more than the corresponding index for the production of foodstuffs and raw materials weighted by 1913 prices, which was 131. This is the natural result of the fact that the foodstuffs which have increased least constitute a greater proportion of production than of international trade. On the other hand, the aggregate trade of these continents has risen less than their production of industrial raw materials, the 1926 index for which was 150 when weighted by 1913 prices and 145 weighted by 1926 prices.

A comparison of the European trade and production indices will show that the contraction in trade is not due, at least not primarily, to reduced local production of foodstuffs and raw materials. It is due rather to obstructions to the free international interchange of goods, to the contraction of certain overseas markets for manufactured products in countries which have developed their own industry in recent years, and to the reduced supplies of new capital savings available for lending abroad.

But in certain agricultural countries in Europe land reforms and other economic factors have resulted in the peasants consuming a greater proportion of their produce themselves.

Eastern Europe has been most affected both by the artificial obstructions to trade and by land reforms, and it is natural, therefore, that the quantum of its imports and exports, despite the increase in the number of trading units, should have contracted more than that of the rest of the Continent. Even in 1926, the trade of Central and Eastern Europe, inclusive of Russia, was 25 per cent less than before the war. In the rest of Europe, total trade in both 1925 and 1926 was practically up to the 1913 standard, imports being a few points higher and exports a few points — in 1926, nearly 6 per cent — lower.

The changes which have taken place in the relative growth of trade in different parts of the world may further be judged from the following table, giving the percentage distribution of world trade drawn up on lines similar to those adopted for Table VII.

The Netherlands have been omitted, as the pre- and post-war trade statistics of this country are not comparable. Had the Netherlands been included, the contribution of Europe to world trade in 1925 would still have been about one-half.

TABLE X.

PERCENTAGE DISTRIBUTION OF WORLD TRADE BY CONTINENTAL GROUPS.

(Basis: Recorded Values, reduced to Dollars.) Special Trade. Merchandise only.

Continental Group	Imports				Exports				Total			
	1913	1924	1925	1926	1913	1924	1925	1926	1913	1924	1925	1926
(a) Eastern and Central Europe: Excluding Russia (U.S.S.R.)	17.8	14.4	15.3	13.2	17.4	11.5	12.3	13.7	17.6	13.0	13.9	13.4
Including Russia (U.S.S.R.)	21.4	15.2	16.6	14.3	21.6	12.5	13.4	14.9	21.5	13.9	15.1	14.6
(b) Rest of Europe*	40.2	40.3	37.9	37.4	33.6	32.7	30.7	29.0	37.0	36.5	34.4	33.3
Europe, excluding Russia (U.S.S.R.)*	58.0	54.7	53.2	50.6	51.0	44.2	43.0	42.7	54.6	49.5	48.3	46.7
Europe, including Russia (U.S.S.R.)*	61.6	55.5	54.5	51.7	55.2	45.2	44.1	43.9	58.5	50.4	49.5	47.9
North America	12.4	15.7	16.0	17.6	15.8	20.6	20.2	20.5	14.0	18.1	18.1	19.0
Caribbean	1.9	2.3	2.3	2.2	2.4	3.5	3.0	3.0	2.1	2.9	2.6	2.6
South America	5.7	4.9	5.4	5.3	6.7	6.6	6.4	6.3	6.2	5.7	5.9	5.8
Africa	4.0	4.0	4.3	4.4	4.5	4.4	4.3	4.3	4.3	4.2	4.3	4.4
Asia	11.9	14.5	14.4	15.6	12.7	16.5	18.6	18.7	12.3	15.5	16.4	17.1
Oceania	2.5	3.1	3.1	3.2	2.7	3.2	3.4	3.3	2.6	3.2	3.2	3.2
Total	100	100	100	100	100	100	100	100	100	100	100	100

Note. — In the case of a few countries, the figures include bullion and specie or relate to general trade.

* Excluding the Netherlands, owing to incomparability of pre- and post-war statistics. The inclusion of the Netherlands would raise the percentages for Europe, including Russia, in 1924, 1925 and 1926 to: imports 56.9, 55.9 and 53.2; exports 46.5, 45.3 and 45.2; totals 51.8, 50.8 and 49.3.

The shares of North America, the Caribbean, Asia and Oceania in both imports and exports have increased. The African share in the imports has likewise increased, but in the exports has slightly declined. The South American shares have diminished a little and those of Europe to a much more serious extent. The proportion that European exports constituted of world exports in 1925 had indeed sunk, by 20 per cent, as compared with 1913. The exports of Europe, even after excluding the Netherlands, amounted to over one-half of world exports in 1913. By 1926 they had sunk to 44 per cent. This loss of status is, of course, due to some extent to the very great contraction of Russian trade, but there are few countries in Europe whose exports have increased as fast as have the aggregate exports of non-European countries. Conditions, however, improved in 1927, and from the data so far available it seems probable that Europe's contribution will be greater this year than it was last.

In 1926, the share of Asia in the total trade of the world was 39 per cent greater than it was in 1913 and that of North America 36 per cent greater. There is thus a tendency towards a shift of the world's centre of activity from Europe and the Atlantic to America, Japan and the Pacific Ocean. The growth of trade in that part of the world where the most rapid progress has been achieved since 1913 is shown below.

		\$ (000,000's)	Percentage increase
In 1925 the U.S.A.	exports were 2,264 greater than in 1913	=	92.5
" Indian	" 392	" "	50.8
" Canadian	" 838	" "	194.0
" Japanese	" 614	" "	194.9
" Chinese	" 363	" "	123.5
" Australian	" 332	" "	88.5
" New Zealand	" 111	" "	108.8
" Argentine	" 231	" "	46.1
" British Malaya	" 522	" "	270.5
	5,667		104.3

In the same period the exports of all European countries together had increased by only \$2,709 millions, that is to say, by only 48 per cent of the amount by which that of these nine countries had grown.

In the introductory section to this Memorandum, a comparison was made of the broad results obtained from this analysis by which an endeavour has been made to answer the first three questions with which this study is concerned.

It may, however, be not without interest to supplement that comparison by a table showing the percentage changes that have taken place in the territorial distribution of the production of foodstuffs and raw materials and of trade. As has been mentioned above, the distribution figures themselves are intended to be illustrative rather than exhaustive, and the percentage changes given below must not be accepted as doing more than indicating the direction in which economic forces in the world to-day are moving.

TABLE XI.

**RELATIVE CHANGES IN THE GEOGRAPHICAL DISTRIBUTION OF WORLD
PRODUCTION AND WORLD TRADE.**

	Relative share of each continental group in 1924, 1925 and 1926 as percentage of its relative share in 1913					
	1924		1925		1926	
	Produc- tion	Trade	Produc- tion	Trade	Produc- tion	Trade
(a) Eastern and Central Europe:						
Excluding Russia (U.S.S.R.)	80	74	85	79	81	76
Including Russia (U.S.S.R.)	76	65	87	70	87	68
(b) Rest of Europe	95	99	91	93	80	90
Europe, excluding Russia (U.S.S.R.)	87	91	88	88	81	86
Europe, including Russia (U.S.S.R.)	83	86	88	85	85	82
North America	111	129	110	129	114	136
Caribbean	167	138	153	124	147	124
South America	110	92	108	95	112	94
Africa	130	98	126	100	122	102
Asia	109	126	104	133	105	139
Oceania	111	123	100	123	105	123

The figures are only intended to be indicative of general tendencies and for this reason no decimals are shown.

It will be observed that the share of Central and Eastern Europe in world trade has contracted more than has the share of this group in the production of raw materials and foodstuffs. Possibly the production figures, including the U.S.S.R., are slightly too high and those of trade too low; but, despite the increase in the number of trading countries, the results shown in the table are by no means inexplicable. The development of small agricultural holdings has diminished the exportable surplus of wheat and other grain without reducing agricultural production to an equivalent extent. The trade of Russia has certainly shrunk to a greater degree than the yield of her soil. Higher tariffs impede intercourse and territorial redistribution has in certain cases rendered the international exchange of certain commodities less necessary. The trade of Western and Maritime Europe in 1926 contracted relatively little despite the heavy drop in the raw material production of this group.

