world output that year, compared with 12 percent during the prewar years.

U.S. production, including insular areas, increased only about 5.5 percent during World War I, while consumption rose 36 percent. Thus, U.S. imports of sugar were increasing while its European allies were experiencing great shortages.

Changes in International Trade

The decline in beet sugar production in Europe and the much greater drop in exports created an especially difficult situation in Britain, whose principal source of supply had been European beet sugar. The loss of supplies from continental Europe left only two sources from which the British could obtain significant quantities of sugar: Cuba and Java. However, the shortage of shipping and the dangerous shipping conditions which soon developed made it impossible to obtain much sugar from Java. This left Cuba as the only source from which supplies could be obtained on a large scale. Fortunately for the British, Cuban production increased rapidly.

However, Britain had to share supplies from Cuba with France, Italy, the United States, and the smaller Allied Powers. France in particular needed substantial increases in imports because much of its beet sugar industry was destroyed early in the war. French production in 1915/16 was only a fifth of the 1909/10 to 1913/14 average.

The situation with respect to sugar supplies gradually worsened as the war continued. By 1917, when the United States entered the war, the combined imports of Britain, France, and Italy were about 370,000 tons below their prewar average, and production in these countries was down about 640,000 tons. These figures indicate a deficit of about 1 million tons, compared with prewar conditions. In August 1917, the household ration of sugar was reduced to 2 pounds a month in Britain and to little more than half this in France.

U.S. Entry into the War

Soon after the United States entered the war in April 1917, President Wilson announced that the allies would be assisted in obtaining supplies of all types of goods from this country. Because sugar was among the food products urgently needed by Britain and France, a major problem of the U.S. War Food Administration, from its establishment in August 1917, was regulating the distribution of sugar shipments among the United States and its allies in some manner that would assure sufficient supplies to Western Europe (*19,20*).

In September 1917, the War Food Administration announced the formation of an International Sugar Committee, whose duties were (*19*) "to determine the most economical source, from a transportation point of view of all the allies, to arrange transport at uniform rates, to distribute the foreign sugar between the United States and allies, subject to the approval of the American, English, French and Italian governments."

The five-man Committee consisted of two members appointed by the United States, two by its allies, and the Chief of the Sugar Division of the War Food Administration. In November 1917, the Committee agreed that all purchases of sugar from Cuba, Santo Domingo (Dominican Republic), Puerto Rico, and St. Croix should be made by the International Sugar Committee. Purchases from Mauritius and the British West Indies were assigned to the Royal Commission on Sugar Supply. The United States handled supplies from Hawaii and the continental United States. Supplies from the Philippines, Java, Brazil, and Peru were to be considered available on the open market, but transactions were to be subject to consultation among the governments represented on the International Committee (*44*).

The Committee announced a maximum price of $6.90 per 100 pounds for old-crop raw sugar from Cuba arriving at destination not later than December 1, and the same price for raw sugar from other sources arriving not later than December 10.

Negotiations for 1917/18 Crop

The purchase of the 1917/18 crop of Cuban sugar (the old crop stipulation referred to 1916/17 and earlier years) was handled by the International Sugar Committee (*60*). The Cuban Government appointed two committees to handle its part of various aspects of the negotiations. In December 1917, an agreement was reached which provided for the purchase of the 1917/18 Cuban sugar crop up to a quantity of 2,500,000 long (2,800,000 short) tons by the International Sugar Committee, with options, which were exercised, to purchase an additional 750,000 long (840,000 short) tons. Purchases totaled 3,640,000 short tons.

Approximately a third of the amount purchased was to be taken by the Royal Commission on Sugar Supply for shipment to Europe. The price was 4.60 cents a pound f.o.b. for 96-degree sugar shipped from Cuban ports on the north side of the island and 4.55 cents a pound for sugar shipped from ports on the south coast. The rest of the sugar was to be purchased by U.S. refiners at 4.985 cents a pound cost and freight to New York or Philadelphia.

United States Sugar Equalization Board

In June 1918, the War Food Administrator proposed the creation of a government corporation to secure foreign sugars in cooperation with Allied Nations. The plan was approved by the President, and the United States Sugar Equalization Board was incorporated with a capital stock of $5 million subscribed by the Government. In October 1918, the Equalization Board purchased the 1918/19 Cuban sugar crop. The price for raw sugar for shipment to the United States was 5.88 cents a pound, cost and freight, delivered at New York or Philadelphia. The prices for sugar for shipment to the United Kingdom, France, and Italy were 5.5 cents a pound f.o.b. Cuba for shipments from northern Cuban ports, and 5.45 cents from southern ports.

The price for raw sugar from Hawaii, Puerto Rico, and Louisiana was set at 7.28 cents a pound. The Equalization Board agreed to sell raw sugar from Cuba which it had purchased at 5.88 cents a pound to U.S. refiners at 7.28 cents. The purpose of this arrangement was to equalize to refiners the cost of raw sugar from different sources.

The Equalization Board retained the margin between its buying and selling prices for Cuban sugar as profit. The cane sugar refiners' margin was fixed at 1.54 cents a pound. This made the net basic price for all refined cane sugar in the United States 8.82 cents a pound. This was the same as the price for beet sugar, stated as 9.00 cents a pound, less the customary discount of 2 percent for cash, making the cash price 8.82 cents.

Armistice on November 11, 1918

Arrangements for the purchase of the 1918/19 Cuban sugar crop had been completed only about a month before the armistice was signed. Discussion soon arose concerning the advisability of immediately relinquishing all Government controls on sugar and returning to a free market. It speedily became apparent that the cane sugar refiners were not willing to assume all the obligations of the U.S. Sugar Equalization Board under the purchase contract with Cuba. Under the circumstances, all that was possible was some relaxation of controls on domestic distribution. By mid-1919, it was becoming apparent that the world shortage of sugar was not over, and some of the relinquished controls over distribution were reinstated.

There was also considerable discussion concerning the desirability of purchasing the 1919/20 Cuban sugar crop. On July 29, 1919, representatives of the Cuban Government offered to sell the 1919/20 Cuban crop to the Sugar Equalization Board. The Board presented the proposal to President Wilson and recommended that the offer be accepted. The receipt of the offer and recommendation was acknowledged, but no reply was received from the President. The Cuban representatives withdrew their offer on September 22, 1919 (*60*). The Equalization Board then notified the President that cane sugar refiners had been advised to purchase raw sugar "as per pre-war time."

Congressional inquiry concerning the sugar question began in September 1919. It resulted in the passage of the McNary Bill, which continued the U.S. Sugar Equalization Board until December 31, 1920, and authorized the purchase of the 1919/20 Cuban sugar crop. The President signed the bill on December 31, 1919, but stated that he thought it inadvisable to exercise his authority to purchase the 1919/20 Cuban crop. On January 16, 1920, the Board suggested to the President that its affairs be liquidated. The suggestion was accepted, and all Government control over sugar ended on March 1, 1920.

Domestic Sugar Controls

In addition to international controls, the Government took various actions to reduce wartime sugar consumption in this country in an equitable manner. A voluntary rationing program was instituted in 1917 (*19*). The program covered industrial users and household consumers. It was not very effective because of a lack of controls.

