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THE

**WORLD SUGAR SITUATION**

REPORT BY THE ECONOMIC COMMITTEE OF THE  
LEAGUE OF NATIONS

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# THE WORLD SUGAR SITUATION.

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## I. INTRODUCTION.

In May 1928, the Economic Consultative Committee recommended that the Council

“ invite the Economic Organisation of the League to undertake a thorough study of all factors and measures influencing the production and consumption of sugar and the international trade therein ” ;

and suggested that a report

“ be made to the Council, in order that the latter may be able to judge whether concerted international action could further the solution of the problems under consideration ”.

In June of the same year, the Council of the League of Nations referred the question to the Economic Committee with the request that it should place these recommendations on the agenda of its next session “ so that it can at once go forward to consider them as far as it may think advisable and practicable ”.

In the course of our enquiry we have received a large amount of documentary evidence through our own members, from various national sources, from the Secretariat of the League of Nations and from the International Agricultural Institute at Rome. Special memoranda were prepared by certain eminent sugar statisticians <sup>1</sup> and we have had oral consultations with experts in sugar manufacture and refining and with experts in the cultivation of beet.

We do not contemplate that further consultations in the immediate future will prove necessary, nor has anything emerged from the evidence which we have heard during the last few months to induce us to modify the views which we expressed in January last :

“ . . . that the present situation of the sugar industry throughout the world is essentially due to lack of equilibrium between production and consumption. Hence, the natural conclusion is that, to re-establish equilibrium, either an attempt must be made to increase consumption or production must be reduced or both solutions must be sought.

“ It is questionable whether it would be consistent with the rôle of the League of Nations to take any action with the object of checking the natural development of production — *i.e.*, of preventing expansion resulting from the free play of economic forces.

“ The development of world production, however, is partly the result of artificial measures of various kinds for which States are mainly responsible.

“ An examination of the problem from this point of view would certainly be of great value, as would also a study of the possibilities of increased consumption.” <sup>2</sup>

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<sup>1</sup> Memoranda by Dr. H. C. Prinsen Geerligs, Messrs. F. O. Licht and Dr. Gustav Mikusch published as document C.148.M.57.1929.II. Reference should be made to these excellent papers for a full description of the sugar situation.

<sup>2</sup> See document C.20.M.14.1929.II, page 3.

We believe that it may prove useful to submit a report now indicating the general character of the difficulties through which the industry has been passing and our provisional conclusions concerning possible League action. As the three memoranda referred to above have already been published, we do not think it necessary to do more than to trace, in brief outline, the major tendencies of recent years which emerge from the evidence we have heard.

## II. SPECIAL CHARACTERISTICS OF THE SUGAR INDUSTRY.

### (a) GROWTH OF TOTAL PRODUCTION AND CONSUMPTION.

The sugar industry has been suffering in recent years from an excess of production and consequent low prices for its products. We showed, in a recent report, that the world consumption of coal had increased by only about 4 per cent in the last fifteen years. In striking contrast to this, the consumption of sugar has been growing since the termination of the war at the exceptional rate of nearly  $4\frac{1}{2}$  per cent *per annum*. For several decennia before the war, production and consumption developed at an average rate of about 3 per cent *per annum*.

There can therefore be but little doubt that the causes of the present difficulties lie rather in excessive production than in any failure of demand. This fact is significant and important, for those responsible for the supply of sugar can, if they wish, directly influence output, while they can only indirectly influence consumption. As prices have fallen, however, to a very marked extent in recent years, the figures must not be taken as proving that an increasing proportion of total available purchasing power has been devoted year by year to the acquisition of sugar.

### (b) RELATIVE DEVELOPMENT OF CANE- AND BEET-SUGAR PRODUCTION.

Sugar is produced commercially from two species of plants belonging to distinct families growing, the one, in tropical or sub-tropical and, the other, in temperate zones and quite differently related to the general economy and agronomy of the countries in which they are cultivated. A concerted policy of production presents, therefore, special difficulties. In fact, no such policy has been achieved and the history of the sugar industry has been one of a continual struggle between the planters of cane and the sowers of beet in which the latter have from time to time acted in unison.<sup>1</sup>

Beet sugar accounted, in the opening years of the twentieth century, for something more than half of the world's total ; in 1913 for something less than half, and to-day for about one-third.

This relative failure of the beet industry in the face of the competition of cane sugar has not, however, involved an absolute contraction of output. On the contrary, the total estimated production of beet sugar in the last commercial year exceeds the maximum reached before the war.

But the continual increase in the consumption of sugar since 1912 has been met almost wholly by the planters of cane.

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<sup>1</sup> E.g., by the Conventions of 1888 and 1902.

STATISTICS OF WORLD PRODUCTION OF SUGAR.<sup>1</sup>

(In terms of raw sugar, metric tons, 000's omitted).

Year	Total Production	Cane	Beet	Percentage of total	
				Cane	Beet
1902-03	9,900	3,890	6,010	39.3	60.7
1909-10	12,766	6,177	6,589	48.3	51.7
1912-13	15,597	6,706	8,891	43.9	56.1
1918-19	13,485	9,602	3,883	71.2	28.8
1924-25	22,066	13,750	8,316	62.2	37.8
1927-28	23,167	14,018	9,149	60.5	39.5
1928-29	25,417	15,888	9,579	62.4	37.6

In the present commercial year the production of cane sugar is thus 8 million tons greater than in 1913-14; that of beet sugar about half-a-million tons greater.

The competitive superiority of the cane industry, as the above figures show, is no post-war phenomenon. It began to make itself felt at the close of the last century as the result of improved methods of cultivation and more scientific seed selection, and when, by the Convention of 1902, European Governments lightened the growing burden of excessive subsidies, the producers of cane were enabled to demonstrate by the supplies of sugar they placed on the market the natural advantages which they enjoyed. In the course of the decade following on the application of the Brussels Convention in 1903, the production of cane sugar increased by 72 per cent and that of beet sugar by only 48 per cent.<sup>2</sup>

Then the war came, which caused, as in all other fields, a complete revolution in the world sugar industry. It decisively settled the ten years' contest between cane and beet in favour of cane. European beet-sugar production dropped steadily owing to the war and reached its lowest point in 1919-20.

The European area under beet, which amounted to roughly 2,200,000 hectares in 1913-14, reached its lowest figure in 1920-21 with only 1,279,346 hectares. The production of raw sugar naturally follows a similar curve, falling from 8,179,013 tons in 1913-14 to 2,589,923 tons in 1919-20.<sup>3</sup>

The high prices existing during the war and the immediate post-war period gave a violent stimulus to cane-growing. The production of cane sugar rose from 10.9 million tons in 1913-14 to 13.3 millions in 1919-20, and to 15.3 millions in 1923-24. But, notwithstanding the fall in prices in recent years, the growth of cane-sugar production continued unabated, the total supply rising to 17.5 millions in 1927-28 and to 18.9 millions in 1928-29.

<sup>1</sup> For more complete tables of World Sugar Production, see Annexes I and II. The figures are those of Dr. H. C. Prinsen Geerligs. They do not include the production of India, as no figures of Indian production are available for the year 1902-03.

<sup>2</sup> The production of beet sugar in the countries which took part in the Brussels Convention increased during this period by only 8 per cent while production in other countries increased 108 per cent.

<sup>3</sup> Memorandum by Messrs. F. O. Licht (document C.148.M.57.1929.II, pages 19 and 20).

As will be seen from Annex II, practically all cane-growing countries contributed to this recent increase, but it was due in the first place to Cuba and Java, the two countries with the largest output. The production of Cuba increased from 4.1 million tons in 1923-24 to 5.2 millions in the following year. During the next three years the production was lower, restrictive measures being applied by the Government. When these were removed, the production rose again to 5.1 millions in 1928-29. In Java, the production has mounted almost uninterruptedly year by year from 1.9 millions in 1923-24 to 3.2 millions in 1928-29.

The war impeded production in Europe and gave an impetus to cane-growing countries. But its influence must not be exaggerated. The rate of the growth of the output of cane between 1921 and 1929 was greater than between 1914 and 1918. More important than the passing influences of the period of European convulsion has been the remarkable progress made in the application of scientific methods to the cane industry. Perhaps the most spectacular results are those obtained in recent years by the cultivation of new varieties of cane which have made it possible to increase the sugar yield of the best areas by 30 per cent. Messrs. F. O. Licht have estimated that about twice as much cane as beet sugar is obtained from every acre cultivated. The gradual spread of more efficient methods of cultivation and extraction in cane-producing countries would seem to be only a question of time, so that, even if the area under cane is not further increased, the total output of cane sugar may reasonably be expected to rise in years to come.