That the share of Africa in the trade of the world has not increased more is due in a large measure to the relatively low price of raw gold.

North America and Asia have both won a position in world trade out of proportion to the increased yield of their natural resources as a whole (foodstuffs included) but not to that of their industrial raw materials sources proper. In both continents there has been a rapid, in the former an extremely rapid, growth of manufacturing industries.

This particular table, and indeed the whole analysis contained in this Memorandum, attracts attention to the importance of the question whether the changes that have taken place in the position of different countries and of different groups of countries in the scale of trading nations are primarily due to causes relating to prices or to causes relating to quantities, whether a unit of manufactured commodities purchases to-day a greater or less quantity of raw materials and foodstuffs. An attempt to answer this question is made in the following section.

THE RELATIVE MOVEMENTS IN THE PRICE OF RAW PRODUCTS AND MANUFACTURED ARTICLES.

It is proposed in this chapter to make a preliminary and brief investigation into the changes that have taken place in recent years in the relative prices of raw products and manufactured articles. Before entering upon this problem, however, the price indices of the various groups of raw materials and foodstuffs that have been considered above may with advantage be compared. These indices are, as already stated, of only approximate accuracy as they are based on a very restricted number of quotations and refer only to what are believed to be medium qualities of the articles selected in leading international markets. In the following table two indices are shown for each group. For the first, the weights are based on the relative production of the various commodities composing each group in 1913 ; for the second, the weights are based on relative production in 1926.

	1913 Weights	1926 Weights
Rubber	67	67
Chemicals (fertilisers).....	105	102
Metals.....	129	129
Food crops ¹	136	136
Meat (farm prices).....	137	136

¹ Other than cereals and crops included under Colonial produce.

	1913 Weights	1926 Weights
Vegetable oil materials.....	140	141
Cereals	149	149
Textiles	154	148
Wood-pulp	168	168
Colonial produce, etc.....	171	163
Fuels.....	181	184
General Index	144	142
Foodstuffs	142	142
Raw materials	148	143

The indices in column (b) tend to be somewhat lower than those in column (a) as they are more influenced by those commodities whose relative prices have fallen because their output has increased more than that of other products. The indices in column (a) are more comparable with the majority of national wholesale price index numbers, as most compilers still adhere to pre-war weights. The weights employed have naturally a much greater effect on the raw material than on the foodstuffs indices, for there have been no revolutionary changes in the relative importance of the different kinds of human food comparable with those caused by the extremely rapid development of the production of petroleum, rubber, wood-pulp, artificial silk and aluminium.

The groups are arranged in the above statement in the order of magnitude of the indices weighted by 1913 quantities. Rubber prices are more than 50 per cent lower than the average for all groups and are over 30 per cent lower than in 1913. Both metals and fertilisers are lower than farm products, and on raw material prices alone it might be presumed that present-day conditions favoured the farmer. That this is not the case will become apparent when the prices of manufactured articles are analysed. The fuel index for 1926 is of course exceptional. All fuels rose rapidly in price during that year on account of the temporary cessation of the British production of coal. Thus the coal index in 1925 was 155, in 1926, 179; the petroleum indices were 179 and 202 respectively.

The central problem with which this chapter is concerned — the relation between the prices of raw and finished products — is rendered difficult of solution owing to the inadequacy of the data concerning the prices of manufactured products. The lack of information is not simply due to the fact that students of prices have unduly concentrated on raw materials and foodstuffs. The period under review covers thirteen years, in which normal inventive progress has been stimulated and the normal conservatism of habits has been undermined by the war and by the uncertainty and insecurity of the conditions that ensued. The methods of production have undergone important modifications; demand has changed and the products of industry, even when bearing the same name as in 1913, are often no longer the same products. Even when price data are available, therefore, they frequently fail to measure identical goods. The amount of carefully sifted data that is available is, however, remarkably small. In view of this fact, it

is not advisable to rely on any single line of enquiry and endeavour to prove thereby the character or the degree of change that has taken place. It is preferable, in the first instance at any rate, to select evidence as independent in origin as possible, to apply a number of different tests, and ascertain whether the data thus drawn from different sources tend to point in a like direction. Four sources of evidence — none of them in themselves wholly satisfactory, or by themselves adequate — are in fact available.

First, in certain countries, the indices of wholesale prices are composed of groups that embrace respectively raw materials, semi-manufactured articles and finished products. Secondly, it is possible to obtain price quotations in some markets for raw materials and for the articles manufactured therefrom. Thirdly, the price indices of the goods that constitute the international trade of different countries are in certain cases composed mainly of manufactured articles and in others mainly of raw materials and foodstuffs. Thus, the export index of an agricultural country is likely to be confined mainly to raw products and its import index mainly to finished goods. Finally the enquiry into the level of tariffs, which was conducted by the League of Nations for the World Economic Conference, afforded a large amount of information concerning the prices of goods entering into international trade.

It will be shown below that the evidence drawn from these four sources points to the conclusion that the prices of individual manufactured goods have, in the great majority of cases, risen more than those of the raw materials from which they are made, and that in certain important areas of the world manufactured goods as a whole have risen more in price than have raw products. But it does not necessarily follow from this that if it were possible to compute world indices for raw materials and for manufactured products the discrepancy between these indices would be similar to that which the evidence considered below suggests. In the first place, a number of manufactured products are in every day popular use to-day that scarcely existed or did not exist before the war—wireless telegraphy and knitted over-garments may be quoted by way of illustration. Secondly, changes of radical importance have taken place in the relative importance in consumption of goods which were in use in 1913. The growth of the motor-car and electrical industries has been such that any price index of manufactured goods covering the period from 1913 to 1926 must be based on a hypothesis (for the establishment of the weighting coefficients) which necessarily robs it of much of its significance. If the evidence to be considered therefore points to the conclusion that the prices of individual manufactured products have risen more than those of the raw materials employed in their manufacture, or that the prices of manufactured goods as a whole in certain countries have risen more than those of raw materials and foodstuffs in those countries, it must not be presumed that it is necessarily true that the prices of manufactured goods as a whole are likewise, and to the same extent, higher than those of raw materials and foodstuffs as a whole. There is, indeed, a strong presumption that they are higher. But the present analysis is at least insufficient to measure the amount of such discrepancy as exists.

Unfortunately very few countries publish indices of wholesale prices in such a form as to permit a clear distinction to be made between goods in various stages of manufacture. Those of Germany and Sweden are the most satisfactory — though the grouping in the Danish, Norwegian and United States indices is not without value for the purposes of the present analysis. The annual averages of the indices for these countries are given below :

Sweden.

Index of the Kommerskollegium.

Years	1913=100				Raw materials=100			
	Raw materials	Semi-manufactures	Finished products	General index	Raw materials	Semi-manufactures	Finished products	General index
1920	369	337	365	359	100	91	99	97
1921	194	207	246	222	100	107	127	114
1922	147	155	196	173	100	105	133	118
1923	147	148	180	163	100	101	122	111
1924	150	151	175	162	100	101	117	108
1925	154	160	166	161	100	104	108	105
1926	142	149	154	149	100	105	109	105
1927	138	149	149	146	100	108	108	106

Germany.

Official Index.

Years	1913=100				Raw materials=100			
	Agri-cultural products	Raw materials and semi-manufactures	Finished products	General index	Agri-cultural products	Raw materials and semi-manufactures	Finished products	General index
1924	120	142	156	137	100	118	130	114
1925	133	141	157	142	100	106	118	107
1926	129	130	150	134	100	101	116	104
1927	138	132	147	138	100	96	107	100

Norway.

Official Index.