In 1918, a more elaborate rationing program, known as the certificate plan, was introduced (*49,50*). There had been much discussion of adopting a card system similar to the British one, which used cards for individual consumers. The card system was not adopted, partly because it was thought to be too costly.

Under the certificate plan, sugar users were divided into classes, and an attempt was made to keep track of each sales transaction. Manufacturers using sugar could make no purchases after May 14, 1918, without the surrender of authorized sugar distribution certificates issued by State Food Administrators under instructions from the War Food Administration. The available supply was to be allocated on a percentage basis, using consumption during the first 4 months of 1918 as a base. Retail sales for household use were limited to 3 pounds a month per person.

The extent to which U.S. sugar consumption was reduced by the sugar certificate plan is uncertain. The Chief of the Sugar Division, War Food Administration, estimated that savings in calendar year 1918 were between 400,000 and 600,000 tons. Domestic consumption for 1918 has been estimated at 3,801,000 tons, 337,000 tons below that of 1917. This reduction occurred during a period when U.S. sugar consumption was generally rising.

The sugar rationing programs for 1917 and 1918 were the first ever attempted by the United States. Also, the Government purchase of Cuban sugar and its distribution among several nations marked a new departure in the control of an important commodity in short supply throughout the world.

PRICE FLUCTUATIONS AND HIGHER TARIFFS

There was much disagreement concerning the desirability of an early return to free market conditions. But groups favoring such return prevailed and Government controls ended in 1920.

The United States was not the first major power to begin the decontrol of sugar. France removed all domestic controls over sugar in June 1919. This was done without any prior accumulation of stocks in France and resulted in increased prices for sugar in those parts of the world market not under some form of governmental control. Prices in Cuba and the United States were not affected by the French action because of the purchase of the 1918/19 Cuban sugar crop and controls in effect in the United States.

Price Fluctuations in 1920

The duty-paid wholesale price of raw sugar at New York had been set at 7.3 cents a pound under the Government controls operating in 1919. This price was maintained during the first 11 months of 1919 (table 5). However, when it became apparent that the Government probably would not buy the 1919/20 Cuban crop, prices began to rise. The movement started in December 1919 and reached a peak of 23.57 cents a pound on May 19, 1920. Prices then declined about as rapidly they had risen, and by November 1920 they were below the regulated price of 1919.

Table 5—Wholesale prices per pound of raw sugar, New York and index of U.S. wholesale prices of all commodities, 1919-21

Month	Raw sugar			All commodities		
	1919	1920	1921	1919	1920	1921
	Cents			*1910-14=100*		
January	7.3	13.0	5.4	199	233	170
February	7.3	11.4	5.3	193	232	160
March	7.3	11.9	6.1	196	234	155
April	7.3	17.7	5.4	199	245	148
May	7.3	20.8	4.9	202	247	145
June	7.3	19.7	4.2	203	243	142
July	7.3	17.6	4.4	212	241	141
August	7.3	13.4	4.7	216	231	142
September	7.3	10.7	4.3	210	226	141
October	7.3	8.3	4.2	211	211	142
November	7.3	6.8	4.1	217	196	141
December	10.2	5.3	3.7	223	179	140
Average	7.5	13.0	4.7	206	226	147

Source: U.S. Dept. of Agr. Agricultural Yearbooks.

After November 1919, the movement of sugar prices resembled that of the index of wholesale prices for all commodities in the United States, but the fluctuations were much wider. Both series reached monthly peaks in May 1920. The price of sugar in that month, however, was 178.5 percent above its level 1 year earlier and 325 percent higher in May 1921. Corresponding figures for all commodities were 22 percent and 70 percent higher.

The unusual price movements of 1920 do not appear to have had much long-term effect in the United States except upon certain members of the sugar trade, primarily because of the short length of time they lasted. Speculators undoubtedly made or lost considerable sums, depending on the accuracy of their predictions, and consumers suffered from high prices for a few months. The period of high prices, however, was too brief to have much effect on production plans in U.S. beet and cane areas. Any large increase in the output of cane or beet sugar would have required the construction of new processing plants or considerable expansion in the capacity of existing plants, either of which would have required from 1 to 2 years to accomplish.

The economic effects on Cuba were much more marked, primarily because sugar production was by far the largest industry in that country (2). Also, much of the sugar-producing capacity in Cuba was comparatively new, and many properties were heavily in debt. The period of high prices occurred early in the year when the mills in Cuba were grinding cane, and new crop sugar was becoming available for sale. Those who sold early in the year doubtless profited from high prices.

However, rapidly rising prices were a powerful inducement to many sugar producers to hold their sugar and wait for still higher prices, even if it was necessary to borrow money to pay current expenses in order to retain possession of the sugar. In this way, the banks became more deeply involved in price speculation. Also the price of land, particularly that thought to be suitable for cane growing, began to rise, adding to the speculative fever. In Cuba the period became known as the "dance of the millions." The "dance" ended rather more abruptly than it began, as sugar prices sank below even their 1919 level.

Somewhat similar, although less extensive, effects occurred in the Dominican Republic. Except for the lack of a U.S. tariff preferential, the position of producers in that country was similar to that in Cuba, only on a smaller scale. U.S. citizens owned several sugar mills in that country. The domestic market was insignificant compared with production, so that the economic life of the industry depended on the export market, which at the time was principally Britain rather than the United States.

The sugar industry in Java, another major exporter, was controlled by the Dutch. Normally, India provided the largest export market for Javanese sugar, but when shipping became available after World War I, sugar from Java was occasionally marketed in Europe and the United States. The Javanese industry appears to have benefited from the high prices in 1920, because of its position as an exporter.

Cause of the 1920 Price Rise

The immediate cause of the high sugar prices of 1920 was the continuing world shortage of sugar. World sugar production, which exceeded 21 million tons in 1913/14, was below 18 million in 1919/20 (table 6). Production in Europe, despite the end of the war in November 1918, in 1919/20 reached a low point only a little above one-third the 1913/14 output. Production in Cuba had increased about 44 percent during the war. Changes in Java, the United States, and the Philippines were small, but output in other countries increased about 24 percent in total.

The removal of U.S. wartime controls, together with wartime prosperity, increased the demand for sugar in this country. U.S. imports of sugar in 1920 were 15 percent above those of 1919 and 90 percent above the 1909/13 prewar average (table 7). World imports in 1920, except those of the United States, were slightly below the 1909/13 average.