During the period of high sugar prices between 1919 and 1924, the European countries which had not taken part in the war increased their area under beet ; and gradually, as the rest of Europe recovered from the financial and economic disturbances consequent upon the war, in one country after another an attempt was made to return to the previous maximum level of production. This, in the face of the greatly accentuated competitive power of cane-producing countries, was only possible with State aid. Thus the principles of the Brussels Convention<sup>1</sup> were almost universally abandoned and a new era of bounties, subsidies and protection began. The situation to-day is thus, in many ways, similar to that which obtained in 1902. An over-stimulated industry is suffering from an excessive, febrile activity. The one new natural factor of vital importance lies in the increased efficiency of the producers of cane.

### (c) THE FALL OF PRICES.

The simultaneous and unco-ordinated expansion of the two industries has led to an excess of output, the effects of which are clearly reflected in the open market prices.

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<sup>1</sup> A summary of the Brussels Convention is given in Annex X.

RAW CANE-SUGAR PRICES.<sup>1</sup>

Year	Average price in shillings per cwt.	Sugar price index 1909-1913 = 100	Sugar price index 1913 = 100	General price index 1913 = 100
1909-1913	11/7 <sup>3</sup> / <sub>4</sub>	100	119	—
1913	9/8 <sup>3</sup> / <sub>4</sub>	81	100	100
1921	18/3 <sup>1</sup> / <sub>2</sub>	153	188	197
1922	15/3 <sup>1</sup> / <sub>2</sub>	128	157	159
1923	25/9	216	265	159
1924	21/9	182	224	166
1925	12/9	106	131	159
1926	12/3	103	126	148
1927	13/9	115	141	142
1928	11/7 <sup>1</sup> / <sub>2</sub>	97	119	140
1929 <sup>2</sup>	9/3	77	95	138

In the above table, the movement of sugar prices is compared with the general index of wholesale prices in the United Kingdom. This comparison presents certain difficulties, as sugar prices were exceptionally low in 1913—the base year for the general index. Moreover, it is not possible to select a single grade of sugar throughout the period which may be taken as typical of open market conditions. The figures afford, however, a rough indication of the extent of the depression and its recent accentuation and illustrate further the wide and rapid fluctuation to which sugar prices are subject. Wide fluctuations are a normal characteristic of the market and the relatively high prices ruling in 1927 should not be overlooked.

(d) ABSENCE OF A COMMON POLICY.

The development of the cane industry has been to an appreciable extent natural—but not wholly, for into Australia the import of foreign sugar is totally prohibited and in all producing countries laws have been passed, protective in intent if, in certain important cases, nugatory in effect. The restoration of the beet industry has been mainly artificial—but again not wholly—for in the Netherlands, where the trade is free and in Belgium and Denmark, where the duties are low, some progress has been achieved. The natural advantages of cane production must therefore not be exaggerated, nor must it be presumed that the sugar crisis has resulted from a battle between the arrayed ranks of only two groups of combatants. There is no concerted action between the producers of the one or the other type of sugar—on the contrary, all attempts at agreement made during post-war years have failed; that between Cuba, Czechoslovakia, Germany and Poland for the restriction of output which was proposed last autumn broke down before its full effects could be realised. In the existing competition all are pitted against all. The brunt of the battle is borne by the exporting countries both of beet and of cane sugar which have to struggle between themselves for the saturated markets which exist.

<sup>1</sup> The prices given here are the London prices, a more complete list of which will be found in Annex VII.

<sup>2</sup> Average for first five months.

(e) THE SPECIAL POSITION OF EXPORTING COUNTRIES AND THE FREE MARKET.

The number of exporting countries, however, is not great. In Europe, Czechoslovakia, Germany and Poland—in Asia, Java and the Philippines—in Africa, the island of Mauritius—in the West, Cuba, the dependencies of the United States and the islands of the Caribbean, the Argentine, Brazil and Peru, account for the great bulk of the sugar entering the world market. In addition to these, Belgium and Hungary in Europe, and certain minor producers in other continents, export a relatively large proportion of their output.

Of the world's beet-sugar production, five countries — Germany, Czechoslovakia, the Union of Soviet Socialist Republics, the United States of America and France — account for two-thirds. If the Indian *gur* be ignored, three countries alone—Cuba, Java and Hawaii—account for over one-half of the world's supplies of cane sugar. Of the five beet countries, the United States of America and France manufacture less than they require and the export surplus of Russia is small and irregular. The whole output of Hawaii is consumed in the United States.

The fact that major sources of supply are relatively few in number should facilitate the solution of the problem with which the industry is faced. But that problem is complicated on the one hand by the lack of semblance between the two types of agriculture and on the other by the restriction of markets. As Dr. Mikusch states in his memorandum :

“ The fact must not, however, be lost sight of that the entire trade operates within four concentric circles, in which tariff protection exercises its effects in a decreasing proportion from the centre outwards, while freedom of trade proportionately increases.

“ In the innermost circle is the sugar which is either consumed under the protection of a duty in the country of production or which is consumed in another country where some other form of duty is levied but where sugar is exempt from import duty.

“ To the next circle belongs the sugar consumed in a country where it enjoys a preference over that of other origin.

“ In the third circle is the sugar consumed in countries in which it receives no kind of preferential treatment with regard to tariffs or other duties but enjoys a favoured position—which may in some cases almost amount to a monopoly—on account of its geographical situation, freight conditions, marketing, Customs or any other circumstances, as for example, the position enjoyed by Peruvian sugar in the Chilian market, or by Java sugar in the Far-Eastern markets.

“ Finally, sugar which is really sold in the open market belongs to the outermost circle.”<sup>1</sup>

He concludes that the first and second circles embrace more than three-quarters of the sugar production of the world, leaving a bare quarter for the two outer circles. But about one-half of this quarter is consigned to markets where it in fact enjoys a preference over other sugar. Only one-eighth of the total supply is thus sold under open-market conditions.

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<sup>1</sup> Memorandum by Dr. G. Mikusch (document C.148.M.57.1929.II, page 31).



Dr. Prinsen Geerligs estimates the amounts to be offered by the various competitive sources of supply on this fully open market during the present commercial year as follows :

	Tons
Czechoslovakia. . . . .	500,000
Netherlands and Belgium . . . . .	150,000
Java . . . . .	475,000
South and Central America . . . . .	180,000
Santo Domingo . . . . .	300,000
Cuba . . . . .	1,750,000
Total . . . . .	3,355,000 <sup>1</sup>

The subsidies, the bounties, the protective and the preferential duties or geographical advantages under which seven-eighths of the world sugar supply is produced or marketed have stimulated local production, have diverted and twisted the channels of trade, have built a pyramid of differential prices, but collectively they have done nothing to restrain the forces which are adversely affecting the industry as a whole. Indeed, it cannot be expected that unconcerted national action will solve a problem essentially international in character. On the contrary, the bounties on export, the high protective duties which render dumping possible, have directly contributed to the surplus supplies which are unduly depressing prices.

In view of the manifold forms which sugar takes and the absence of official statistics concerning consumption or stocks in many parts of the world, it is exceedingly difficult to make even an approximate estimate of that surplus. The general impression in the sugar world, however, is that at the end of the 1927-28 campaign it amounted to about one million tons, though some experts put it at double this figure. It is anticipated that the present campaign will result in a further addition to stocks.

(f) THE IMMEDIATE AND THE ULTIMATE PROBLEM.

A million tons is less than 4 per cent of the world's consumption of sugar to-day and, as the rate of consumption is increasing at about 4½ per cent per annum, were restraint exercised in the production of sugar, the depression from which the industry now suffers might be expected gradually and automatically to disappear. Such restraint however, demands some sacrifice.

Moreover, we cannot shut our eyes to the fact that behind the immediate problem of the existing relatively small surplus of supplies lurks the much graver question of the ultimate capacity of the beet-sugar industry in many countries to stand up against the competition of cane.

The majority of beet-producing countries are unable to compete with cane on equal terms and it is only thanks to the protection they enjoy that many beet-sugar firms are able to survive. It is well-nigh impossible—and we have not attempted—to make any accurate comparison between the average costs of production in various countries. <sup>2</sup> But a well-known authority has stated recently that the average cost

<sup>1</sup> He estimates further that the demand on the open market during the present commercial year is likely to fall short of the 3.3 million tons available by about one-third.

<sup>2</sup> See document C.148.M.51.1929.II, pages 5 to 11 and 24.

price of 100 kilogrammes in Germany has been estimated at approximately \$8.04 and in Java at \$3.81.<sup>1</sup>

The average cost price in Java is probably the lowest in the world. Indeed, Java is one of the few countries which can make profits even at the present open-market prices. This comparison exaggerates, then, the general advantage of cane over beet. But one of the causes of the low costs in this country—apart from the cheapness of labour—has been the better selection of seed, and there is nothing to prevent higher yields being obtained in other cane-growing countries by similar means. It is in the face of this threat that Europe has had resort to protective measures—though that threat alone has not determined her policy.

### III. GOVERNMENT MEASURES.

#### (a) PROTECTIVE MEASURES.

We do not propose to record in any detail the various measures which Governments have adopted in order to create a sugar industry within domestic or imperial frontiers or to protect their progeny.