Years	Raw materials	Manufactured goods	Raw materials	Manufactured goods
1923	232	232	100	100
1924	265	270	100	102
1925	248	259	100	104
1926	192	205	100	107
1927	161	172	100	107

Denmark.
Official Index.

Years	Raw materials and semi-manuf.	Consumers' goods	Raw materials and semi-manuf.	Consumers' goods
1925	182	237	100	130
1926	143	184	100	128
1927	132	175	100	133

United States of America.

Bureau of Labor Statistics.

Special index numbers of identical commodities in raw and manufactured stage.

Years.	Raw.	Manufactured.	Raw.	Manufactured.
1914	99	101	100	102
1915	101	106	100	105
1916	125	131	100	105
1917	184	182	100	99
1918	208	203	100	98
1919	216	215	100	100
1920	220	233	100	106
1921	121	148	100	122
1922	130	139	100	107
1923	138	148	100	107
1924	139	148	100	106
1925	151	160	100	106
1926 ¹				

¹ Calculation of special index numbers discontinued.

It will be observed that in every country for which there is evidence, and in almost every year, the prices of partly manufactured goods tend to be above those of raw materials and those of finished products above those of semi-manufactured goods. This discrepancy was greatest in each case during the various periods of commercial depression — for instance, in North America in 1921, in Germany in 1924, in Denmark in 1925, in Norway in 1926. It must not be overlooked, however, that all these indices are weighted according to 1913 consumption so that too little importance is given to those industries, such as the manufacture of motor-cars, that have developed the most rapidly — industries whose products have become relatively cheap.

As a check on the above index numbers special price indices have been calculated for a number of individual commodities arranged according to their stage of manufacture.

TABLE XII.

RELATIVE CHANGES IN THE PRICES OF INDIVIDUAL COMMODITIES OR GROUPS
OF COMMODITIES ARRANGED ACCORDING TO STAGES OF MANUFACTURE

A. UNITED STATES OF AMERICA

Commodities	Indices		Percentage changes in relative value		Commodities	Indices		Percentage changes in relative value	
	1925	1926	1925	1926		1925	1926	1925	1926
Maize	165	120	100	100	Milk, fresh	147	148	100	100
" meal	174	137	105	114	Butter and cheese	148	142	101	96
" oil	200	198	121	165	Wool	110	83	100	100
Rye	177	150	100	100	" yarn	222	185	202	223
" flour	196	179	111	119	Silk, raw	169	155	100	100
Oat	124	115	100	100	" yarn	173	167	102	108
" meal	135	124	109	108	Iron ore	125	121	100	100
Wheat	190	171	100	100	Pig iron	130	125	104	103
" flour	200	186	105	109	Iron bars	163	165	130	136
" bread	198	199	104	116	Steel plate and structural steel	136	135	109	112
Cattle	125	112	100	100	Skelp	141	137	113	113
Beef, fresh	133	124	106	111	Wire and nails	161	158	129	131
" salt	105	112	84	100	Cutlery	221	208	177	172
Hogs	146	155	100	100	Copper	89	88	100	100
Pork, fresh	169	184	116	119	" wire	100	102	112	116
" cured and hams	169	173	116	112	Lead	207	192	100	100
Poultry, live	161	171	100	100	" pipe	207	195	100	102
" dressed	163	179	104	105	Zinc, slab	137	132	100	100
Cotton	181	133	100	100	" sheet	137	146	100	111
" yarn, carded	172	146	95	110	Wood, pulp	121	129	100	100
" thread	186	186	103	140	Paper, newsprint	179	167	148	129
" cloth	189	157	104	118	White pine, boards	182		100	
" underwear	191	178	106	134	" " doors	191		105	
Hides, cow	83	71	100	100	Yellow pine, timber	181	190	100	100
Harness	110	109	133	154	" " boards	178	176	98	93
Skins, calf	107	92	100	100	Flooring	221	196	122	103
" shoes	182	181	170	197					
Skins, goat	110	103	100	100					
Shoes, kid	197	196	179	190					

B. CANADA

	1925	1926	1925	1926		1925	1926	1925	1926
Tobacco, raw	133	181	100	100	Lumber, timber	149	148	100	100
" manufactured ..	217	217	163	120	Pulp	153	156	103	105
Grains	181	164	100	100	Paper	187	176	126	119
Flour	178	166	98	101	Iron ore	112	106	100	100
Bakery prod.	199	191	110	116	Pig iron	132	128	118	121
Cotton, raw	193	144	100	100	Rolling mill prod.	155	149	138	141
" yarn and thread ..	183	158	95	110	Cast iron pipe	177	164	158	155
" fabrics	199	181	103	126	Hardware	175	165	156	156
" hosiery	278	277	144	192	Tools	203	203	181	192
Live-stock	125	127	100	100	Copper	103	101	100	100
Meat	136	145	109	114	" prod.	106	105	103	104
" canned and cured ..	165	171	132	135	Lead	195	176	100	100
Milk	134	135	100	100	" pipe	260	253	133	144
" products	147	144	110	107	Coal	214	213	100	100
Silk, raw	172	167	100	100	" tar	229	238	107	112
" manuf.	198	194	115	116	Hides	89	75	100	100
Wool	215	167	100	100	Harness leather	118	117	133	156
" yarn	181	186	84	111	Boots	158	166	178	221
Cloth, hosiery	231	220	107	132	Calf skins	110	89	100	100
Fish, raw	120	127	100	100	" boots	115	112	105	126
" dried	134	112	112	88	Flax, fibre	266	227	100	100
" canned	183	203	153	160	" tow sewing twine ..	180	180	68	79

TABLE XII (continued)

C. GERMANY

Commodities	Indices 1926	Percentage changes in relative value 1926	Commodities	Indices 1926	Percentage changes in relative value 1926
Rye	117	100	Wool †.....	182	100
„ flour	134	115	„ stockings †.....	200	110
Wheat	137	100	Flax*.....	149	100
„ flour	138	101	„ thread*.....	155	104
Potatoes*.....	149	100	Cotton.....	136	100
„ meal*.....	192	129	„ yarn.....	153	113
„ groats*.....	198	133	Cotton*.....	104	100
Cattle	106	100	„ yarn*.....	135	130
Beef	110	104	„ goods*.....	151	145
Pigs	134	100	Hemp	124	100
Pork	142	106	„ yarn.....	142	115
Milk*.....	120	100	Jute*.....	112	100
Butter and Cheese*.....	138	115	„ yarn*.....	124	111
Coal	124	100	„ twine †.....	139	124
Briquettes*.....	151	122	„ sacking †.....	165	147
Benzol*.....	180	145	Hides and skins*.....	117	100
Tar oil †.....	272	219	Leather*.....	131	112
Lignite	135	100	Shoes*.....	130	111
Briquettes*.....	145	107	Timber, round* †.....	92	100
Iron ore*.....	97	100	„ hewn or sawn*.....	147	160
Pig iron	115	119	Carpenter's planes* †.....	164	178
Iron Products	133	137	Timber, round* †.....	92	100
Copper*.....	87	100	Paper and cardboard* †.....	159	173
„ sheets*.....	94	108			
Zinc*.....	138	100			
„ sheets*.....	143	104			

* Figures referring to January 1927.

† Figures calculated from the data of the *Frankfurter Zeitung*. The other figures are computed from official data.

D. SWEDEN

	1926	1926		1926	1926
Cattle	135	100	Raw textiles	123	100
Meat	149	110	Yarn	164	133
Iron ore	110	100	Tissues	192	156
Pig iron	127	115	Hides and Skins.....	81	100
Iron and steel prod.	134	122	Leather.....	109	135
Wood	147	100	Shoes	161	199
Wooden articles	177	120	Coal	109	100
Pulp	171	100	Coal tar.....	202	185
Tar paper	155	91			
Paper.....	176	103			

The evidence afforded by the above statements confirms and strengthens that already obtained from the composite index numbers, namely, that in 1925 and 1926 there remained a general and appreciable shift in relative values in favour of manufactured articles. The exceptions to this rule are surprisingly few. Moreover it will be noted that the discrepancy between the relative price levels is greater the higher a commodity is placed in the scale of production.