Table 6—Production of raw sugar in selected areas, crop years, 1913/14 to 1932/33

Year	Europe	Cuba	Java	United States	Philippines	Other countries	World
				1,000 tons			
1913/14	9,043	2,909	1,549	2,009	408	5,236	21,154
1914/15	7,598	2,922	1,454	1,966	421	6,514	20,875
1915/16	5,434	3,398	1,797	2,106	412	5,738	18,885
1916/17	5,194	3,422	2,009	2,279	425	5,263	18,592
1917/18	4,594	3,890	1,960	2,042	475	7,330	20,291
1918/19	3,611	4,491	1,473	2,062	453	6,514	18,604
1919/20	3,278	4,184	1,681	1,905	467	6,474	17,989
1920/21	4,104	4,406	1,853	2,339	589	6,255	19,546
1921/22	4,402	4,517	1,994	2,408	533	6,724	20,578
1922/23	4,985	4,083	1,981	1,924	475	7,412	20,860
1923/24	5,540	4,606	2,201	2,234	529	7,700	22,810
1924/25	7,678	5,812	2,535	2,684	780	7,181	26,670
1925/26	8,000	5,524	2,175	2,517	607	9,166	27,989
1926/27	7,450	5,050	2,639	2,428	767	8,290	26,624
1927/28	8,582	4,527	3,238	2,910	808	8,450	28,515
1928/29	9,148	5,775	3,198	2,762	934	8,838	30,655
1929/30	8,997	5,231	3,245	3,078	981	9,075	30,607
1930/31	11,382	3,497	3,095	3,256	958	9,343	31,530
1931/32	8,241	2,917	2,514	3,422	1,174	10,926	29,194
1932/33	7,020	2,234	1,545	3,538	1,343	11,242	26,922

Table 7—Sugar imports by principal importing countries, 1909-13 average and years, 1914-33

Year	United States	United Kingdom	Continental Europe	Other countries	World
			1,000 tons		
1909-13	2,123	1,854	560	2,588	7,125
1914	2,709	1,834	639	2,219	7,401
1915	2,643	1,787	914	1,807	7,151
1916	2,766	1,493	1,005	1,780	7,044
1917	2,472	1,207	877	1,962	6,518
1918	2,585	1,008	347	2,197	6,137
1919	3,512	1,717	2,195	1,240	8,664
1920	4,037	1,518	1,406	1,240	8,664
1921	2,984	1,432	1,017	2,516	8,191
1922	4,861	2,122	1,660	2,973	11,616
1923	3,855	1,711	1,291	2,788	9,645
1924	4,138	1,946	1,684	3,301	11,069
1925	4,460	2,366	2,050	3,546	12,422
1926	4,710	1,976	1,803	3,461	11,950
1927	4,216	1,893	1,671	3,140	10,920
1928	3,869	2,150	2,087	3,733	11,839
1929	4,888	2,351	1,917	3,823	12,979
1930	3,495	2,141	2,061	3,685	11,382
1931	3,176	2,049	1,381	2,745	9,351
1932	2,971	2,663	1,474	2,247	9,355
1933	2,874	2,282	1,306	2,004	8,466

The 1919/20 Cuban crop was about 300,000 tons smaller than that of the previous year because of adverse weather. Exports of sugar from Cuba declined about 1 million tons in 1920, partly because of the smaller crop and partly because Cuban producers tried to avoid some of the severe drop in prices late in 1920 by carrying some sugar over into 1921 (table 8). Late in 1920, Cuban producers began attempts to mitigate their financial problems; these efforts continued during the twenties and thirties.

U.S. imports of Cuban sugar in 1920 were about 13 percent below those of 1919, despite the increase of nearly 15 percent in U.S. imports from all sources (table 9). A large increase from countries other than Cuba and the Philippines accounted for the difference. Much of this came from Java at the time New York sugar prices were near their peak. Members of the sugar trade generally credited the arrival of Javanese sugar with stemming the spiral of rising sugar prices.

Once sugar prices had returned to their approximate prewar level late in 1920, they remained comparatively low throughout most of the decade and declined even further early in the thirties (table 10). The only exceptions were in 1923 and 1924 when

Table 8—Sugar exports by principal exporting countries, average, 1909-13 and years, 1914-33

Year	Cuba	Netherlands East Indies	Continental Europe	Other	World
			1,000 tons		
1909-13	2,010	1,413	2,577	1,472	7,472
1914	2,787	1,456	429	2,031	6,703
1915	2,866	1,329	379	2,190	6,764
1916	3,284	1,596	214	2,732	7,826
1917	3,221	1,305	130	2,426	7,082
1918	3,647	1,698	138	1,809	7,292
1919	4,498	2,057	331	2,532	9,418
1920	3,493	1,670	575	2,234	7,972
1921	3,145	1,849	1,004	2,490	8,488
1922	5,581	1,583	997	3,483	11,644
1923	3,861	2,014	1,545	3,338	9,758
1924	4,379	2,071	1,277	3,533	11,260
1925	5,531	2,279	2,234	3,017	13,061
1926	5,225	1,915	2,471	2,585	12,196
1927	4,645	2,202	1,874	5,761	14,482
1928	4,389	2,827	1,960	3,125	12,301
1929	5,544	2,681	2,038	3,301	13,564
1930	3,598	2,469	2,083	3,568	11,718
1931	2,998	1,739	1,840	2,436	9,013
1932	2,890	1,668	1,188	3,979	9,725
1933	2,522	1,283	916	4,127	8,848

Table 9—U.S. imports of sugar by source of supply, 1909-13 average and years, 1914-33

Year	Cuba	Philippines	Other	Total
		1,000 tons		
1909-13	1,722	113	272	2,107
1914	2,463	58	12	2,533
1915	2,392	163	155	2,710
1916	2,575	109	133	2,817
1917	2,335	134	198	2,667
1918	2,280	87	84	2,451
1919	3,343	88	69	3,500
1920	2,881	146	993	4,020
1921	2,590	165	223	2,978
1922	4,527	275	53	4,853
1923	3,426	238	189	3,853
1924	3,692	339	104	4,135
1925	3,923	493	33	4,449
1926	4,280	380	44	4,704
1927	3,650	531	29	4,210
1928	3,249	575	33	3,857
1929	4,149	711	28	4,888
1930	2,645	749	53	3,492
1931	2,482	872	28	3,382
1932	1,791	1,028	12	2,831
1933	1,573	1,249	40	2,862

Table 10—Average annual wholesale price per pound of raw sugar, New York, and index of wholesale prices of all commodities, average, 1909-13 and years, 1914-33

Year	Raw sugar	All commodities	Year	Raw sugar	All commodities
	Cents	*1910-14=100*		*Cents*	*1910-14=100*
1909-13	4.1	98	1924	6.0	143
1914	3.8	99	1925	4.3	151
1915	4.7	102	1926	4.3	146
1916	5.8	125	1927	4.7	139
1917	6.3	172	1928	4.2	141
1918	6.4	192	1929	3.8	139
1919	7.5	202	1930	3.4	126
1920	13.0	225	1931	3.3	107
1921	4.7	142	1932	2.9	95
1922	4.7	141	1933	3.2	96
1923	7.0	147			

prices were moderately higher, partly because of a temporary decline in production in the United States and smaller exports from Cuba.

The Cuban Sugar Depression in the Twenties

The decline of sugar prices, starting in the fall of 1920, brought prolonged financial difficulties to producers of Cuban sugar. Their expanded capacity to produce sugar, developed during World War I in response to increased demand for Cuban sugar, could not be abandoned or even closed down for a period of years without large financial losses affecting both Cuban and U.S. investors. Unemployment, already a problem in Cuba, became worse with any reduction in sugar output.

In fact, the processing capacity of Cuban sugar mills was further increased early in the twenties. Much of this resulted from attempts to improve efficiency and lower the unit cost of processing sugarcane. A number of mill owners in financial difficulty were able to demonstrate that, although the property at its present capacity could not be operated profitably, an increase in the size and output of the mill would reduce unit costs sufficiently to make the operation profitable. The banks, many of them in New York, were thus under pressure to make additional loans; they hoped that this would make it possible for the borrowers to ultimately pay their debts.