Protective measures have not been confined to the beet-growing countries. As we have observed above, the importation of sugar into Australia is prohibited and duties on sugar exist in all cane-producing areas.

As, however, with but certain exceptions (Argentine, Brazil, British India, Australia, etc.) the home markets of the cane-sugar countries are small, these protective duties are frequently of secondary importance. Much more important is the treatment received in overseas markets. The islands within the Customs frontier of the United States (Porto Rico, Hawaii and the Philippines) naturally enjoy exemption from Customs duties in the United States. To Cuba, the United States has granted a 20 % preference. France and Japan both exempt their colonies and protectorates from all duty obligations. Great Britain and Canada grant a preferential treatment to sugar produced within the British Empire. The Portuguese colonies enjoy a similar preference in Portugal.

In Switzerland, Denmark and Belgium, the duties on raw sugar are, it is true, low: less than one dollar per 100 kilogrammes. In all other countries of Europe save Sweden they are over two dollars; in Germany, Czechoslovakia, Poland and Hungary, to whom the export trade and the support of the home market are alike important, they are five dollars or more; in Spain and Turkey they exceed nine dollars.

To protective and preferential duties have been added in certain countries (Austria, Finland, the Irish Free State, Latvia and the United Kingdom) direct subsidies to the trade and, in Czechoslovakia, indirect advantages by rebate of taxes.

Protection has bred protection. The attempt by one country to check the inflow of the world's sugar surplus into its markets, or to furnish the requirements of its markets itself, has led others to retaliate.

A single example of the reproductive power of commercial legislation may be given. In April 1928, the British Government reduced the duty on raw sugar while maintaining the duty on refined sugar unchanged. This legislation in no way affected the agriculturist in England, but benefited the sugar refiner. Refiners elsewhere found themselves deprived of an important market. Since November 1928, the

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<sup>1</sup> Dr. Mikusch quoted in the "Zeitschrift für die Zuckerindustrie der Cechoslovakischen Republik," of March 15th, 1929, page 406.

Czechoslovak Government has accordingly granted sugar factories a refund of the trade taxes (sales tax, coal and transport dues, in so far as they affect export), and a reduction of the business turnover tax on internal trade. At the same time the domestic price of sugar was raised to the profit of the farmer. As a result of this subsidy Czechoslovak export was freed of part of its fiscal burden and the competitive power of the Czechoslovak exporter on world markets was enhanced. In December, therefore, the German Reichstag and the Austrian Abgeordnetenhaus<sup>1</sup> passed bills raising once more their duties on imported sugar and in January 1929 similar steps were taken in Italy. It is not necessary for us to pursue the subsequent stages of this process of legislative generation; nor do we desire to consider the relative merits or demerits of the policies enforced. It is, we venture to believe, self-evident that no policy intended to stimulate production can contribute to alleviate a situation the weakness of which lies in an existing excess of supplies.

There is, however, one aspect of the problem on which lengthy evidence was heard and on which we believe that we should make certain observations at this stage. A number of the witnesses and experts whom we heard expressed the view that Governments have been influenced in their policy as regards beet sugar mainly by a consideration of the interests of the agriculturists. This argument is well presented in the report of Messrs. F. O. Licht:

“The reason why all Governments cling so stubbornly to beet culture is not to be found mainly in considerations of financial policy, but in agricultural and social considerations. Beet culture in itself, without reference to sugar production, is for many reasons a vital condition of all intensive agriculture.

“From the strictly agricultural point of view, it is universally recognised that beet-growing insures a good rotation of crops, clean fields, a richer yield of other crops following on beet and a general improvement of the soil.

“Not less important are the many uses of the residual by-products of the beet, such as slices or pulp, leaves and molasses, which enable the farmer to keep larger stocks of cattle and so increase the production of meat, milk, butter and cheese. Molasses is also increasingly used in many chemical processes. Sugar-beet culture, inclusive of leaves, slices and tops, yields on the average a far higher proportion per hectare of starch equivalent and proteins (76.70 and 3.51 metric quintals respectively) than any other crop.

“The labour problem in relation to the sugar industry must also be examined. Beet-growing, as a highly intensive form of cultivation, provides employment for a considerable portion of the rural population, whose numbers would be greatly reduced if this crop were discontinued; the sugar factories enable many field labourers to earn good wages during the winter months when they would otherwise be unemployed. In terms of men's working years, the number of hands employed in intensive farming on good soil, without beet crops, is 3 per 25 hectares; in the same conditions, with 10 % beet crops, it is 5 per 25 hectares, with 20 % beet crops 6 per 25 hectares and with 30 % beet crops, about 7.5 per 25 hectares.”<sup>2</sup>

The experts in the cultivation of sugar beet, however, were all agreed that, for the agriculturist, the financial benefit derived from the growing of sugar beet was not necessarily superior to that from other crops. Some were of opinion that in their

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<sup>1</sup> The increase in the Customs duty in Austria is replaced provisionally by a subsidy.

<sup>2</sup> Memorandum by Messrs. F. O. Licht, (document C.148.M.57.1929.II, page 25).

countries the cultivation of sugar beet on a large scale was not essential and could be replaced without disadvantage to the farmer by mangolds, turnips or other crops. This opinion encountered the opposition of other experts who insisted that the general value of the crop to the land must be considered as a factor distinct from the profit derived by the farmer. This argument, which has, we believe, had an appreciable effect on recent legislation, has met with adverse criticism, for it was argued that in the profit derived from the cultivation of sugar the farmer will certainly include the indirect benefit—the higher yield of other crops on account of cleaner land and deeper tillage, better rotation, etc. If the direct, plus the indirect, income from sugar cultivation is less than that obtained from other crops, there would appear to be legitimate grounds, not for the granting of a subsidy, but for the cultivation of alternative crops. The fact that the subsidised cultivation of sugar is directly or indirectly profitable is of itself no proof that that culture or the subsidy which permits it is beneficial. We have emphasised this point because we believe that there is little prospect of a rational solution of existing difficulties in the absence of a clear understanding of it.

The attempts to maintain the existing capital sunk in the cultivation of beet or manufacture of sugar, or to retain a given distribution of the population between town and country, are, of course, supported by arguments quite distinct from those which we have been considering.

#### (b) FISCAL MEASURES.

As we shall explain later, many representatives of the sugar industry believe that at least a partial solution of the present difficulties lies in a further and more rapid increase in consumption. For this reason the question of excise duties on sugar assumed importance in the discussions which we had with the experts. The number of countries in which these duties have been raised since the war is not great. On the contrary, in the majority of countries imposing them, they are lower than formerly. But in certain instances the duties are strikingly high—in one case over \$20 and another over \$15 per 100 kilogrammes of refined sugar<sup>1</sup>. It is by no means impossible, therefore, that a reduction of duty would lead to so great an increase in consumption as to augment and not to diminish the revenue derived from the tax. The question is one which we venture to think is worth careful study by the Governments concerned. In the majority of countries, however, it is not the excise but the customs duties to which high domestic prices and restricted demand are due.

#### IV. SUGGESTED SOLUTIONS.

Before recording the suggested solutions which were discussed by the experts heard, we desire to emphasise once more the essential character of the crisis from which the industry is suffering. The consumption of sugar is increasing with unusual rapidity and the demand for this product is such that conditions of exceptional prosperity might have been anticipated. In fact the industry is being conducted in many areas at a loss. This loss is due to a persistent excess of production caused, in the first instance, by improved methods of cane cultivation, in the second by the determined endeavour of beet-producing countries to maintain or even to expand their output in the face of the greater natural advantages of their rivals.

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<sup>1</sup> The price of refined sugar to-day is under \$6 per 100 kilogrammes.

In view of this state of affairs, it was to be expected that the proposed remedies should be directed towards restricting production or further stimulating demand. The proposals actually put forward may be summarised as follows. It was suggested:

1. That an international agreement between all important producers or alternatively between producers in exporting countries, should be arranged with a view to stabilising production for a few years.

2. That an international agreement between all exporting countries and those likely to have an export surplus in the near future, should be arranged with a view to a concerted and rational policy of sale.

3. That a concerted endeavour should be made to augment the sale and use of sugar by means of active propaganda, more especially in Eastern and tropical countries.

4. That the possibility of increasing consumption by lowering excise duties without reducing receipts from this source of taxation should be carefully considered by Governments.

5. That a central bureau for the collection and dissemination of information should be established.

The majority of these proposals failed to receive the unanimous support of the experts we heard. There was, on the other hand, almost complete unanimity in the strongly expressed opinion that the principles of the Brussels Convention of 1902 could not with advantage be applied to the present situation. Further, the suggestions which we have summarised above took, in several instances, various alternative forms.