The causes that may have contributed to this change in relative values are numerous and their relative importance differs greatly from commodity to commodity and from one quarter of the globe to another. In the first place, in the case of a number of foodstuffs, new areas were developed and brought into cultivation during the war to compensate for the reduced production in the war areas; these areas continue to some extent to compete with those whose output was temporarily reduced or stopped. Sugar cultivation to-day affords an excellent example of this phenomenon. Similarly, the capacity for the production of certain raw materials or semi-manufactured products (such as pig-iron and crude steel) was increased during the war beyond normal requirements, and the competing establishments tend to depress prices. Further, as the science of manufacture increases, less raw materials tend to be required for any given amount of finished goods. But opinion to-day tends towards the belief that the two factors of primary importance are the restrictions imposed on the supply of labour and the restrictions imposed by tariffs on the free movement of goods. The restrictions on the labour supply, whether effected by minimum wages, unemployment benefits, or other means, affect industrial workers to a greater extent than agricultural, and post-war tariffs are generally higher on manufactured goods and lower on raw materials and foodstuffs than they were before the war¹.

The index numbers of the goods entering into international trade afford some evidence that these factors — more especially the last two — have influenced the rates of the prices of manufactured goods and raw materials as a whole in certain countries. The export indices of countries whose sales are mainly of manufactured goods tend to be distinctly higher than their import indices and the export indices of agricultural countries to be below their import indices. In the following table certain of these indices are given, and in the last two columns of the table the percentage that finished manufactured goods constitute of total imports and total exports respectively.

¹ See *Recent Monopolistic Tendencies in Industry and Trade*, Prof. Gustav CASSEL; *Tariff Level Indices*, Geneva, 1927.

TABLE XIII.

Countries	Export Price Index as Percentage of Import Price Index				Manufactured Articles as Percentage of Total		
	1923	1924	1925	1926	Years	Imports	Exports
<i>Eastern and Central Europe.</i>							
Austria (1).....	105	107			1926	38.3	73.2
Czechoslovakia.....	102	101	103	98	1926	26.4	60.9
Germany.....	89	96	97	106	1926	12.5	70.7
Hungary.....	79	81			1925	33.9	16.4
Russia (U.S.S.R.).....		77	89	88	1926	39.8	0.6
<i>Western and Maritime Europe.</i>							
Sweden.....	133	130	122	131	1923	39.7	36.8
Switzerland.....	114	108	109		1923	34.3	78.0
United Kingdom.....	128	122	119	123			76.2
<i>South America.</i>							
Argentina.....	66	74	86				
Paraguay.....	94 (2)				1920	75.7	7.5
Uruguay.....	74						
<i>Africa.</i>							
Algeria.....	58	56	55				
<i>Asia.</i>							
India.....	76	86	96				

(1) Base 1922.

(2) Base 1919.

The countries selected are those whose exports are mainly composed either of manufactured goods or of raw materials and foodstuffs. The export price index is expressed in each case as a percentage of the import index for the same year. Whenever, therefore, the figures in the first four columns exceed one hundred, export prices have risen more than import prices, whenever they are below one hundred, import prices have risen the more. It will be observed that the export prices of such industrialised States as Germany, the United Kingdom, Sweden, Switzerland, are relatively high and those of the agricultural countries of South America and Africa are relatively low.

The gradual rise in the German figures from 89 in 1923 to 106 in 1926 attracts attention at once to the importance of the monetary factor. During inflation, domestic prices tend to drop recurrently, or remain definitely for relatively protracted periods, below the general level of world prices, and even after stabilisation is attained some time may pass before they reach that level. Reciprocally, prices in countries with currencies that have depreciated but little will tend to rule higher in an inflatory world than world prices; and, if stabilisation is achieved by a policy of deflation, as was the case in, for instance, the United

Kingdom, Sweden and Switzerland, the labour factor to which reference was made above, will, on account of the difficulty of reducing wages with sufficient rapidity, tend to operate with intensified force.

The figures therefore require careful interpretation, and the various causes that have contributed to the results shown are not easy to unravel. It is not the purpose of this chapter to attempt any detailed analysis of these causes, but attention should be drawn to two facts of special importance. First, the export indices are based on the presumption that the goods whose prices are measured have undergone no change in quality during the whole period under review. In certain cases, this presumption is known to be untrue. Thus, the British export index is undoubtedly influenced by the fact that the quality of certain of the commodities sold is superior to-day to what it was in 1913. Secondly, the average quality of any particular group of commodities may have become higher not because of any improvement in that of an individual article, but because less of the inferior kinds of articles comprising that group are sold. This second factor has also no doubt affected the British export index. Less coarse cotton goods, for instance, are exported to the Far East than was formerly the case, because these fabrics are now manufactured to a greater extent in Japan, China and India. It is quite possible, therefore, that the export indices of certain industrial countries may tend to exaggerate the rise in the prices of manufactured goods as a whole.

On the other hand, in countries whose import duties on manufactured articles have been materially increased, it is probable that the average export prices will tend to be below the average of the prices of all manufactured goods — for the duties, if effective, will tend to raise prices. But the goods whose prices have been raised the most will be less readily exported.

The fourth source of evidence as to the relative prices of manufactured goods and raw products is afforded by the data collected in connection with the enquiry made last year into the level of tariffs in certain countries. For this purpose, a very large quantity of price quotations was obtained, and for the year 1925 unweighted indices for raw materials and foodstuffs and for manufactured articles were computed. These indices work out respectively at 148 and 164. The basic quotations are open to criticism on a number of points which need not be entered into here, and it is probable that the index for manufactured articles is affected by the improvement in the quality of those articles. But these two indices tend, nevertheless, to confirm the evidence that has been submitted above.

As was stated at the beginning of the chapter, the present enquiry into relative prices does not pretend to be more than a preliminary approach to the problem. The evidence that has been submitted, however, appears to confirm the view that was expressed during the discussions of the World Economic Conference held last year, that in Europe at any rate a unit of manufactured goods purchases to-day a somewhat greater quantity of raw materials and foodstuffs than before the war.

ANNEXES

Annex I

INDICES OF WORLD PRODUCTION OF FOODSTUFFS AND RAW MATERIALS

Groups of Products	Articles	1913	1923	1924	1925	1926
Cereals and other food crops	<i>Group index weighted by 1926 values</i>	100	103	100	112	109
	Wheat	100	101	90	105	108
	Rye	100	97	81	104	97
	Barley	100	89	79	96	92
	Oats	100	97	93	103	102
	Maize	100	109	92	112	107
	Rice	100	103	111	110	109
	Potatoes	100	106	109	126	115
	Sugar { Beet sugar	100	76	104	104	98
	{ Cane sugar	100	153	167	178	165
Meat	<i>Group index weighted by 1926 values</i>	100	101	109	108	110
	Cattle	100	100	110	111	114
	Pork	100	105	114	108	108
	Mutton	100	84	87	94	101
Colonial produce, etc. . .	<i>Group index weighted by 1926 values</i>	100	121	122	125	127
	Coffee	100	129	118	118	130
	Cocoa	100	204	218	215	207
	Tea	100	105	110	109	115
	Hops	100	47	85	72	71
	Tobacco	100	134	131	145	137
Vegetable oil materials .	<i>Group index weighted by 1926 values</i>	100	119	135	142	138
	Cotton seed	100	89	112	126	128
	Linseed	100	114	119	146	127
	Rapeseed	100	95	89	97	79
	Hempseed	100	89	87	134	124
	Sesamum	100	95	98	78	77
	Soya beans	100	208	251	217	252
	Copra	100	172	182	187	207
	Palm oil and palm-kernel oil (raw)	100	142	159	171	161
	Olive oil (raw)	100	116	134	111	104
	Ground-nuts	100	166	203	235	233
Textiles	<i>Group index weighted by 1926 values</i>	100	97	112	126	128
	Cotton	100	88	111	126	126
	Flax	100	69	81	101	94
	Hemp	100	93	93	140	132
	Manila hemp	100	122	128	117	124
	Jute	100	99	96	106	128
	Wool	100	91	97	100	100
	Raw silk	100	138	150	167	168
	Artificial silk	100	367	490	657	766
	Hides and skins	<i>Group index weighted by 1926 values</i>	100	97	104	108
Cattle		100	97	105	107	110
Goats		100	101	95	111	112
Sheep		100	84	87	94	101
Rubber	<i>Group index weighted by 1926 values</i>	100	328	356	447	564
	Raw rubber	100	328	356	447	564