This reasoning, although it was valid for individual cases, resulted in a sufficient expansion of production in Cuba to force sugar prices even lower when applied over a short period of time to a considerable number of sugar properties. This offset, in large part, the benefit sugar producers could obtain from increased efficiency and, consequently, depressed conditions continued in the Cuban sugar industry *(25,43)*.

Cuban sugar producers were in a peculiarly defenseless position, because Cuban sugar consumption was much too small to offset reduced exports to any meaningful extent. Government export subsidies, used by various European countries prior to the Brussels Convention, were not feasible; the sugar industry constituted such a large share of the Cuban economy that Government revenues, aside from taxes paid by the sugar industry, were insufficient to support such a program.

Protection Policies in Importing Countries

Meanwhile, the market for Cuban sugar in continental Europe declined as European beet sugar production recovered gradually from wartime damages, regaining the prewar level about 1927.

Britain reversed its policy of free trade in sugar soon after the armistice. The wartime shortage of sugar and complete loss of beet sugar imports from continental Europe were powerful factors influencing the British Government. Initiated in 1919, the new policy provided for the development of a domestic beet sugar industry and for tariff preferentials for sugar imported from British colonies and dominions.

The British duty on raw sugar was set lower than that on refined sugar, regardless of the source of the sugar, thus providing protection from imported refined sugar for British refiners. Some British beet sugar mills established under the new protective policy were equipped to manufacture raw sugar only. This raw sugar was delivered to the refining industry for conversion to refined sugar, increasing the refiners' volume of business. In addition, refiners received a drawback of customs duty on exports of refined sugar calculated so as to provide a small export subsidy.

The new British sugar policy gradually reduced the volume of Cuban sugar which could be imported, as beet sugar production increased and the output of cane sugar expanded in British colonies and dominions. The subsidy on the export of refined sugar reduced the size of the market for refined sugar exports from either Cuba or the United States where no export subsidies were paid.

Sugar producers in Java, the other principal country producing sugar for export at the time, had experiences similar to those of Cuban producers. However, the effects generally were less severe. Javanese production capacity had not expanded so much during and immediately after World War I as it had in Cuba. The industry in Java was owned by the Dutch, and occasionally Holland provided a protected market for a part of the sugar produced in its colony. Also, sugar was relatively less dominant in the economy of Java than it was in Cuba.

Despite its advantage, the Javanese sugar industry faced increased difficulties from about 1930, primarily because of the start of worldwide depression and the decline in exports of sugar to India. For some time, Java had been the major source of large Indian imports. However, late in the twenties, India obtained from England the right to establish tariffs for itself. One result was increased protection for sugar producers in India and reduced imports. Although the initial impact of the reduction of imports of sugar into India was borne by Java, producers in Cuba met increased competition from Javanese sugar in most of its export markets except the United States.

U.S. Tariffs and Sugar Production

Although export markets for sugar in Europe and India were contracting, the United States was reversing the tariff policy adopted under President Wilson in 1913. The duty on raw sugar from Cuba had been reduced in the 1913 Act to 1.0048 cents a pound. In 1921, the Emergency Tariff Act became effective, raising the rate on Cuban raw sugar to 1.6 cents a pound. In 1922, the Fordney-McCumber Tariff Act provided for a further raise to 1.7648 cents. The rate was again raised in 1930, this time to 2 cents a pound, almost double the rate in effect prior to 1921 (*24*).

These increases in import duty not only encouraged increased production in the continental United States and Hawaii but also in Puerto Rico and the Philippines, whose shipments of sugar continued to enter the United States free of duty. As a result, production in all major areas supplying the United States with sugar, except Cuba, increased during the twenties and early thirties (table 11). Production increased most in the Philippines, where a modern sugar industry was developing at the end of World War I. Output was also increased substantially in Hawaii and Puerto Rico. Production in the mainland cane area showed little response to the first two U.S. tariff increases. Sugarcane diseases in Louisiana, the principal producing State, were unusually serious during this period and were responsible for the almost complete disappearance of cane sugar production in the mainland cane area in 1926 and 1927. The output of beet sugar did not increase materially until after 1929.

Cuba's production, most of which was exported to the United States, increased only slightly from 1920 through 1924. However, as exports, particularly to countries other than the United States, continued larger than anticipated, production in Cuba advanced to new high levels as mills were enlarged and improved to increase efficiency. Production averaged 5,395,000 tons a year from 1925 through 1930. But the danger of building up excessively large supplies was clearly recognized, as indicated by the continued efforts of industry leaders to find some effective way of regulating production and exports.

The danger to the Cuban sugar industry suddenly became very real in 1930, when the U.S. import duty on raw Cuban sugar was raised to 2 cents a pound by the Smoot-Hawley Tariff Act, at a time when commodity prices were generally declining. The increase in the U.S. tariff caused the price of raw sugar to decline more in Cuba than in the United States. The average price of raw sugar in New York during 1931-

Table 11—Sugar production in areas with duty-free access to the U.S. market, 1920-33

Year	Mainland		Hawaii	Puerto Rico[1]	Philippines	Total
	Beet	Cane				
			1,000 tons, raw value			
1920	1,165	180	560	499	91	2,495
1921	1,091	334	546	496	203	2,670
1922	722	302	618	412	219	2,273
1923	943	168	554	381	259	2,305
1924	1,166	90	716	451	325	2,748
1925	977	142	781	672	552	3,124
1926	960	48	805	612	408	2,833
1927	1,170	72	832	637	587	3,298
1928	1,135	136	921	763	635	3,590
1929	1,089	218	925	590	769	3,591
1930	1,293	215	939	878	867	4,192
1931	1,237	184	1,018	790	871	4,100
1932	1,452	265	1,057	996	1,100	4,870
1933	1,757	250	1,191	838	1,285	5,321

[1] Includes production in the Virgin Islands, which varied from 3,000 to 14,000 tons a year.

Source: Sugar Statistics and Related Data, Vol. 1, Bul. 293, Agr. Stabil. and Conserv. Serv., U.S. Dept. of Agr.

33 was only 9 percent below the 1929 figure. In Cuba, the decline was 33 percent.

The average price of raw sugar in Cuba dropped below 1 cent a pound during 1932-36. The drop was much more than could be matched by any reduction in cost that could be made by improving efficiency. Sugar output declined more than 50 percent between 1930 and 1933, and many companies producing sugar in Cuba went bankrupt, including a number owned by U.S. citizens.

Flexible Tariffs in the United States

The Fordney-McCumber Tariff of 1922, which increased the rate of duty on raw sugar from Cuba to 1.7648 cents a pound, also permitted the President to change the rate applicable to sugar or any other product, after determining the difference in the cost of producing a commodity in the United States and in the principal competing country. The difference in production costs was supposed to indicate the rate of duty needed and to provide a "scientific" basis for determining rates.

The responsibility for determining differences in cost of production and recommending changes in rates of duty was given to the Tariff Commission. Commission investigations were undertaken at the direction of the President and the Commission's report and recommendations were made to him; only he could change any rate of duty.

Within a month after enactment of the Tariff Act of 1922, a petition was filed with the Tariff Commission asking for an investigation of the rate of duty on sugar. The investigation was undertaken and aroused considerable public interest for about 2½ years until the President announced his decision.