1. Thus the desirability, not of stabilising, but of curtailing production was discussed, though finally rejected. The majority of the experts held the opinion that a stabilisation of production for three or four years at its present level would, in view of the natural growth of demand, restore the industry to a profit-making basis. Again, certain experts considered that such stabilisation could only be effected if all important producing countries co-operated. Others, however, believed that an agreement between the major exporting countries should suffice, while one witness suggested that two separate agreements should be made, the one between cane- and the other between beet-producing countries.

There was general agreement that, for the arrangement of any understanding between producers intended to affect output, Government intervention, though believed by some to be eminently desirable, was not indispensable.

Into the possible form of an understanding of the general character contemplated we do not consider it necessary to enter. We believe that if the industry desires to take concerted action with a view to preventing a disturbing surplus of supplies it is fully competent to do so without external aid. As we stated in April last, we do not desire to "assume any responsibility or take any initiative in this matter". We note, however, that a policy of reducing output is not contemplated in any quarter and that, since an agreement of only relatively short duration is proposed, the interests of the consumer are not likely to be threatened. We shall, however, not fail to keep this aspect of the problem constantly before us.

2. International action with a view to a united sales policy was not considered generally to constitute by itself any adequate solution of the problem. The majority of those who supported the proposal added that, while it might help to reduce waste in marketing and might even render some control of prices possible, stable conditions could not be established if production were allowed to expand without limit.

As a rider to the general proposal, it was further suggested that the central selling agency might endeavour to support the prices at which the bulk of the supplies were sold by placing some portion of the year's output below cost price in markets where sugar was at present but little used. By this means it was hoped that it might prove possible at once to dispose of the surplus and, by gradually extending the habit of sugar consumption, to open up new markets.

It was emphatically asserted by some experts that the full co-operation of the main distributing centres was an indispensable condition for the successful operation of both a producers' and a sales agreement.

The whole of these proposals were, however, strongly criticised by others on the grounds that no single office could replace the intricate organisation which had been built up for the transport and sale of sugar, that the multiplicity of grades of beet sugar and the special requirements of individual markets rendered centralisation impracticable, and that the disappearance of the future market which must result from a selling pool would introduce a new cause of disturbance and risk into a market already extremely sensitive.

3. Those experts who were unwilling to accede to any international agreement amongst producers laid special emphasis on the possibility of promoting sales by widespread propaganda. It was not, however, wholly evident to what extent this contemplated advertising campaign was looked upon as a definitive cure of existing ills.

4. All were agreed that it was desirable that Governments should consider whether it might be possible to assist at once the sugar industry and their own budgetary position by lowering the rates of excise duties.

5. On the proposal to establish a central bureau of information, opinion was somewhat divided; for, while all agreed that the spread of information was in itself desirable, it was maintained by some that adequate machinery already existed.

## V. CONCLUSIONS.

On these proposals we desire to limit ourselves to the following general observations:

1. The difficulties with which the industry is at present beset are such as can, to a large extent, either remedy themselves or be remedied by those responsible for the conduct of business.

2. We do not consider, therefore, that we are called upon to express any view concerning the relative merits of the various proposals for purely private action which have been put forward.

3. Though it is true that the majority of the experts—representatives both of industry and of agriculture—were of opinion that in existing circumstances the conclusion of a Convention between States, based on the principles of the Brussels Convention, would not be likely to provide a solution for the crisis, all were agreed in recognising that the difficulties have been accentuated by the measures taken in many countries to stimulate the production of sugar, without consideration of the effects of their unco-ordinated action on the world situation.

4. It is possible that action by producers in accordance with an agreed plan might render superfluous some of the artificial measures by which the sugar industry

benefits in certain countries. Should that be so, the time might have come for the States concerned to submit the regime they have established to encourage the production or sale of sugar to a fresh examination, giving due regard to the essential interests of agriculture ; and, should they find themselves unable to modify this regime without other countries acting similarly, to make known their views in regard to the taking of joint action.

5. The Economic Committee will continue to watch carefully the further developments of the sugar question in order to be in a position to furnish the Council at any moment with information enabling it to " judge whether concerted international action could further the solution of the problems under consideration ".

6. Finally, we venture to suggest to the Council that the attention of Governments should be drawn to the desirability of ascertaining whether there is any possibility of lowering their excise duties on sugar, without adversely affecting their fiscal position.

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**Annex I.**

**STATISTICS OF THE WORLD PRODUCTION OF SUGAR<sup>1</sup>: 1913-14 TO 1928-29.**

(In 1,000 metric tons, in terms of raw sugar.)

Year	World production of sugar	Cane	Beet	Percentage of total	
				Cane	Beet
1913-14	19,879	10,884	9,013	54.7	45.3
1914-15	19,349	11,081	8,268	57.7	42.3
1915-16	17,757	11,639	6,116	67.0	33.0
1916-17	18,232	12,392	5,840	67.9	32.1
1917-18	18,430	13,324	5,106	72.3	27.7
1918-19	17,162	12,808	4,354	74.6	25.4
1919-20	16,609	13,283	3,326	79.9	20.1
1920-21	18,119	13,216	4,902	72.9	27.1
1921-22	19,164	14,069	5,095	73.4	26.6
1922-23	19,413	14,084	5,328	72.5	27.5
1923-24	21,390	15,330	6,060	70.2	29.8
1924-25	24,883	16,567	8,316	66.5	33.5
1925-26	26,021	17,461	8,580	67.1	32.9
1926-27	24,701	16,824	7,877	68.1	31.9
1927-28	26,676	17,527	9,149	65.7	34.3
1928-29	28,437	18,858	9,579	66.3	33.7

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<sup>1</sup> Figures from Dr. Gustav Mikusch.



**Annex II.<sup>1</sup>**

TABLE A. — STATISTICS OF THE WORLD PRODUCTION OF SUGAR, 1913-14 TO 1919-20.

	(In 1,000 metric tons, in terms of raw sugar.)						
(a) <i>Beet Sugar.</i>	1913-14	1914-15	1915-16	1916-17	1917-18	1918-19	1919-20
<i>Europe:</i>							
Germany . . . . .	2,716	2,510	1,515	1,558	1,541	1,328	702
Czechoslovakia . . . . .	—	—	—	—	—	624	507
Austria . . . . .	1,680	1,593	940	933	656	8	5
Hungary . . . . .	—	—	—	—	—	55	11
France . . . . .	797	337	151	206	223	122	172
Belgium . . . . .	230	206	114	136	131	74	147
Netherlands . . . . .	231	302	243	264	200	173	239
Poland . . . . .	—	—	—	—	—	216	92
Denmark . . . . .	144	154	127	116	136	144	156
Sweden . . . . .	137	154	127	137	131	127	145
Italy . . . . .	330	163	164	156	103	120	186
Spain . . . . .	188	113	118	140	156	171	92
Jugoslavia . . . . .	6	?	?	—	—	—	?
Roumania . . . . .	39	34	32	16	3	2	5
Bulgaria . . . . .	9	26	13	7	15	16	13
Great Britain . . . . .	4	1	2	—	—	—	—
Irish Free State . . . . .	—	—	—	—	—	—	—
Finland . . . . .	—	—	—	—	—	—	—
U.S.S.R. . . . .	1,740	1,919	1,662	1,322	1,017	370	88
Other countries . . . . .	8	7	6	6	6	8	8
<b>Total Europe . . . . .</b>	<b>8,259</b>	<b>7,519</b>	<b>5,214</b>	<b>4,997</b>	<b>4,318</b>	<b>3,558</b>	<b>2,568</b>
U.S. of America . . . . .	740	730	880	829	771	767	732
Other beet sugar . . . . .	14	19	24	14	17	29	26
<b>Total beet sugar . . . . .</b>	<b>9,013</b>	<b>8,268</b>	<b>6,118</b>	<b>5,840</b>	<b>5,106</b>	<b>4,354</b>	<b>3,326</b>
 (b) <i>Cane Sugar.</i>							
Cuba . . . . .	2,638	2,624	3,055	3,068	3,500	4,031	3,789
U.S. of America (Louisiana, Texas) . . . . .	283	236	133	297	235	272	117
Porto Rico . . . . .	330	313	438	456	421	368	441
Hawaii . . . . .	560	586	538	585	523	548	505
San Domingo, Haiti . . . . .	107	110	128	132	129	164	183
Argentina . . . . .	278	336	149	84	88	128	297
Other American States . . . . .	988	998	1,072	1,134	1,087	1,083	1,595
<b>Total America . . . . .</b>	<b>5,184</b>	<b>5,203</b>	<b>5,513</b>	<b>5,756</b>	<b>5,983</b>	<b>6,594</b>	<b>6,927</b>
British India . . . . .	2,478	2,650	2,829	2,922	3,498	2,558	3,274
Java . . . . .	1,531	1,474	1,389	1,723	1,928	1,875	1,413
Philippines . . . . .	233	208	332	203	216	195	209
Other Asiatic Countries . . . . .	581	641	767	957	790	739	610
<b>Total Asia . . . . .</b>	<b>4,823</b>	<b>4,973</b>	<b>5,317</b>	<b>5,805</b>	<b>6,432</b>	<b>5,367</b>	<b>5,506</b>
Queensland and New South Wales . . . . .	269	250	163	196	335	207	177
Fiji Islands . . . . .	94	87	122	99	64	65	74
<b>Total Australia . . . . .</b>	<b>363</b>	<b>337</b>	<b>285</b>	<b>295</b>	<b>399</b>	<b>272</b>	<b>251</b>
Africa . . . . .	506	561	520	530	503	568	591
Europe . . . . .	8	6	5	5	6	7	8
<b>Total cane sugar . . . . .</b>	<b>10,884</b>	<b>11,081</b>	<b>11,639</b>	<b>12,392</b>	<b>13,324</b>	<b>12,808</b>	<b>13,283</b>
<b>World Sugar Production . . . . .</b>	<b>19,879</b>	<b>19,349</b>	<b>17,757</b>	<b>18,232</b>	<b>18,430</b>	<b>17,162</b>	<b>16,609</b>

<sup>1</sup> Figures of Dr. Gustav Mikusch.