Annex I (continued)

INDICES OF WORLD PRODUCTION OF FOODSTUFFS AND RAW MATERIALS

Groups of Products	Articles	1913	1923	1924	1925	1926
Wood pulp	<i>Group index weighted by 1926 values</i>	100	136	145	162	183
	Mechanical pulp	100	132	143	153	170
	Chemical pulp	100	138	146	166	188
Fuels	<i>Group index weighted by 1926 values</i>	100	116	115	116	116
	Coal	100	99	98	97	97
	Lignite	100	124	133	144	144
	Petroleum	100	265	263	277	284
Metals	<i>Group index weighted by 1926 values</i>	100	101	102	115	119
	(smelter production)					
	Pig iron	100	89	87	98	100
	Steel	100	102	103	118	122
	Copper	100	124	134	141	147
	Lead	100	102	112	130	137
	Zinc	100	96	103	116	126
	Tin	100	107	112	112	112
	Aluminium	100	216	265	291	314
	Nickel	100	100	114	119	113
Silver	100	109	107	109	111	
Chemicals (fertilisers) ...	<i>Group index weighted by 1926 values</i>	100	106	117	135	136
	Natural phosphates	100	98	108	124	130
	Potash	100	117	100	145	127
	Sulphur	100	248	167	185	237
	Natural guano	100	235	295	263	188
	Chile nitrate of soda	100	69	87	91	73
	Norwegian nitrate of lime	100	255	223	299	274
	Superphosphates of lime	100	91	101	115	116
	Basic slag	100	55	81	90	94
	Cyanamide of calcium	100	294	333	469	539
	Sulphate of ammonia	100	168	194	222	245
	Sulphate of copper	100	106	115	114	123

Annex II.

METHOD OF CALCULATION OF THE COMPOSITE PRODUCTION INDEX.

The various articles composing the index are given in Annex I. For the purposes of the calculation of the index a "weight" has been attributed to each commodity equivalent to its relative importance as measured by its aggregate value at selected "world" prices. The prices selected are intended to be representative in the sense that they refer to representative qualities and that their ratios are fairly typical of relative values on the world market. They are annual averages of actual quotations for medium qualities of the various articles in leading producing countries. They are not averages of prices of different qualities or of prices in different countries.

They have all been converted into terms of dollars according to the annual average rates of exchange. In view of the changes that have taken place in relative values, dual calculations have been made and for each year two indices are shown in Annexes III and IV. In the first the prices for 1913, the base year, have been employed; in the second, prices in 1926, the last year considered.

The indices are thus compiled by the aggregate method, the mathematical formula of which is:

$$I = \frac{q_1' p' + q_1'' p'' + q_1''' p''' + \dots + q_1^n p^n}{q_0' p' + q_0'' p'' + q_0''' p''' + \dots + q_0^n p^n} = \frac{\Sigma(q_1 p)}{\Sigma(q_0 p)}$$

For the first index the quantity of each commodity produced each year is multiplied by the 1913 price of that commodity and the resulting totals for all commodities are summed. The absolute figures thus obtained for each year are then converted into percentages of the absolute figure for 1913. For the second index the same procedure is adopted; but the prices are those referring to 1926. As the prices are constant, variations in the index represent changes in the quantities produced and not in the values.

Two tables showing the aggregates from which the general index has been calculated, are given below.

AGGREGATE PRODUCTION OF RAW MATERIALS AND FOODSTUFFS WEIGHTED BY THE PRICES SELECTED.

In terms of dollars (000,000's omitted)

Groups of Commodities	(a) 1913 Prices used as Weights.					(b) 1926 Prices used as Weights.				
	1913	1923	1924	1925	1926	1913	1923	1924	1925	1926
Cereals and other food crops	16,719.4	17,310.1	16,807.3	18,848.3	18,258.3	23,973.2	24,721.1	23,900.8	26,881.5	26,118.4
Meat	4,117.7	4,142.6	4,500.2	4,472.9	4,566.0	5,633.2	5,663.1	6,137.0	6,076.4	6,196.5
Colonial produce, etc.	960.1	1,231.5	1,231.0	1,272.6	1,281.0	1,645.2	1,986.9	2,014.1	2,063.9	2,092.7
Vegetable oil materials	904.1	1,072.3	1,215.6	1,275.8	1,242.6	1,260.0	1,503.5	1,708.0	1,802.2	1,749.5
Textiles	2,634.1	2,588.1	3,017.9	3,425.7	3,513.0	4,060.4	3,932.8	4,538.6	5,105.3	5,215.0
Hides and skins	925.2	902.6	975.4	1,005.2	1,036.3	749.9	725.2	779.2	806.8	832.9
Rubber	183.1	601.0	652.4	819.5	1,033.3	122.2	400.9	435.2	546.7	689.3
Wood-pulp	204.8	279.2	297.7	331.8	374.9	344.1	469.1	500.3	557.5	629.9
Fuels	4,080.2	4,655.6	4,614.1	4,647.2	4,666.2	7,400.6	8,565.8	8,491.4	8,561.7	8,601.3
Metals (smelter production) ..	4,058.4	4,115.5	4,174.8	4,689.4	4,834.8	5,240.6	5,285.1	5,356.5	6,037.6	6,223.8
Chemicals (fertilisers)	524.6	571.9	625.9	718.6	731.4	552.3	587.9	646.9	743.2	748.6
Total	35,311.7	37,470.4	38,112.3	41,507.0	41,537.8	50,981.7	53,841.4	54,508.0	59,182.8	59,097.9
{ Foodstuffs	20,837.1	21,452.7	21,307.5	23,321.2	22,824.3	29,606.4	30,384.2	30,037.8	32,957.9	32,314.9
{ Raw materials	14,474.6	16,017.7	16,804.8	18,185.8	18,713.5	21,375.3	23,457.2	24,470.2	26,224.9	26,783.0

Territorial Divisions	(a) 1913 Prices used as Weights.					(b) 1926 Prices used as Weights.				
	1913	1923	1924	1925	1926	1913	1923	1924	1925	1926
Eastern and Central Europe:										
Excluding Russia (U.S.S.R.)	5,940.8	4,654.9	5,121.1	5,888.3	5,632.5	8,784.7	6,834.4	7,460.5	8,619.5	8,238.4
Including Russia (U.S.S.R.)	8,986.7	6,974.6	7,405.8	9,111.9	9,168.5	13,393.0	10,320.4	10,881.9	13,464.9	13,590.3
Rest of Europe	5,599.9	5,366.9	5,720.2	5,969.0	5,363.3	8,359.3	8,008.5	8,440.3	8,804.4	7,776.5
Europe, excluding Russia (U.S.S.R.)	11,540.7	10,021.8	10,841.3	11,857.3	10,995.8	17,144.0	14,842.9	15,909.8	17,423.9	16,014.9
Europe, including Russia (U.S.S.R.)	14,586.6	12,841.5	13,126.0	15,080.9	14,531.8	21,752.3	18,328.9	19,331.2	22,269.3	21,366.8
North America	9,125.3	11,606.4	10,708.0	11,594.5	11,935.5	18,290.2	17,113.2	15,833.8	16,945.5	17,555.3
Caribbean	605.5	925.9	1,021.7	1,003.3	952.1	783.7	1,283.2	1,391.1	1,352.4	1,272.4
South America	1,956.2	2,373.3	2,292.1	2,446.4	2,531.4	2,593.0	3,190.5	3,031.0	3,233.9	3,390.1
Africa	889.8	1,097.4	1,223.9	1,290.7	1,252.5	1,192.1	1,468.8	1,612.9	1,713.7	1,655.9
Asia	7,539.2	8,483.0	9,001.5	9,373.2	9,560.8	10,421.1	11,465.8	12,165.0	12,561.6	12,655.4
Oceania	609.1	642.9	739.1	718.0	773.7	949.3	991.0	1,143.0	1,106.4	1,202.0
WORLD	35,311.7	37,470.4	38,112.3	41,507.0	41,537.8	50,981.7	53,841.4	54,508.0	59,182.8	59,097.9

Annex III.