The Commission readily determined that Cuba was the principal competing nation and obtained permission from the Cuban Government to make the necessary studies to determine the cost of producing sugar in Cuba. A majority of the Tariff Commission, in a report dated July 31, 1924, found "that the cost of production including the result of a consideration of all advantages and disadvantages in competition (other than the 20-percent Cuban preferential) of sugar testing 96 degrees by the polariscope is 1.2307 cents per pound higher in the United States than in the Republic of Cuba." On this basis, the Commission recommended that the full duty rate on raw sugar be reduced from 2.202 cents to 1.54 cents a pound. Under the terms of the treaty of reciprocity with Cuba, the rate on sugar from Cuba would become 1.232 cents a pound (*20*).

After some delay and consultation with various agricultural organizations, the President, in a statement issued June 15, 1926, postponed action on the recommendation of the Tariff Commission. In his statement, the President cited numerous protectionist arguments similar to those frequently advanced by representatives of the domestic sugar industry. These included the need for a more diversified agriculture, the possibility of using sugarbeets as a replacement crop for some of the acres being taken out of wheat production, and the danger of monopolistic manipulation of the prices of imported sugar. The President indicated that a return to the high sugar prices complained of in 1923 might warrant reconsideration of the Tariff Commission's recommendation. No such reconsideration occurred, and the duty on sugar was not reduced in accordance with the Commission's recommendation.

The unsuccessful attempt to adjust the import duty on sugar, according to the findings of an investigation of the difference in cost of production, discouraged the use of the device in connection with possible changes in the rates of duty on other products. The sugar investigation did much to reveal the difficulties of the procedure, and cast serious doubt on its effectiveness.

Refiners' Loss of Protection in 1930

Cane sugar refiners were particularly unhappy about one feature of the Smoot-Hawley Tariff of 1930. This act established the import duty on refined sugar from Cuba at $2.12 per 100 pounds, only 12 cents above the duty on 96 degree raw sugar. It takes about 107 pounds of 96 degree sugar to produce 100 pounds of refined sugar. The import duty on 107 pounds of 96 degree raw sugar under the 1930 act amounted to $2.14, slightly above the import duty on 100 pounds of refined sugar. In the 1922 act, the import duty on 107 pounds of 96 degree raw sugar amounted to $1.882 and on 100 pounds of refined sugar to $1.912. The situation for sugar subject to the full duty changed in the same manner as that for Cuban sugar. The removal of tariff production for refiners in 1930 appears to have been accidental. There was little if any discussion of the change during the time the law was being considered by the Congress.

The export of refined Cuban sugar to the United States reached a significant volume for the first time in 1926, when it amounted to about 68,000 tons. This development occurred despite the higher duty on refined sugar at that time. By 1930, such exports had risen to 298,000 tons; in 1932, they reached a peak of 487,000 tons. In 1932, exports of refined sugar to the United States constituted about one-fourth the total shipments of Cuban sugar to this country.

The growth of sugar refining in Cuba before 1930 indicates that many Cuban producers were finding it profitable to add sugar refining to their business of growing sugarcane and producing raw sugar, despite the additional import duty assessed against such sugar. Most of this refining was done with additional equipment in the plants where raw sugar was produced. This helped reduce the required investment and lowered costs in other ways. Also, wages were lower in Cuba than in the United States. In 1930 about 95 percent and in 1932 over 99 percent of the refined sugar exported from Cuba came to the United States.

These imports of refined sugar reduced the volume of business available to U.S. refiners. Consequently, the rapid increase in Cuban refining immediately after 1930 caused great concern among U.S. refiners and encouraged them to cooperate with other branches of the domestic sugar industry in the hope of finding some way to reduce these imports or, at least, to prevent further increases.

Cuban Attempts to Maintain Sugar Prices

Early in the twenties, Cuban sugar producers began considering ways of mitigating the effects of the depressed sugar prices (*20*). A Sugar Finance Committee was formed by industry representatives in February 1921. The Committee planned to exercise control over the export of sugar from Cuba by a permit system. The representatives hoped that the Committee could prevent prices from declining to excessively low levels. The proceeds of sales were to be prorated among producers. The membership of the Committee largely reflected the interests of U.S. investors in the Cuban sugar industry and those of the larger scale Cuban producers.

Insufficient control over supplies exported from Cuba, the opposition of U.S. refiners, and competition with sugar shipped from the Philippines and Puerto Rico combined to make the Committee's efforts ineffective. The Committee was dissolved in January 1922, but it seems to have acted as a spur to later efforts.

Sugar prices recovered somewhat during the last half of 1922, and exports of sugar from Cuba during the year rose to 5,581,000 tons, about 84 percent above those for 1921. Shipments to the United States and other countries increased substantially. These large exports were sufficient to dispose of both the 1921/22 Cuban sugar crop and the large inventory of more than a million tons on hand at the end of 1921.

Sugar prices remained relatively favorable to producers during 1923 and 1924. This provided further encouragement for the expansion of productive capacity in Cuba. The 1923/24 Cuban crop of 5,894,000 tons was the largest produced in Cuba prior to 1947. As a result of this large Cuban crop, sugar prices declined to levels generally considered unprofitable by producers. This drop led to renewed discussion of possible corrective measures.

Little agreement existed among the various groups concerned with Cuban sugar production and marketing, and nothing positive was done until the Verdeja Crop Restriction Act was passed by the Cuban Congress in May 1926. This act initiated a program of direct crop control by the Cuban Government. Production for 1926 was limited to 90 percent of the estimated crop of each mill, and authority was given to reduce production another 10 percent in 1927/28 and 1928/29. Largely as a result of these restrictions, sugar production in 1928 was about 22 percent below that of 1925.

The control was achieved by requiring each mill to stop producing sugar when its output for the year equaled its allotment for that year. No growing cane was destroyed, but some of it was allowed to remain in the field for 2 years before being harvested. This meant that the surplus of sugar was first changed into a reserve of standing cane. The supply of cane declined slowly, since several annual crops of cane are ordinarily harvested from a field before the cane roots are plowed out and the field replanted.

The initial effect of the production limitations started in 1926 was that sugar prices rose somewhat, but the effect was relatively slight and lasted only a short time. By mid-1927, prices were down again and showing signs of going lower. Production in other countries continued to increase. Output in Java, a major competitor of Cuba, increased more than a million tons between 1926 and 1928, offsetting most of the effect of the reduced output in Cuba. At the same time, beet sugar production in Europe continued to recover from its wartime low, and production within the U.S. tariff wall continued to expand.

The Sugar Defense Law enacted by the Cuban Government in October 1927 provided for the continued restriction of Cuban sugar production for a 5-year period. It also set up an agency, the Cuban Sugar Export Company, to sell all sugar exported to countries other than the United States. At the time, about three-fourths of the sugar exported from Cuba was coming to the United States, so that the agency became the single seller for only one-fourth of Cuba's crop.

The control of export sales was generally opposed by U.S. refiners who owned mills in Cuba. These refiners wished to process their raw Cuban sugar production in their U.S. refining plants. The Export Agency, however, established compulsory non-U.S. quotas for all mills, preventing U.S. refiners from using some of the sugar they had produced in Cuba. The plan had little effect on prices in the face of increasing production in other countries. Cuban labor also became dissatisfied with crop restrictions, since these reduced the amount of work available when unemployment was a serious problem.