TABLE B. — STATISTICS OF THE WORLD PRODUCTION OF SUGAR, 1920-21 TO 1928-29.

(In 1,000 metric tons, in terms of raw sugar.)									
(a) <i>Beet Sugar.</i>	1920-21	1921-22	1922-23	1923-24	1924-25	1925-26	1926-27	1927-28	1928-29
<i>Europe.</i>									
Germany . . . . .	1,084	1,301	1,455	1,146	1,564	1,599	1,664	1,675	1,860
Czechoslovakia . . . . .	717	663	744	1,002	1,429	1,510	1,042	1,254	1,055
Austria . . . . .	15	14	24	47	75	78	80	110	108
Hungary . . . . .	31	61	82	124	202	166	175	187	220
France . . . . .	339	309	495	496	834	754	713	868	910
Belgium . . . . .	243	290	269	300	400	332	233	273	280
Netherlands . . . . .	317	378	250	226	323	300	277	254	311
Poland . . . . .	173	178	304	383	490	581	556	560	750
Denmark . . . . .	137	146	90	109	141	180	155	143	170
Sweden . . . . .	164	235	72	149	135	205	21	145	161
Italy . . . . .	138	229	294	350	417	159	310	281	385
Spain . . . . .	235	80	187	187	280	273	242	217	260
Jugoslavia . . . . .	22	26	38	45	142	63	78	84	129
Roumania . . . . .	17	29	46	82	104	123	147	140	120
Bulgaria . . . . .	10	14	18	30	44	—	35	42	29
Great Britain . . . . .	2	8	8	15	27	58	173	215	220
Irish Free State . . . . .	—	—	—	—	—	—	14	21	22
Finland . . . . .	1	2	1	1	1	2	4	6	3
U.S.S.R. . . . .	101	56	233	419	506	1,188	970	1,454	1,425
Other countries . . . . .	8	10	9	18	29	29	28	39	44
<b>Total Europe . . . . .</b>	<b>3,754</b>	<b>4,029</b>	<b>4,619</b>	<b>5,129</b>	<b>7,143</b>	<b>7,600</b>	<b>6,917</b>	<b>8,008</b>	<b>8,462</b>
U.S. of America . . . . .	1,098	1,029	680	888	1,103	907	905	1,085	1,053
Other beet sugar . . . . .	50	37	29	43	70	53	55	56	64
<b>Total beet sugar . . . . .</b>	<b>4,902</b>	<b>5,095</b>	<b>5,328</b>	<b>6,060</b>	<b>8,316</b>	<b>8,560</b>	<b>7,877</b>	<b>9,149</b>	<b>9,579</b>
 (b) <i>Cane Sugar.</i>									
Cuba . . . . .	3,998	4,060	3,659	4,117	5,202	4,956	4,580	4,103	5,100
U.S. of America . . . . . (Louisiana, Texas)	168	314	285	158	85	134	45	68	166
Porto Rico . . . . .	446	368	344	406	599	553	571	678	558
Hawaii . . . . .	489	553	495	636	704	717	739	823	850
San Domingo, Haiti . . . . .	176	173	198	238	322	368	328	392	368
Argentina . . . . .	203	197	210	257	249	425	512	458	410
Other American States . . . . .	1,555	1,720	1,713	1,814	1,928	1,962	1,858	1,993	1,967
<b>Total America . . . . .</b>	<b>7,035</b>	<b>7,385</b>	<b>6,904</b>	<b>7,626</b>	<b>9,089</b>	<b>9,115</b>	<b>8,633</b>	<b>8,515</b>	<b>9,419</b>
British India . . . . .	2,763	2,869	3,315	3,601	2,817	3,271	3,547	3,509	3,020
Java . . . . .	1,634	1,786	1,914	1,899	2,119	2,446	2,104	2,567	3,203
Philippines . . . . .	256	338	263	376	590	444	579	638	630
Other Asiatic Countries . . . . .	667	734	733	853	810	859	773	953	1,130
<b>Total Asia . . . . .</b>	<b>5,320</b>	<b>5,727</b>	<b>6,225</b>	<b>6,729</b>	<b>6,336</b>	<b>7,020</b>	<b>7,003</b>	<b>7,667</b>	<b>7,983</b>
Queensland and New South Wales . . . . .	186	304	311	290	443	526	422	518	541
Fiji Islands . . . . .	74	73	36	65	102	72	96	99	86
<b>Total Australia . . . . .</b>	<b>260</b>	<b>377</b>	<b>347</b>	<b>355</b>	<b>545</b>	<b>598</b>	<b>518</b>	<b>617</b>	<b>627</b>
Africa . . . . .	588	571	599	612	587	719	657	714	811
Europe . . . . .	13	9	9	9	10	9	13	14	18
<b>Total cane sugar . . . . .</b>	<b>13,216</b>	<b>14,069</b>	<b>14,084</b>	<b>15,330</b>	<b>16,567</b>	<b>17,461</b>	<b>16,824</b>	<b>17,527</b>	<b>18,858</b>
<b>World Sugar Production</b>	<b>18,119</b>	<b>19,164</b>	<b>19,413</b>	<b>21,390</b>	<b>24,883</b>	<b>26,021</b>	<b>24,701</b>	<b>26,676</b>	<b>28,437</b>

Annex III.<sup>1</sup>

AREA UNDER BEET IN THE CHIEF BEET-SUGAR PRODUCING COUNTRIES  
BEFORE AND AFTER THE WAR. (Hectares.)

Year	Germany	Czecho- slovakia	Austria	Hungary	France	Belgium	Nether- lands	Denmark
1910-11	474,003	—	—	—	237,942	66,429	54,786	22,300
1911-12	503,290	—	—	—	240,120	61,050	54,556	25,000
1912-13	546,359	—	24,000	—	245,385	65,800	62,854	30,000
1913-14 <sup>2</sup>	531,478	295,081	—	72,700	206,000	54,200	60,555	31,000
1919-20	258,009	182,653	3,990	20,000	65,259	34,000	53,103	41,629
1920-21	272,845	192,864	5,146	23,500	91,030	53,000	66,599	38,500
1921-22	332,432	191,893	8,298	28,100	105,605	58,051	73,615	54,236
1922-23	358,339	184,591	10,584	28,775	127,450	59,176	55,956	24,330
1923-24	335,642	232,438	12,968	46,037	154,906	72,264	67,497	30,300
1924-25	351,682	299,645	18,610	73,723	214,009	80,591	73,930	41,130
1925-26	372,542	311,674	19,872	65,513	214,300	72,478	66,210	37,679
1926-27	369,160	258,176	18,676	61,630	218,970	61,755	60,492	29,900
1927-28	404,146	281,321	23,145	62,353	234,430	71,380	69,002	40,300
1928-29	430,521	250,475	27,836	65,503	242,370	63,217	65,255	41,200

Year	Sweden	Poland	Italy	Spain	England	Russia	United States
1910-11	35,000	—	46,765	20,000	—	667,707	173,622
1911-12	29,100	—	54,758	33,234	—	787,708	214,952
1912-13	27,210	—	55,302	37,000	1,561	763,645	254,570
1913-14	28,700	175,251	82,348	50,966	1,634	728,247	262,005
1919-20	35,500	74,977	51,700	41,000	—	285,489	275,124
1920-21	45,690	69,313	46,300	72,500	1,218	162,059	341,154
1921-22	48,752	81,880	50,000	41,850	3,334	116,904	330,797
1922-23	16,716	109,353	85,000	48,000	3,365	175,608	218,988
1923-24	42,706	141,217	93,000	76,549	6,769	242,770	268,913
1924-25	37,400	168,347	136,300	100,000	9,055	343,182	332,673
1925-26	40,312	174,195	52,000	98,000	22,497	537,000	265,424
1926-27	4,418	180,452	80,255	85,000	51,600	543,000	275,742
1927-28	40,554	198,032	93,240	65,000	92,040	640,000	292,992
1928-29	42,623	220,512	112,000	75,000	71,200	759,000	283,000

<sup>1</sup> Figures from Messrs. F. O. Licht.