INDICES OF PRODUCTION OF RAW MATERIALS AND FOOD- Production in

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.		(a)	(b)	Excluding U.S.S.R.		Including U.S.S.R.	
		(a)	(b)	(a)	(b)			(a)	(b)	(a)	(b)
Cereals.....	1923	83	83	77	77	100	100	90	90	83	83
	1924	72	70	68	67	92	91	80	79	75	74
	1925	93	92	95	94	109	109	99	99	99	98
	1926	89	88	96	97	98	97	93	92	98	97
Cereals and other food crops.....	1923	86	86	81	85	96	97	90	90	88	88
	1924	85	83	81	80	98	97	90	89	86	85
	1925	101	101	106	106	111	111	105	105	108	107
	1926	90	89	103	103	100	99	93	93	102	102
Meat.....	1923	71	70	71	69	103	104	86	85	83	82
	1924	85	83	88	86	106	106	95	94	94	94
	1925	87	86	91	90	105	105	95	95	96	95
	1926	91	91	93	93	106	106	98	98	98	98
Colonial produce, Tobacco, Hops, etc.....	1923	99	81	94	83	94	82	97	82	94	82
	1924	110	107	109	102	150	140	131	120	120	114
	1925	106	92	128	114	137	125	117	105	130	117
	1926	103	91	123	110	114	106	107	97	120	109
Vegetable-oil materials.....	1923	78	78	78	79	126	126	114	114	107	107
	1924	116	114	103	102	138	138	132	131	124	123
	1925	85	85	105	105	121	121	111	111	114	115
	1926	115	113	113	113	101	101	104	104	105	106
Textiles.....	1923	113	105	91	86	120	110	117	108	103	107
	1924	132	117	102	96	144	125	139	122	119	121
	1925	142	131	102	117	173	144	164	139	145	144
	1926	141	123	121	111	186	152	169	141	146	143
Hides and skins.....	1923	82	83	82	82	101	100	92	92	89	89
	1924	96	96	95	95	101	101	99	99	98	98
	1925	92	93	97	97	103	103	98	98	99	99
	1926	92	92	98	98	104	104	98	98	100	100
Rubber.....	1923	—	—	—	—	—	—	—	—	—	—
	1924	—	—	—	—	—	—	—	—	—	—
	1925	—	—	—	—	—	—	—	—	—	—
	1926	—	—	—	—	—	—	—	—	—	—
Wood-pulp.....	1923	81	81	81	81	122	122	102	102	102	102
	1924	99	99	100	100	141	141	121	121	121	121
	1925	118	118	121	121	153	152	136	136	137	137
	1926	136	136	140	140	167	167	152	152	154	154
Fuels.....	1923	64	65	63	63	96	96	84	84	82	82
	1924	90	90	85	85	97	97	94	94	92	92
	1925	95	95	91	91	91	91	93	93	91	91
	1926	105	106	103	103	62	62	79	79	80	80
Metals.....	1923	54	54	46	46	81	81	70	70	65	65
	1924	72	71	62	62	96	97	87	87	81	81
	1925	89	88	80	79	98	98	94	94	90	90
	1926	90	90	86	85	92	93	92	91	89	89
Chemicals (fertilisers).....	1923	102	101	100	99	106	107	104	104	104	104
	1924	121	117	119	115	119	120	120	119	119	118
	1925	156	152	154	150	127	128	139	138	138	138
	1926	163	157	161	155	132	133	145	143	144	142
<i>General Index</i>	1923	78	78	78	77	96	96	87	87	85	84
	1924	86	85	82	81	102	101	94	93	90	89
	1925	99	98	101	101	107	105	103	102	103	102
	1926	95	94	102	101	96	93	95	93	100	98
Foodstuffs.....	1923	83	83	83	82	98	98	89	89	87	87
	1924	85	83	82	81	100	99	91	90	87	86
	1925	99	98	103	103	110	110	103	103	105	105
	1926	90	89	102	101	101	101	94	94	102	101
Raw materials.....	1923	68	67	65	64	94	94	84	83	80	80
	1924	89	88	83	82	104	103	98	97	94	93
	1925	100	98	96	95	104	102	102	100	100	98
	1926	105	104	103	101	91	86	97	93	96	93

Annex III.

STUFFS WEIGHTED BY: (a) 1913 VALUES ; (b) 1926 VALUES
1913 = 100

North America		Caribbean ¹		South America		Africa		Asia		Oceania		World	
(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
123	126	83	84	145	148	114	113	90	89	135	133	101	101
104	108	84	85	113	116	113	109	88	87	162	163	89	89
117	119	74	75	135	135	116	115	89	87	114	115	106	106
111	114	71	72	142	143	115	112	89	88	156	159	104	104
123	125	147	148	155	157	119	119	102	102	128	128	104	103
106	109	181	181	129	130	124	121	107	106	154	156	101	100
116	118	175	176	149	147	128	126	108	107	131	128	113	112
111	114	162	162	155	154	119	117	107	106	151	153	109	109
147	147	120	123	93	90	105	103	102	104	97	95	101	101
150	149	104	105	102	99	124	120	108	111	106	101	109	109
136	133	118	117	101	98	130	126	113	117	110	107	109	108
132	129	119	118	104	101	136	132	120	124	118	117	111	110
138	127	113	112	139	138	296	288	109	108	147	145	128	121
117	110	112	111	124	123	343	332	116	115	160	158	128	122
129	121	118	118	120	119	352	344	121	118	147	139	133	125
125	117	109	108	136	137	337	328	120	118	153	142	133	127
82	83	133	130	185	185	133	134	127	128	205	207	119	119
114	115	134	134	154	154	152	153	141	142	208	206	134	135
120	121	144	144	235	236	167	168	146	148	221	222	141	142
125	125	217	212	218	218	158	161	142	145	237	235	137	138
84	83	86	84	118	113	107	107	107	108	88	88	98	97
110	108	99	97	115	110	121	121	118	118	104	104	115	112
130	127	107	104	121	115	135	134	128	128	107	107	130	126
145	141	217	211	112	108	125	125	124	125	108	108	133	128
134	131	101	101	100	99	103	101	93	92	95	92	98	97
141	138	95	95	114	113	121	118	94	92	103	98	106	104
148	145	118	118	112	111	127	124	100	99	104	102	109	108
149	146	119	119	115	114	132	128	107	106	112	111	112	111
—	—	—	—	56	56	22	22	676	676	—	—	328	328
—	—	—	—	58	58	22	22	737	737	—	—	356	356
—	—	—	—	71	71	33	33	925	925	—	—	447	447
—	—	—	—	67	67	45	45	1,186	1,186	—	—	564	564
171	171	—	—	—	—	—	—	600	588	—	—	136	136
167	167	—	—	—	—	—	—	646	626	—	—	145	145
183	183	—	—	—	—	—	—	753	730	—	—	162	162
207	207	—	—	—	—	—	—	913	888	—	—	183	183
138	140	538	543	411	418	143	143	155	157	100	100	114	116
123	126	507	512	614	631	150	150	165	167	110	110	113	115
127	130	426	430	981	1,012	157	158	156	159	110	110	114	116
140	143	343	346	1,649	1,699	167	168	155	157	110	110	114	116
136	137	132	143	354	348	689	743	139	140	100	107	101	101
118	118	131	140	347	338	951	984	156	158	110	120	103	102
137	137	137	148	357	349	966	983	160	161	124	137	116	115
145	146	145	158	382	374	960	993	162	163	124	139	119	119
172	164	246	246	71	71	117	116	189	184	101	100	109	106
148	145	286	286	89	89	141	139	214	210	114	113	119	117
177	172	234	234	93	93	154	153	237	232	156	155	137	135
185	178	306	306	74	74	177	175	290	285	200	197	139	136
127	129	153	164	121	123	123	123	113	110	106	104	106	106
117	119	169	178	117	117	138	135	119	117	121	120	108	107
127	128	166	173	125	125	145	144	124	121	118	117	118	116
131	132	157	162	129	131	141	139	127	122	127	127	118	116
127	129	143	144	121	121	115	114	102	102	116	115	103	103
114	117	169	169	115	113	124	121	107	107	135	134	102	101
120	120	167	166	123	121	129	126	109	108	123	120	112	111
116	117	155	155	127	126	124	121	109	108	138	139	110	109
127	128	172	199	122	126	134	135	137	127	96	95	111	110
120	121	168	193	121	122	154	154	149	138	108	108	116	114
133	133	164	183	128	130	165	166	161	147	113	114	126	122
144	144	161	175	133	138	161	161	170	150	117	116	129	125