Before the end of 1928, Cuba abandoned production and marketing controls. In 1929, the unrestricted Cuban crop increased to 5,775,000 tons—25 percent above the previous year's output. Prices declined to new lows. In July 1929, a single new selling agency, the Cooperative Sugar Sales Agency, was set up to market the entire Cuban sugar crop. Under the operations of this agency, the margin between sugar prices in New York and London widened for a few months late in 1929, but the operation was not generally regarded as successful and the agency was dissolved in April 1930.

This effort marked the end of Cuban efforts to control sugar production and prices by unilateral means. The first such effort, made by representatives of the sugar industry in 1921, had been abandoned shortly after its inauguration. The efforts of the Cuban Government were more elaborate and more persistent, but they also ended in failure. Even before their abandonment, however, efforts to establish some sort of international control were initiated.

Early International Efforts to Control Sugar

While Cuba was attempting to find some way to control, or at least influence, the international sugar market to the advantage of Cuban producers, producers in several other countries were sporadically making similar attempts. These included industry representatives in Czechoslovakia, Poland, Germany, and the Netherlands, regarding the industry in Java. None of these efforts had any long-term success (*52*).

Late in 1927, a Cuban delegation headed by Colonel Jose M. Tarafa conferred in Paris with representatives of the Polish, Czech, and German sugar industries. The European countries agreed to cooperate by encouraging increased domestic consumption of their 1927/28 crops, provided Cuba's 1927/28 crop was limited to 4 million long tons (4,480,000 short tons). In October 1928, decisions were to be made concerning the disposal of any sugar surplus that might exist at that time.

The Cubans attempted to obtain the cooperation of the Dutch in limiting sugar produced in Java. The Dutch agreed only "to continue our cooperation insofar as our mutual interests pert" (*50*). Not only did the Dutch fail to cooperate in any meaningful way, but the combined contributions of Czechoslovakia, Poland, and Germany proved inconsequential, and the reduction in the Cuban crop was, in effect, unilateral.

The failure of the Dutch to limit Javanese production seems to have been strongly influenced by the fact that sugar exports to countries in the Far East at that time had not declined as much as those to Europe and by the development of new higher yielding varieties of sugarcane in Java. This followed the discovery of a means of cross-fertilizing the seed of two varieties and thereby producing a new variety. Ordinarily, cane is reproduced vegetatively, and before the Dutch discovery in the twenties, new varieties were comparatively rare. Sugarcane seed is extremely small, and until recent centuries, it was commonly believed that the plant never produced true seed. The discovery of a practical method of cross-fertilizing sugarcane varieties was one of the most important discoveries ever made for improving cane. It lowered the cost of production of cane sugar and for a few years gave the Dutch in Java a considerable advantage over other cane-growing areas. Later, the method was adopted in most other countries where sugarcane is grown, including the United States.

In the summer of 1929, the Cubans again attempted to reach an agreement with European sugar producers on limiting production. The chance of success seemed increased by the large Cuban crop early in 1929 and by the increasing difficulty several European countries were having in finding export markets. For example, the Dutch met the problem of disposing of large quantities of Javanese sugar by selling outside their former market area. Despite these problems, no agreement was reached. World production, especially in exporting countries, continued large, although exports declined by some 2 million tons.

The Chadbourne Negotiations

The condition of the sugar industry in Cuba and Java had worsened materially by mid-1930. Large crops had again been produced in both countries, although in neither case were they quite so large as in 1929. The Smoot-Hawley Tariff of 1930 raised the U.S. import duty on raw sugar from Cuba to 2 cents a pound, effective in June. U.S. sugar consumption began to decline as the depression of the thirties worsened. Cuban sugar exports were nearly 2 million tons lower in 1930 than in 1929, and sugar prices in Cuba declined 28 percent from the already low level of the previous year.

Although events in Java were less dramatic than those in Cuba, the volume of exports turned downward, and the price declined about as severely as in Cuba. Even more ominous to the industry in Java was the prospective loss of much of the export market to India as that country moved to protect its sugar industry with import duties.

In view of these mounting difficulties, a new committee was formed to represent the Cuban sugar industry. It was led by Thomas L. Chadbourne, a New York attorney, whose clients included certain New York banks with financial interests in the Cuban sugar industry. At a meeting in New York in August 1930, the committee attempted to work out an agreement with representatives of the U.S. sugar industry to stabilize the sugar trade between the two countries. U.S. sugar producers did not altogether agree on the objectives of the conference. Hawaiian producers were not represented, and one beet sugar company was believed to oppose any agreement.

Despite the lack of unanimity, a program commonly referred to as a "gentlemen's agreement" emerged from the conference. Cuba was to limit its 1931 exports to the United States to 2,800,000 tons, but Cuba would be entitled to the full increase in U.S.

consumption in 1932 and 1933 and to half the increase in 1934 and 1935. U.S. domestic areas and the Philippines were to stabilize their output at the 1930 level, except for the share of increased consumption they were to get in 1934 and 1935. Cuba was to set aside at least 1 million tons of sugar from the 1930 and 1931 crops to be sold to non-U.S. markets over a 5-year period. Cuba also was to seek an international conference with other sugar-producing nations to try to stabilize the sugar industry worldwide. The agreement was not recorded in writing.

The Cuban Government passed a law for the stabilization of sugar in November 1930, following the terms of the gentlemen's agreement reached earlier in New York. Protracted negotiations then ensued between representatives of the Cuban and Javanese sugar industries, the first time the Dutch had seriously negotiated regarding international control of sugar production, exports, and prices. Later, industry representatives of a number of European producers participated in the negotiations.

First International Sugar Agreement

The International Sugar Agreement was signed in May 1931 by representatives of organized sugar industries in nine countries—Cuba, Java, Germany, Poland, Hungary, Belgium, Czechoslovakia, Yugoslavia, and Peru. In most cases, the industry representatives had legislative support from their own governments. The agreement stipulated annual export quotas for 5 years for each member, exclusive of Cuban exports to the United States. The quotas in general were high enough so that no large reduction in exports was necessary. Those for Java and Germany were never filled. In the last years of the agreement, export markets had become so small that no country was tempted to exceed its export quota.

Countries adhering to the agreement accounted for nearly 50 percent of world sugar production in 1931. By 1933/34, they had only 25 percent. The countries involved in the agreement had restricted output by about 7,168,000 tons, but during the period of restriction, production in the rest of the world had risen 5,204,000 tons, thus largely offsetting the effect of the agreement *(50)*. Production in areas with duty-free access to the U.S. market increased 1,587,000 tons, of which more than half was in the Philippines and about a third in Puerto Rico. India and Formosa also had major production increases. Formosa was then a part of the Japanese Empire, and production there made Japan largely self-sufficient in sugar.

Provisions for increasing the quotas of the member countries by certain percentages if the price of sugar f.o.b. Cuba should rise above 2 cents per pound never became operative, because world sugar prices remained well below 2 cents.

Despite certain adjustments in quotas which helped to keep the agreement functioning through 1932, it was becoming a dead letter by 1933. Revolution in Cuba made the continued adherence of that country somewhat doubtful. U.S. developments under the Agricultural Adjustment Administration became more important to New York sugar prices than world market conditions, and world conferences attempting to deal with a wide range of international economic questions opened opportunities for a more inclusive agreement concerning sugar.