<sup>2</sup> In the present territory of the German Reich, the area under beet cultivation amounted to 442,000 hectares.

Annex IV.<sup>1</sup>

YIELD OF SUGAR PER HECTARE OF THE PRINCIPAL BEET-SUGAR PRODUCING COUNTRIES BEFORE AND AFTER THE WAR.

(Metric quintals.)

Year	Germany	Czechoslovakia	Austria	Hungary	France	Belgium	Netherlands	Denmark
1910-11	330	—	—	—	236	299	290	339
1911-12	180	—	—	—	174	265	360	307
1912-13	304	—	287	—	283	301	336	346
1913-14	318	270	—	268	238	276	275	312
1919-20	186	188	97	—	167	—	281	244
1920-21	240	218	179	124	236	—	286	220
1921-22	226	180	122	138	171	—	368	266
1922-23	261	238	156	179	251	286	325	236
1923-24	218	259	184	183	230	281	255	247
1924-25	276	275	232	189	284	307	328	246
1925-26	275	283	244	187	247	300	337	323
1926-27	289	241	243	198	213	263	343	328
1927-28	265	266	295	225	251	281	261	244
1928-29	Final figures are not yet available.							

Year	Sweden	Poland	Italy	Spain	England	Russia	United States
1910-11	314	—	338	272	—	201	201
1911-12	284	—	277	238	—	175	199
1912-13	308	—	314	319	135	170	185
1913-14	307	236	334	242	192	175	197
1919-20	256	114	307	172	—	44	195
1920-21	220	152	248	135	159	47	211
1921-22	297	127	285	175	195	35	203
1922-23	264	179	287	249	158	98	215
1923-24	243	182	300	184	151	109	223
1924-25	222	186	314	209	203	100	194
1925-26	337	208	243	192	192	152	240
1926-27	237	181	302	224	216	115	223
1927-28	236	178	225	233	161	142	232
1928-29	Final figures are not yet available.						

<sup>1</sup> Figures from Messrs. F. O. Licht.

Annex V.<sup>1</sup>

BEET-SUGAR PRODUCTION OF THE CHIEF COUNTRIES BEFORE  
AND AFTER THE WAR.

(Raw sugar in metric tons.)

Year	Germany	Czecho- slovakia	Austria	Hungary	France	Belgium	Nether- lands	Denmark
1910-11	2,606,122	—	—	—	724,897	284,714	221,359	109,003
1911-12	1,505,479	—	—	—	516,618	246,220	267,607	110,667
1912-13	2,732,189	—	63,058	—	972,761	300,253	316,933	157,000
1913-14 <sup>2</sup>	2,719,759	1,270,955	—	230,500	795,149	230,342	229,523	144,000
1919-20	716,627	504,700	5,210	11,430	171,630	146,918	238,692	155,874
1920-21	1,101,235	713,165	14,786	32,700	336,960	242,589	317,196	136,600
1921-22	1,311,419	654,171	14,219	60,000	305,892	289,866	380,479	146,800
1922-23	1,463,000	726,472	24,468	82,000	492,705	268,928	255,592	90,500
1923-24	1,134,611	997,993	47,000	125,000	490,849	300,121	231,923	109,500
1924-25	1,575,684	1,409,703	75,000	202,354	827,472	400,105	329,244	141,800
1925-26	1,595,161	1,487,920	78,145	166,286	746,913	332,170	306,970	182,800
1926-27	1,657,088	1,031,489	79,686	175,086	705,126	233,421	286,125	155,000
1927-28	1,664,766	1,239,155	110,004	186,701	863,205	273,113	259,964	142,800
1928-29 <sup>3</sup>	1,725,000	1,050,000	110,000	210,000	860,000	260,000	310,000	165,000

Year	Sweden	Poland	Italy	Spain	England	Russia	United States
1910-11	173,961	—	190,406	69,300	—	2,144,139	519,804
1911-12	127,376	—	173,158	75,600	—	2,046,065	617,870
1912-13	131,961	—	216,348	126,409	2,524	1,372,214	712,604
1913-14	137,106	571,401	334,064	188,200	3,766	1,740,360	665,128
1919-20	145,008	93,600	188,738	91,800	—	88,279	745,596
1920-21	164,210	169,200	139,941	235,900	2,135	100,875	1,106,955
1921-22	234,771	177,500	232,196	82,400	8,335	56,414	1,040,465
1922-23	71,790	301,890	297,280	170,000	8,014	220,000	703,322
1923-24	149,427	389,995	351,102	185,063	15,924	360,000	898,903
1924-25	135,000	494,854	422,000	260,000	27,289	458,375	1,113,523
1925-26	204,497	588,756	182,000	250,000	59,111	1,180,000	918,568
1926-27	20,871	562,790	313,738	245,000	175,111	983,000	914,922
1927-28	145,335	566,961	284,276	259,964	216,963	1,561,986	1,102,184
1928-29 <sup>3</sup>	160,000	700,000	380,000	238,000	225,000	1,380,000	1,084,000

<sup>1</sup> Figures from Messrs. F. O. Licht.

<sup>2</sup> In the present territory of the German Reich, the beet-sugar production amounted to 2,259,178 tons.

<sup>3</sup> As estimated by Messrs. F. O. Licht, January 31st, 1929.

TOTAL CONSUMPTION AND CONSUMPTION PER HEAD II

	1923-24		1924-25	
	Consumption in 1,000 metric tons	Consumption per head in kg.	Consumption in 1,000 metric tons	Consumption per head in kg.
<i>Europe :</i>				
Germany . . . . .	918	14.6	1,402	22.2
Czechoslovakia. . . . .	362	25.8	390	27.6
Austria . . . . .	150	22.9	176	26.7
Hungary . . . . .	49	6.0	84	10.2
Switzerland . . . . .	144	36.8	146	36.3
France . . . . .	827	20.6	931	23.1
Belgium . . . . .	168	21.9	193	24.9
Netherlands . . . . .	215	29.8	209	28.6
Great Britain . . . . .	1,729	38.4	1,839	40.6
Poland . . . . .	203	7.2	281	9.8
U.S.S.R. . . . .	442	3.2	737	5.3
Denmark . . . . .	163	48.2	170	49.7
Sweden . . . . .	203	33.8	224	37.1
Italy . . . . .	347	8.7	336	8.4
Spain . . . . .	224	10.5	232	10.8
Other European countries . . . . .	686	9.1	779	10.2
Total Europe . . . . .	6,830	13.5	8,129	15.9
<i>Asia :</i>				
China, Hongkong . . . . .	896	2.1	1,027	2.4
British India . . . . .	4,000	12.3	3,550	10.8
Japan, Formosa . . . . .	675	8.4	707	8.6
Java . . . . .	148	4.2	180	4.8
Other Asiatic countries . . . . .	320	4.0	345	3.8
Total Asia. . . . .	6,039	6.3	5,809	5.9
<i>Africa :</i>				
Egypt. . . . .	70	5.1	100	7.2
Union South Africa . . . . .	145	17.9	143	17.5
Mauritius . . . . .	5	13.2	6	15.8
Other African Countries . . . . .	197	1.8	240	2.2
Total Africa . . . . .	417	3.1	489	3.6
<i>America :</i>				
United States . . . . .	5,551	49.2	6,006	52.5
Hawaii . . . . .	16	54.4	17	54.7
Porto Rico . . . . .	48	34.0	49	34.5
Cuba . . . . .	110	33.1	120	35.6
Canada . . . . .	377	40.0	401	41.9
Br. W. Indies, Guiana . . . . .	23	11.2	25	12.0
French West Indies . . . . .	5	10.2	5	10.2
Haiti, San Domingo . . . . .	11	3.8	12	3.9
Mexico . . . . .	143	10.1	150	10.6
Other Central-American Countries . . . . .	80	13.1	77	12.4
Argentina . . . . .	265	27.8	295	30.0
Brazil . . . . .	700	22.0	800	24.4
Peru . . . . .	41	7.2	49	8.5
Other South-American Countries . . . . .	176	8.2	207	9.5
Total America. . . . .	7,546	34.0	8,213	36.5
<i>Australasia :</i>				
Australia (Continent) . . . . .	345	59.9	345	58.7
Other Australasian countries . . . . .	68	25.3	73	26.8
Total Australasia . . . . .	413	48.9	418	48.6
<b>World consumption . . . . .</b>	<b>21,245</b>	<b>11.6</b>	<b>23,058</b>	<b>12.4</b>
<b>World production . . . . .</b>	<b>21,390</b>		<b>24,883</b>	

<sup>1</sup> Figures from Dr. Gustav Mikusch.