¹ Central America, Mexico and all islands in the Caribbean Sea.

Annex IV.

AND FOODSTUFFS WEIGHTED BY : (a) 1913 VALUES ; (b) 1926 VALUES.
World Totals = 100.

North America		Caribbean ¹		South America		Africa		Asia		Oceania		World	
(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
33.2	30.7	1.1	0.9	4.5	4.2	2.3	2.3	8.2	8.4	1.1	1.3	100	
40.4	38.2	0.9	0.8	6.5	6.2	2.6	2.5	7.2	7.4	1.5	1.7	100	
38.7	37.0	1.1	0.9	5.7	5.5	3.0	2.8	8.0	8.2	2.0	2.3	100	
36.7	34.5	0.8	0.7	5.7	5.4	2.5	2.5	6.8	6.9	1.2	1.4	100	
35.4	33.5	0.8	0.7	6.1	5.8	2.6	2.4	6.9	7.1	1.7	1.9	100	
20.4	19.6	2.0	1.8	3.2	3.0	2.0	2.0	27.6	26.3	1.1	1.1	100	
24.2	23.8	2.9	2.5	4.7	4.6	2.3	2.3	27.3	26.0	1.3	1.4	100	
21.5	21.4	3.6	3.2	4.0	3.9	2.5	2.4	29.4	28.1	1.6	1.8	100	
21.0	20.6	3.2	2.7	4.1	4.0	2.3	2.2	26.5	25.1	1.2	1.3	100	
20.8	20.5	3.0	2.6	4.4	4.3	2.2	2.1	27.1	25.6	1.5	1.6	100	
17.9	19.3	1.5	1.4	15.2	14.7	3.7	3.5	16.5	14.7	2.8	3.1	100	
26.2	28.1	1.7	1.7	14.0	13.3	3.8	3.5	16.8	15.3	2.7	2.9	100	
24.6	26.5	1.4	1.3	14.2	13.4	4.2	3.8	16.3	14.9	2.7	2.9	100	
22.5	23.8	1.6	1.5	14.2	13.4	4.4	4.1	17.2	15.9	2.8	3.1	100	
21.4	22.6	1.6	1.5	14.3	13.5	4.5	4.2	17.9	16.5	2.9	3.3	100	
15.3	14.6	8.7	7.6	27.7	25.5	4.2	3.0	31.8	35.4	0.2	0.2	100	
16.5	15.4	7.7	7.1	29.9	29.2	9.7	7.1	27.1	31.7	0.2	0.2	100	
14.0	13.1	7.7	6.9	26.7	25.7	11.3	8.1	28.8	33.1	0.2	0.3	100	
14.9	14.0	7.8	7.2	24.9	24.2	11.3	8.2	29.0	33.4	0.2	0.2	100	
14.3	13.4	7.1	6.5	28.2	27.5	10.7	7.7	28.6	33.0	0.2	0.2	100	
18.6	18.0	0.4	0.4	5.1	4.9	11.2	11.1	41.4	42.4	0.8	0.6	100	
12.8	12.5	0.4	0.4	7.9	7.6	12.6	12.5	44.4	45.6	1.3	1.1	100	
15.8	15.4	0.4	0.4	5.7	5.5	12.7	12.6	43.3	44.5	1.2	1.0	100	
15.8	15.4	0.4	0.4	8.5	8.0	13.1	13.0	42.8	44.0	1.1	1.0	100	
16.9	16.2	0.6	0.6	8.0	7.8	12.9	12.8	43.0	44.3	1.3	1.1	100	
32.5	30.2	0.6	0.5	4.9	5.5	5.1	5.1	34.1	33.9	6.7	7.9	100	
27.9	25.7	0.5	0.5	5.9	5.7	5.6	6.4	37.3	37.9	6.0	7.2	100	
31.2	29.1	0.5	0.5	4.9	5.4	5.4	5.6	35.2	35.9	6.1	7.3	100	
32.6	30.5	0.5	0.4	4.5	5.1	5.4	5.5	33.5	34.6	5.5	6.7	100	
35.3	33.1	0.9	0.9	4.2	4.6	4.8	5.0	31.7	33.1	5.4	6.6	100	
10.2	10.0	1.7	1.6	15.9	15.4	6.2	6.6	26.1	26.3	3.8	4.4	100	
14.0	13.5	1.7	1.7	16.2	15.8	6.5	6.9	24.8	25.0	3.7	4.2	100	
13.6	13.2	1.5	1.5	17.3	16.8	7.1	7.4	23.2	23.4	3.7	4.1	100	
13.9	13.4	1.8	1.8	16.4	15.9	7.2	7.5	24.1	24.3	3.6	4.1	100	
13.6	13.2	1.8	1.7	16.3	15.8	7.2	7.6	24.9	25.0	3.8	4.4	100	
—	—	—	—	39.4	39.4	15.8	15.8	44.8	44.8	—	—	100	
—	—	—	—	6.7	6.7	1.1	1.1	92.2	92.2	—	—	100	
—	—	—	—	6.4	6.4	1.0	1.0	92.6	92.6	—	—	100	
—	—	—	—	6.3	6.3	1.2	1.2	92.5	92.5	—	—	100	
—	—	—	—	4.7	4.7	1.2	1.2	94.1	94.1	—	—	100	

¹ Central America, Mexico and all islands in the Caribbean Sea.

Annex IV (continued).

PERCENTAGE DISTRIBUTION OF AGGREGATE PRODUCTION OF RAW MATERIALS

World Totals = 100.