Although the agreement cannot be considered a success, it did contain some of the devices such as export quotas used in later agreements among a larger number of nations. It failed partly because sugar importing nations were not included, leaving them free to increase production within their boundaries. Failure also resulted partly from the great severity of the worldwide depression of the thirties, which might have defeated any attempt, no matter how well planned, to cure or reduce the economic ills of a single industry such as sugar.

U.S. and Cuban Sugar Developments, 1920-33

When the rate of duty on Cuban sugar reached 2 cents a pound in 1930, mainland producers were able to increase their output substantially. Meanwhile, U.S. sugar consumption was increasing, and U.S. imports of Cuban sugar, although varying widely from year to year, averaged 3,637,000 tons a year during 1920-29. They averaged 3,862,000 tons for 1922-29. Imports from countries other than Cuba and the Philippines rose to 993,000 tons in 1920, as a result of high prices in the United States, but fell to 28,000 tons in 1929.

The change in imports following the increase in the duty on raw sugar from Cuba to 2 cents a pound in 1930 was very different than those registered after the 1921 and 1922 increases. This was partly because the import duty had reached a level where it was more effective in encouraging production in domestic areas and the Philippines and in discouraging imports from Cuba. The worldwide depression early in the thirties also affected sugar consumption and prices adversely. U.S. consumption in 1932, its low point during the depression, was 17 percent below 1929, and the New York price, duty paid, of raw sugar was down 22 percent. The world price at which Cuban raw sugar was sold declined 56 percent from 1929 to 1932.

Sugar production in Cuba declined 61 percent, and exports to the United States fell 64 percent between 1929 and 1933. The industry in Cuba suffered extensive bankruptcy. The value of Cuban imports from the United States declined 83 percent from 1929 to 1933. Thus, the situation in Cuba adversely affected the economy of the United States as well as that of Cuba.

The sugar industry in the United States also encountered serious economic difficulties during this period, primarily because of the severe depression which affected the entire country.

Developments in Corn Sweeteners

Before 1920, the corn wet-milling industry had completed the reorganization required by the courts under the decision that the largest producing company was guilty of restraint of trade and the corporate structure of the industry had assumed a form not greatly different from that prevailing until about 1970.

Production of corn sirup in 1927, the earliest date for which figures are available, amounted to 532,000 tons and that of dextrose to 448,000 tons (table 12). In terms of dry weight, these quantities amounted to 427,000 tons and 412,000 tons. The total consumption of sirup and dextrose equaled about 11 percent of U.S. consumption of sugar, corn sirup, and dextrose that year. Although the amounts and percentage reached in 1927 are below present-day figures, they are high enough to indicate that the sweetener part of the cornstarch business had become an industry of competitive significance to sugar producers (*27*).

Starch sweetener production declined irregularly between 1927 and 1933, influenced by the same economic conditions that affected sugar producers and other industries. Sugar, corn sirup, and dextrose had about the same percentage decline in output from 1927 to 1933.

Prices received for corn sirup and dextrose from 1928 to 1933 declined like that for sugar, but somewhat less than the 50-percent decline in the price of corn at Chicago. Lower prices for corn were advantageous to producers of corn sirup and dextrose, since the cost of corn was the largest single item in their cost of production. Because the corn wet-milling industry purchased only a small proportion of the corn grown in the United States, fluctuations in the price of corn were largely independent of the activities of that industry.

Table 12—Production and prices of corn sweeteners, 1927-33

Year	Production[1]		Price per pound	
	Sirup	Dextrose	Sirup	Dextrose
	--- 1,000 tons ---		*--- Cents per lb. ---*	
1927	532	448	3.26	---
1928	553	484	4.02	4.16
1929	556	447	3.98	4.16
1930	513	425	3.84	3.98
1931	465	401	3.17	3.47
1932	397	388	2.60	2.72
1933	500	421	2.80	2.98

[1] Sirup contains about 80.3 percent and dextrose 92.0 percent dry matter.

Source: Starches, Dextrines and Related Products. U.S. Tariff Commission. Report No. 138, 2nd. Series. 1939.

Saccharin

U.S. production and use of saccharin received considerable stimulus from the wartime shortage of sugar in this country in 1918 and 1919, although precise data are scarce. The U.S. Tariff Commission, however, reported the production of saccharin in certain years as:

Years	*Pounds*
1918	425,600
1919	547,988
1920	137,315
1921	188,759
1923	340,944

The end of the sugar shortage in 1920 appears to have been related to the sharp decline in the production of saccharin that year (*16*).

If saccharin is considered 300 times as sweet as sugar, a common estimate, the 1919 output of saccharin would be equivalent in sweetness to about 82,000 tons of sugar, or 1.7 percent of United States sugar consumption that year. Only some indeterminate part of the saccharin consumed that year can be considered as having replaced sugar, since much of it was used by persons unable to use sugar. However, the share used as replacement for sugar probably was larger in 1919 than in years when sugar was plentiful.

SUGAR QUOTAS PRIOR TO WORLD WAR II

U.S. sugar producers, as well as those in Cuba and the Philippines, were in acute economic distress at the time President Roosevelt initiated the New Deal. Prior to 1933, domestic sugar producers had always sought to protect and improve their economic position through the tariff. However, the effects of the approximate doubling of the import duty on raw sugar from 1921 to 1930 had been disappointing to the domestic beet and mainland cane sugar industries.

Most of the increased production in the twenties and early in the thirties had occurred in the Philippines, Puerto Rico, and Hawaii. There was no appreciable increase in the production of beet sugar until after 1930. Imports from Cuba did not decline in volume until 1930, and even at their low point in 1933 they accounted for about 25 percent of U.S. sugar consumption.

In the midst of the depression, the Chairman of the U.S. Tariff Commission, in a letter to the President dated April 11, 1933, said, "Cuba must fix the price at which she sells sugar at a point which will enable her product to enter the American market. The result is that the price has gone down to a point which is disastrous both for American and for Cuban producers. It is evident that no increase of the American tariff can relieve the resulting situation in this country or in Cuba" (*62*).

The Chairman then recommended that the United States adopt a quota system for sugar and consider reducing the import duty on Cuban sugar. These opinions were repeated in a later report (No. 73) of the Tariff Commission. The report also pointed out that "It is also of some interest to note that the preferential advantage of 20 percent in the tariff on sugar which Cuba obtained beginning in 1903 enabled the island to forge rapidly ahead in the production of sugar as compared with other (full-duty) areas in Latin America."

The Sugar Act of 1934

Representatives of the domestic sugar industry conferred on June 27, 1933, and selected a committee to draft a sugar agreement designed to improve the balance between sugar supplies and consumption. In September 1933, the proposed agreement was signed by representatives of the various branches of the U.S. sugar industry, with certain reservations by mainland cane sugar producers. It was submitted to the Secretary of Agriculture for approval or other action (*20*).

In October 1933, the Secretary of Agriculture rejected the proposed agreement, stating that it seemed to him "to emphasize unduly the interests of processors rather than the income of farmers" and that "the Government should not under agreements of this kind undertake to relieve processors, refiners, and others of provisions of the antitrust laws unless definite protection is provided for consumers with greater assurance of benefits for farmers."