## EACH COUNTRY DURING THE LAST FIVE YEARS.

1925-26		1926-27		1927-28	
Consumption in 1,000 metric tons	Consumption per head in kg.	Consumption in 1,000 metric tons	Consumption per head in kg.	Consumption in 1,000 metric tons	Consumption per head in kg.
1,432	22.6	1,521	23.9	1,626	25.4
408	28.6	370	25.7	393	27.0
198	29.8	176	26.3	202	30.0
91	11.0	103	12.4	113	13.5
156	39.7	135	34.3	166	42.5
979	24.2	816	20.1	971	23.8
192	24.6	192	24.4	210	26.4
213	28.7	219	29.2	233	30.6
1,877	41.2	1,888	41.1	2,072	44.8
297	10.1	343	11.5	386	12.7
1,013	7.1	1,068	7.4	1,310	8.9
186	53.8	170	48.6	183	51.7
224	37.0	218	35.9	230	37.7
361	8.9	367	8.9	379	9.1
234	10.8	258	11.9	268	12.2
821	10.6	814	10.4	856	10.9
8,882	16.7	8,658	16.5	9,600	18.1
1,005	2.3	893	2.0	1,000	2.2
4,200	12.9	4,300	13.1	4,350	13.3
782	9.3	780	9.2	885	10.3
200	5.2	237	6.1	281	7.1
346	3.6	403	4.2	450	4.6
6,533	6.6	6,613	6.7	6,966	7.0
110	7.9	115	8.1	120	8.4
157	19.1	165	20.0	169	20.3
7	18.0	7	18.0	7	18.0
263	2.3	259	2.3	284	2.5
537	4.0	546	4.0	580	4.2
6,047	52.2	6,020	51.3	5,889	49.6
18	55.0	18	55.0	19	55.1
50	34.8	50	34.7	50	34.7
150	44.0	155	44.9	155	44.3
401	41.4	396	40.3	406	40.8
25	11.9	25	11.6	25	11.7
5	10.2	5	10.1	5	10.0
12	3.8	14	4.3	14	4.2
166	11.6	190	13.3	190	13.3
78	12.4	93	14.5	94	14.5
330	32.7	330	31.9	330	31.1
800	24.0	750	22.1	720	20.9
57	9.8	51	8.7	42	7.1
228	10.3	210	9.4	221	9.8
8,367	36.7	8,307	35.9	8,160	34.8
350	58.3	356	58.2	362	58.0
73	26.6	73	26.6	74	26.3
423	48.3	429	48.3	436	48.2
24,542	13.1	24,553	13.0	25,742	13.5
26,021		24,701		26,676	

**Annex VII.**

**OPEN MARKET PRICES OF RAW SUGAR.**

<i>A. London:</i> <sup>1</sup>		Highest	Lowest (In shillings per cwt.)	Average
1908.		12/1½	9/8½	10/8½
1909.		14/6	10/3	11/3½
1910.		15/1¾	8/11½	13/0½
1911.		18/6½	9/1¾	13/1½
1912.		16/3	9/6¼	12/7
1913.		10/3	9/1	9/8¾
1921.		33/-	10/6	18/3½
1922.		19/3	10/6	15/3½
1923.		32/-	16/-	25/9
1924.		30/6	14/9	21/9
1925.		14/9	9/1½	12/9
1926.		16/3	10/4½	12/3
1927.		16/3	11/7½	13/9
1928.		13/6	9/6	11/7½
1929	January	9/9	9/3	9/6
	February	9/7½	9/4½	9/6
	March	9/6	9/1½	9/3¾
	April	9/4½	9/-	9/2¼
	May	9/-	8/4½	8/8¼
<i>B. New York:</i> <sup>2</sup>		(Cents per lb.)		
1908		3.125	2.31	2.713
1909		3.09	2.25	2.646
1910		3.09	2.44	2.828
1911		4.60	2.06	3.090
1912		3.44	2.41	2.804
1913		2.44	1.875	2.150
1921		5.25	1.813	3.459
1922		4.00	1.813	2.977
1923		6.625	3.25	5.240
1924		5.625	3.00	4.186
1925		3.06	1.94	2.562
1926		3.375	2.188	2.568
1927		3.500	2.688	2.959
1928		3.00	2.00	2.470
1929	January	2.063	2.00	2.031
	February	2.031	1.938	1.977
	March	1.969	1.875	1.930
	April	1.938	1.844	1.883
	May	1.906	1.813	1.836

<sup>1</sup> Figures furnished by Messrs. Czarnikow, Ltd., London sugar brokers. The post-war figures are the prices of raw cane sugar (basis 96° polarisation) per cwt net, c.i.f. U.K./Continent. The pre-war figures are the prices of raw beet sugar, basis 88% net analysis, f.o.b. Hamburg. Raw beet sugar 88% net analysis is equivalent to about 92° polarisation and the 4 degrees between the two figures are calculated at 3d. per cwt, which has been added to the pre-war figures in the above table. This is considered by Messrs. Czarnikow, Ltd., to be the most reliable price guide.

<sup>2</sup> Figures published by Messrs. Willett & Gray, New York sugar brokers. Cost and freight quotations for 96° Cuba Centrifugals, prompt shipment to New York, net cash (without duty).



**Annex VIII.**

**CUSTOMS DUTIES ON RAW SUGAR.<sup>1</sup>**

(Dollars per 100 kg.)

*A. Customs Duties in Countries growing Beet Sugar.*

Spain * . . . . .	11.58	Kingdom of the	
Czechoslovakia . . . . .	10.05	Serbs, Croats	4.82 (general)
Turkey . . . . .	9.89	and Slovenes. . . . .	3.86 (conventional)
Roumania . . . . .	9.47 (maximum)	Italy . . . . .	4.63
Greece . . . . .	6.31 (minimum)	Latvia . . . . .	3.86
Portugal . . . . .	7.21	Canada . . . . .	3.84 (intermediate)
Finland . . . . .	6.48 (maximum)	France . . . . .	2.18 (preferential)
Bulgaria . . . . .	4.32 (minimum)	Austria . . . . .	3.81
Poland . . . . .	6.29	Estonia . . . . .	3.64
Hungary . . . . .	5.76	Lithuania . . . . .	3.28
Russia . . . . .	5.61	Sweden . . . . .	3.00
Germany . . . . .	5.27	Great Britain* . . . . .	1.87
United States of	5.15	Belgium* . . . . .	1.77
America . . . . .	5.00	Denmark* . . . . .	1.11
	4.86	Switzerland . . . . .	0.67
			0.39

*B. Customs Duties in Countries growing Cane Sugar.*

Brazil . . . . .	37.48	South Africa . . . . .	4.29
Spain . . . . .	11.58	Chile . . . . .	4.02
Mexico . . . . .	7.14	Japan . . . . .	3.03 (maximum)
Persia . . . . .	6.73	British India . . . . .	1.93 (minimum)
Argentine . . . . .	6.68	Cuba . . . . .	2.87
Portugal . . . . .	6.48 (maximum)	China . . . . .	1.10
Uruguay . . . . .	4.32 (minimum)	Peru . . . . .	0.69
United States of	5.09	Morocco . . . . .	0.49
America . . . . .	4.86	Dutch East Indies	12 1/2% <i>ad valorem</i> <sup>2</sup>
Australia . . . . .	3.89 (on sugar from Cuba)	Egypt . . . . .	12% " "
	4.45		8% " "

<sup>1</sup>In the case of countries marked with an asterisk in which excise duties are levied on domestic sugar only, these duties have been deducted from the Customs duties. The figures therefore correspond to the "surtax" in the system of the Brussels Convention.

<sup>2</sup>It should be remembered that the present open-market price of refined sugar is well below \$6 per 100 kg.

**Annex IX.**

EXCISE DUTIES ON REFINED SUGAR.<sup>1</sup>

(Dollars per 100 kg.)

Italy . . . . .	20.95	Bulgaria. . . . .	5.98
Union of Socialist Soviet Republics	15.44	Czechoslovakia . .	5.45
Netherlands . . .	10.82	France . . . . .	4.88
Kingdom of the Serbs, Croats and Slovenes . . .	8.80	Poland . . . . .	4.31
Norway . . . . .	8.00 <sup>2</sup>	Austria. . . . .	3.24
Turkey . . . . .	7.72	Great Britain *. . .	2.78
Spain * . . . . .	7.28	Germany . . . . .	2.50
Hungary . . . . .	7.07	Roumania . . . . .	2.43
Japan. . . . .	6.42 - 7.69	Denmark * . . . .	1.53
		Belgium * . . . . .	1.11
		Sweden . . . . .	1.07

**Annex X.**

THE BRUSSELS CONVENTION OF 1902.

During the latter half of the nineteenth century the great sugar-producing countries on the continent of Europe all granted, either directly or indirectly, subsidies for the production or export of sugar. The assistance thus afforded had the effect of stimulating production, and an increasing amount of sugar was exported annually from Continental countries and sold mainly on the British market, where prices fell considerably and for long periods remained at a level below the cost of production, the loss for the producers being covered by bounties granted in the exporting States. As time went on, this system became very expensive for the sugar-producing countries, which were taxing their own people and selling at low prices to the foreign consumer; on the other hand, the British Government was anxious to stop the artificial reduction in prices, which was prejudicial to the production of cane sugar in the British colonies in the West Indies. After much difficult negotiation, a conference met in Brussels at the end of 1901. It resulted in the signature of the Convention of March 5th, 1902, which came into force on September 1st, 1903.