Groups of Products	Years	Eastern and Central Europe				Rest of Europe (Western and Maritime)		Europe			
		Excluding U.S.S.R.		Including U.S.S.R.				Excluding U.S.S.R.		Including U.S.S.R.	
		(a)	(b)	(a)	(b)			(a)	(b)	(a)	(b)
Wood-pulp	1913	25.9	25.9	26.6	26.5	28.8	28.8	54.7	54.7	55.4	55.3
	1923	15.4	15.3	15.7	15.7	25.8	25.8	41.2	41.1	41.5	41.5
	1924	17.7	17.6	18.3	18.3	27.9	27.9	45.6	45.5	46.2	46.2
	1925	18.9	18.9	19.8	19.8	27.2	27.2	46.1	46.1	47.0	47.0
	1926	19.3	19.2	20.3	20.3	26.3	26.3	45.6	45.5	46.6	46.6
Fuels	1913	16.9	16.8	20.5	20.5	27.8	27.5	44.7	44.3	48.3	48.0
	1923	9.5	9.4	11.2	11.1	23.4	22.8	32.9	32.2	34.6	33.9
	1924	13.4	13.2	15.4	15.2	23.8	23.2	37.2	36.4	39.2	38.4
	1925	14.1	13.8	16.3	16.1	22.3	21.7	36.4	35.5	38.6	37.8
	1926	15.5	15.2	18.5	18.2	15.2	14.8	30.7	30.0	33.7	33.0
Metals	1913	18.1	18.6	22.6	23.2	28.4	28.9	46.5	47.5	51.0	52.1
	1923	9.6	9.9	10.3	10.6	22.6	23.2	32.2	33.1	32.9	33.8
	1924	12.7	12.9	13.7	14.0	26.6	27.4	39.3	40.3	40.3	41.4
	1925	13.9	14.2	15.6	16.0	24.1	24.7	38.0	38.9	39.7	40.7
	1926	13.7	14.0	16.2	16.6	22.0	22.5	35.7	36.5	38.2	39.1
Chemicals (Fertilisers)...	1913	23.1	23.2	23.5	23.6	32.8	31.3	55.9	54.5	56.3	54.9
	1923	21.6	21.9	21.6	22.0	32.0	31.5	53.6	53.4	53.6	53.5
	1924	23.4	23.2	23.5	23.3	32.7	32.0	56.1	55.2	56.2	55.3
	1925	26.4	26.3	26.5	26.5	30.4	29.7	56.8	56.0	56.9	56.2
	1926	27.0	26.9	27.2	27.1	31.0	30.6	58.0	57.5	58.2	57.7
<i>General Index</i>	1913	16.8	17.2	25.4	26.3	15.9	16.4	32.7	33.6	41.3	42.7
	1923	12.4	12.7	18.6	19.1	14.3	14.9	26.7	27.6	32.9	34.0
	1924	13.4	13.7	19.4	20.0	15.0	15.5	28.4	29.2	34.4	35.5
	1925	14.2	14.6	22.0	22.7	14.4	14.9	28.6	29.5	36.4	37.6
	1926	13.6	13.9	22.1	23.0	12.9	13.2	26.5	27.1	35.0	36.2
Foodstuffs	1913	19.3	20.0	30.9	32.4	12.6	13.2	31.9	33.2	43.5	45.6
	1923	15.6	16.2	24.8	26.0	12.0	12.7	27.6	28.9	36.8	38.7
	1924	16.0	16.5	24.9	25.9	12.3	12.9	28.3	29.4	37.2	38.8
	1925	17.0	17.7	28.5	30.0	12.4	13.0	29.4	30.7	40.9	43.0
	1926	15.9	16.3	28.7	30.1	11.6	12.2	27.5	28.5	40.3	42.3
Raw materials	1913	13.2	13.4	17.6	17.8	20.6	20.8	33.8	34.2	38.2	38.6
	1923	8.2	8.2	10.4	10.4	17.4	17.7	25.6	25.9	27.8	28.1
	1924	10.2	10.3	12.6	12.7	18.4	18.6	28.6	28.9	31.0	31.3
	1925	10.5	10.7	13.5	13.7	17.0	17.2	27.5	27.9	30.5	30.9
	1926	10.8	11.1	14.0	14.4	14.5	14.3	25.3	25.4	28.5	28.7

Annex IV (continued).

AND FOODSTUFFS WEIGHTED BY : (a) 1913 VALUES ; (b) 1926 VALUES.
World Totals = 100.

North America		Caribbean ¹		South America		Africa		Asia		Oceania		World	
(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
43.9	43.9	—	—	—	—	—	—	0.7	0.8	—	—	—	100
55.2	55.2	—	—	—	—	—	—	3.3	3.3	—	—	—	100
50.5	50.5	—	—	—	—	—	—	3.3	3.3	—	—	—	100
49.6	49.6	—	—	—	—	—	—	3.4	3.4	—	—	—	100
49.7	49.7	—	—	—	—	—	—	3.7	3.7	—	—	—	100
44.7	44.9	0.7	0.8	0.1	0.1	0.6	0.6	4.6	4.6	1.0	1.0	—	100
54.0	54.4	3.1	3.4	0.3	0.4	0.8	0.7	6.3	6.3	0.9	0.9	—	100
48.8	49.3	3.0	3.3	0.5	0.5	0.8	0.8	6.7	6.7	1.0	1.0	—	100
50.0	50.6	2.5	2.7	0.8	0.8	0.8	0.8	6.3	6.3	1.0	1.0	—	100
54.9	55.3	2.0	2.2	1.3	1.4	0.9	0.9	6.2	6.2	1.0	1.0	—	100
42.2	41.5	1.6	1.3	0.6	0.5	0.1	0.1	3.4	3.4	1.1	1.1	—	100
56.6	56.3	2.0	1.9	2.2	1.6	0.6	0.5	4.6	4.8	1.1	1.1	—	100
48.5	48.0	2.0	1.8	2.1	1.6	0.8	0.6	5.1	5.3	1.2	1.3	—	100
49.9	49.6	1.8	1.7	2.0	1.4	0.7	0.5	4.7	4.8	1.2	1.3	—	100
51.4	51.1	1.9	1.7	2.0	1.5	0.7	0.5	4.6	4.8	1.2	1.3	—	100
15.8	15.1	0.02	0.02	22.4	24.3	1.7	2.0	2.0	1.9	1.8	1.8	—	100
24.9	23.3	0.03	0.05	14.5	16.1	1.8	2.1	3.5	3.3	1.7	1.7	—	100
19.7	18.7	0.1	0.1	16.7	18.5	2.0	2.3	3.6	3.4	1.7	1.7	—	100
20.4	19.4	0.03	0.04	15.2	16.8	1.9	2.2	3.5	3.3	2.1	2.1	—	100
21.0	19.9	0.04	0.05	11.9	13.3	2.1	2.5	4.2	4.0	2.6	2.6	—	100
25.9	26.1	1.7	1.5	5.5	5.1	2.5	2.3	21.4	20.4	1.7	1.9	—	100
31.0	31.8	2.5	2.4	6.3	5.9	2.9	2.7	22.7	21.3	1.7	1.9	—	100
28.1	29.0	2.7	2.5	6.0	5.6	3.2	3.0	23.6	22.3	2.0	2.1	—	100
27.9	28.6	2.4	2.3	5.9	5.5	3.1	2.9	22.6	21.2	1.7	1.9	—	100
28.7	29.7	2.3	2.2	6.1	5.7	3.0	2.8	23.0	21.4	1.9	2.0	—	100
19.9	19.6	1.9	1.7	5.5	5.3	2.4	2.2	25.4	24.1	1.4	1.5	—	100
24.6	24.6	2.6	2.3	6.5	6.2	2.6	2.5	25.3	24.0	1.6	1.7	—	100
22.1	22.4	3.1	2.8	6.2	5.9	2.9	2.7	26.6	25.4	1.9	2.0	—	100
21.3	21.2	2.8	2.5	6.1	5.7	2.7	2.6	24.7	23.4	1.5	1.6	—	100
20.9	20.9	2.7	2.4	6.4	6.1	2.7	2.5	25.2	23.9	1.8	1.9	—	100
34.4	35.1	1.4	1.3	5.6	4.8	2.7	2.5	15.5	15.3	2.2	2.4	—	100
39.5	41.1	2.2	2.4	6.1	5.5	3.4	3.0	19.1	17.8	1.9	2.1	—	100
35.6	37.1	2.1	2.3	5.8	5.2	3.7	3.3	19.8	18.6	2.0	2.2	—	100
36.4	38.0	1.9	2.0	5.7	5.2	3.6	3.3	19.9	18.4	2.0	2.2	—	100
38.3	40.3	1.8	1.9	5.7	5.3	3.4	3.2	20.3	18.4	2.0	2.2	—	100

¹ Central America, Mexico and all islands in the Caribbean Sea.