The first article in the Convention declares that the contracting parties undertake to suppress all direct and indirect bounties on the production or export of sugar.

<sup>1</sup> See note <sup>2</sup> on page 27.

<sup>2</sup> The duty indicated for Norway is the Customs duty. But as Norway does not produce any sugar herself, this duty is practically a tax on consumption.

\* Countries marked with an asterisk impose excise duty on domestic sugar only.

It gives the following examples of the way in which advantages, constituting bounties for the purposes of the Convention, may result from fiscal legislation by the various States :

- (a) Direct bounties granted to export ;
- (b) Direct bounties granted to production ;
- (c) Total or partial exemption from taxation granted in respect of a proportion of the manufactured product ;
- (d) Advantages derived from surplus yield ;
- (e) Advantages derived from exaggerated drawback ;
- (f) Advantages derived from any surtax in excess of the rate fixed by Article 3 of the Convention.

The advantages described under (d) and (e) refer to cases when the internal excise duty is levied on the *estimated* yield and the actual yield proves to be higher. If the full amount of duty is returned in drawback on export, a bounty is obtained.

In order to prevent fraud, the second article of the Convention provided for strict fiscal supervision of the manufacture of sugar, which would be carried out while it was "in bond"—that is, before having paid any duty ; drawbacks would then be abolished and sugar for home consumption be subject to duty only when delivered at that destination.

The advantages described under (f) above refer to cases in which the difference between the duty payable on imported sugar and the excise tax payable on home-grown sugar (*i.e.*, the so-called "surtax") is higher than 6 francs per 100 kilogrammes for refined sugar and than 5.50 francs for raw sugar (the figures laid down in Article 3 of the Convention). Behind an exaggerated protective duty the sugar industry, united in a cartel, could raise the price to the home consumer and, thanks to the profits then realised on the home market, it could afford to sell its surplus production abroad at a greatly reduced price. The result would be an indirect export bounty.

The fourth article sets out the safeguard given to the contracting States against competition by bounty-fed sugar. The States parties to the Convention undertook to impose a countervailing duty on sugar from countries that granted bounties.

One other provision may be mentioned. Under Article 6, Spain, Italy and Sweden were allowed to participate in the Convention without observing the stipulations in Articles 1, 2, and 3 provided they did not export any sugar. These countries were thus enabled to protect their sugar production by a surtax of more than 6 francs (or 5.50 francs in the case of raw sugar) per 100 kilogrammes, as long as their production was only for supplying the requirements of the home market.

\* \* \*

The Convention was amended in some particulars in 1908 when Great Britain obtained the right to admit certain quantities of bounty-fed sugar to its market. When the next five-year period expired in 1913, Great Britain was no longer bound to the other contracting States except by certain limited undertakings. In August 1917, the French Government denounced the Convention, and in 1918 the British Government gave notice of its intention to regain its full liberty of action. These denunciations induced the Belgian Government to propose to the other countries that the Convention should cease to have effect, and it was brought to an end on September 1st, 1920.

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## Annex XI.

### LIST OF EXPERTS CONSULTED.

#### A. Experts in the Sugar Industry.

- Belgium:* M. Lucien BEAUDUIN, Senator, President of the " Société générale des Fabricants de sucre en Belgique ", chaussée de Charleroi, 123, Brussels.
- Cuba:* M. Luis Marino PEREZ, Secretary of the Economic Defence Commission, Havana.
- Czechoslovakia:* M. Joe HARTMANN, Director of the " Société tchèque pour l'industrie sucrière ", Prague.
- Denmark:* M. Carl GAMMELTOFT, Director of the Danish Sugar Factories, Amalieg, 22, Copenhagen.
- Dutch East Indies:* M. Prinsen GEERLIGS, Director of the Netherlands Branch of the " Proefstation Voor de Javasuikerindustrie ", 17, Wanningstraat, Amsterdam.
- France:* M. HERSCHER, President of the " Comité central des Fabricants de sucre " 42, rue du Louvre, Paris.
- Substitute:*  
M. SOHIER, Director of the Group for the Reconstruction of the French Sugar Industry, 42, rue du Louvre, Paris.
- Germany:* Herr Kommerzienrat Dr. phil. e.h. Erich RABBETHGE, Director of Rabbethge & Giesecke, Kleinwanzleben; Director of the German Sugar Bank A.-G., Kleinwanzleben, near Magdeburg.
- Great Britain:* B. A. FORSTER, Esq., c/o Messrs C. Czarnikow (Sugar Brokers), 29, Mincing Lane, London, E.C.
- Hungary:* Dr. Albert HIRSCH, Sugar Manufacturer, V. Nador-utca, 3, Budapest.
- India:* S. N. GUPTA, Esq., I.C.S., Deputy Indian Trade Commissioner in London, Office of the High Commissioner for India, 42, Grosvenor Gardens, London, S.W. 1.
- Italy:* Comm. Dott. Ernesto RISSO, Advisory Director of the National Consortium of Sugar Producers, Via Garibaldi, 7, Genoa.
- Netherlands:* Dr. J. A. A. M. VAN LOON, Delegate Member of the Administrative Council of the " Centrale Suiker Maatschappij ", Amsterdam.
- Accompanied by* — Dr. P. J. H. VAN GINNEKEN, Secretary of the " Bond van Cooperatieve Suikerfabrieken in Nederland " at Bergen-op-Zoom. (M. Ginneken attended the meetings, but did not speak.)

- Poland:* M. Joseph ZYCHLINSKI, President of the "Crédit Foncier", of the Agricultural and Industrial Sugar Union of West Poland, of the Council of the Polish Sugar Industry and of the Union of Sugar Factories of West Poland, Poznan.  
*Substitute*— M. Charles SACHS, Member of the Polish Sugar Industry Board and of the Warsaw Sugar Union Board.
- Portugal:* M. Waldemar DE ALBUQUERQUE D'OREY, Companhia Colonial do Busi, Rua de S. Caetano, 32, Lisbon.  
*Assistants* — Colonel C. B. R. HORNING, Director of the Sena Sugar Estates, Ltd., Norfolk House, Laurence Pountney Hill, Cannon Street, London, E.C.4.  
M. Luiz DE SOUZA LARA, "Gremio de Produtores de Assucar de Provincia de Angola".
- Sweden:* M. E. C. HERSLOW, Expert Engineer of the Swedish Sugar Factories Union; Svenska Sockerfabriks Aktiefbolaget, Malmo.

**B. Experts in Beet Cultivation.**

*Experts appointed by the Economic Committee.*

- Belgium:* M. G. MULLIE, Senator, Farmer, Dottignies.
- Czechoslovakia:* His Excellency Professor Vladislav BRDLIK, former Minister of Agriculture, University Professor, Vodickova, 15, Prague II.
- France:* M. A. A. MONMIREL, President of the "Confédération générale des Planteurs de betteraves", 34, rue Taitbout, Paris.
- Germany:* Herr Oberamtmann WENTZEL, Teutschenthal b/Halle.
- Great Britain:* Sir Daniel Hall, K.C.B., LL.D., F.R.S. Chief Scientific Adviser, Ministry of Agriculture, London.
- Italy:* M. Gino DE VECCHI, Secretary of the Fascist National Confederation of Agriculture, Palais Reine-Marguerite, Rome.
- Kingdom of the Serbs,  
Croats and Slovenes:* Professor Stefan JURIC, Professor in Agriculture Trg Kralja Aleksandra, 3, Zagreb.
- Netherlands:* Dr. G. MINDERHOUD, Professor at the Agricultural University at Wageningen.
- Poland:* M. Stanislas HUMNICKI, Engineer, President of the Union of Beetroot-Growers, Director-General of the Confederation of Beetroot-Planters at Warsaw, Member of the Board of Directors of the International Confederation of European Beetroot-Growers, 30, rue Kopernic, Warsaw.  
*Substitute:* M. Roman JANTA-POLCZYNSKI, Member of the Beetroot-Growers Confederation of West Poland, 9, Place Wolnosci, Poznan.

*Roumania:* M. Constantin FILIPESCU, Inspector-General, Agricultural Engineer, 47, Blvd. Carol, Bucarest.

*Experts appointed by the International Institute of Agriculture, Rome.*

Professor Dorph PETERSEN, Director of the Danish Government Seed Experimental Station, President of the International Seed-Testing Association, 15, Fjords Allé, Copenhagen, V.

Dr. Ivan SERBAN DE VOJLA, Secretary-General of the Hungarian National Chamber of Agriculture, V. Nador-utca, 20, Budapest.

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