The President, in a message to Congress dated February 8, 1934, recommended the enactment of a sugar quota law which would have the threefold objective "of keeping down the price of sugar to consumers, of providing for the retention of beet and cane farming within our continental limits, and also to provide against further expansion of this necessarily expensive industry."

The Secretary of Agriculture expanded upon this statement in a press release dated March 16, 1934, which stated, "The program as outlined in the President's message and implemented by pending legislation, recognizes a duty to stabilize the price and production of sugar for the benefit of the continental producers and the industry of the insular possessions. It also takes into account the obligations of the United States toward Cuba as implied by the Monroe Doctrine and specified in the Platt Amendment."

The Sugar Act of 1934, otherwise known as the Jones-Costigan Act, was approved by the President on May 9, 1934. It provided an entirely new method, the basic parts of which were used until 1974, for regulating the domestic sugar industry and controlling the imports of sugar for the benefit of all producing areas, domestic and foreign. The act required the Secretary of Agriculture to determine the "consumption requirements for sugar for the continental United States" for 1934 and succeeding calendar years. The Secretary was given power to revise the consumption requirements for any year whenever circumstances required. The consumption requirements were to be determined from available statistics of the U.S. Department of Agriculture, so as to effect the declared policies and purposes of the act. These required the Secretary to have "due regard to the welfare of domestic consumers and to a just relation between the prices received by domestic producers and the prices paid by domestic consumerss ..."

Once consumption requirements were determined, the quantity of sugar required was divided among the domestic areas and foreign countries supplying sugar to the United States by assigning a quota to each. In doing this, the law provided that these quotas should be based on the average quantities of sugar brought into the continental United States for consumption or consumed therein, "during such three years, respectively, in the years 1925-1933, inclusive, as the Secretary of Agriculture may from time to time, determine to be the most important representative three years ..." It was also provided that the annual quota for the beet sugar area should be not less than 1,550,000 tons, raw value, and the quota for the mainland cane area not less than 260,000 tons; also that the continental areas together should receive 30 percent of consumption requirements in excess of 6,452,000 tons raw value for any year.

The most representative 3 years for the determination of quotas for offshore areas, except Hawaii, were determined by the Secretary to be 1931-33; for Hawaii they were 1930-32. Consumption requirements were set at 6,476,000 short tons, and quotas were assigned as follows:

Area	*Quota (short tons, raw value)*
U.S. beet sugar	1,556,166
Mainland cane	261,034
Hawaii	916,550
Puerto Rico	802,842
Virgin Islands	5,470

Philippines	1,015,186
Cuba	1,901,752
Full duty countries	175,000
Total	6,476,000

Since receipts of sugar from each quota area had varied substantially during 1925-33, the provisions of the law and the Secretary's regulation were important in determining the size of each quota (table 13). The Secretary of Agriculture, in an address to Colorado farm organizations on July 13, 1935, pointed out the relatively minor adjustments in production required in domestic areas and the Philippines to conform to quota limitations. He then said, "The Cuban quota, on the other hand, represents a decline of 51.3 percent from the year of peak shipments and a decline of 35.2 percent from the nine-year average" (*20*). However, the Cuban sugar quota was above the quantities Cuba exported to the United States in 1932 or 1933. Cuban sugar producers almost unanimously regarded the U.S. quota arrangement as a great improvement over the tariff of 1930.

In addition to the overall quotas, offshore areas were given quotas for refined sugar which were part of their total quotas. Continental areas could market their entire quotas in refined form. Imports of refined sugar from Cuba were limited to 22 percent of the Cuban sugar quota; Hawaii, Puerto Rico, and the Philippines were limited to the largest amount of such sugar shipped to the continental United States in any one of the years 1931, 1932, or 1933. These refined sugar quotas in 1934 were:

Area	*Short tons, raw value*
Cuba	418,385
Philippines	79,661
Puerto Rico	133,119
Hawaii	26,023

The limitations on shipments of refined sugar to the continental United States restored to cane sugar refiners in another form the protection which they had lost under the Tariff Act of 1930.

The 1934 act also provided for benefit payments to growers to be made from funds obtained from a processing tax on sugar. The processing tax was set at 50 cents per 100 pounds of sugar, raw value, equal to 53.5 cents for refined sugar. It was assessed against all sugar, domestic and foreign. Benefit payments,

Table 13—Sugar consumption in continental United States and contributions from all areas, as percentage of total consumption 1925-33 and 1934 quotas, short tons, raw value

Year	Consumption	Contributions							
		Continental United States				Hawaii		Puerto Rico	
		Beet		Cane					
	--- *Tons* ---		*Percent*	*Tons*	*Percent*	*Tons*	*Percent*	*Tons*	*Percent*
1925	6,603,000	1,063,500	16.11	149,500	2.26	763,000	11.56	603,500	9.14
1926	6,796,500	1,046,000	15.39	84,000	1.24	740,500	10.90	551,000	8.11
1927	6,348,000	935,000	14.73	46,500	.73	762,000	12.00	578,000	9.11
1928	6,642,500	1,243,000	18.71	138,500	2.08	819,000	12.33	698,500	10.51
1929	6,964,000	1,026,500	14.74	189,000	2.71	928,500	13.33	460,000	6.61
1930	6,710,500	1,140,500	17.00	197,500	2.94	808,000	12.01	780,000	11.62
1931	6,561,500	1,343,000	20.47	206,000	3.14	967,000	14.74	748,500	11.41
1932	6,248,500	1,318,500	21.10	160,000	2.56	1,024,000	16.39	910,500	14.57
1933	6,316,000	1,366,000	21.63	315,000	4.99	989,500	15.67	791,000	12.52
Quota 1934	6,476,000	1,556,166	24.03	261,034	4.03	916,550	14.15	802,842	12.40

Year	Contributions							
	Philippines		Virgin Islands		Cuba		Other countries	
	Tons	*Percent*	*Tons*	*Percent*	*Tons*	*Percent*	*Tons*	*Percent*
1925	485,000	7.35	10,000	0.15	3,486,000	52.79	40,500	0.61
1926	375,000	5.52	6,000	.09	3,944,500	58.04	47,500	.70
1927	521,000	8.21	6,500	.10	3,491,000	54.99	6,500	.10
1928	570,500	8.59	11,000	.17	3,125,000	47.05	35,000	.53
1929	724,500	10.40	4,000	.06	3,613,000	51.88	17,500	.25
1930	804,500	11.99	6,000	.09	2,945,500	43.89	30,500	.45
1931	815,000	12.42	2,000	.03	2,448,000	37.19	40,000	.61
1932	1,042,000	16.68	4,500	.07	1,762,500	28.21	26,500	.42
1933	1,241,000	19.65	4,500	.07	1,601,000	25.35	8,000	.13
Quota, 1934	1,015,186	15.68	5,470	.08	1,901,752	29.37	17,000	.26

Source: Agriculture Adjustment in 1934, A Report of Administration of the Agriculture Adjustment Act, February 15, 1934 to December 31, 1934.

however, were made only to sugarbeet and sugarcane growers in domestic areas and in the Philippines prior to its change to Commonwealth status.

At the time the processing tax was imposed, the President, by proclamation, reduced the import duty on raw sugar from Cuba from $2 to $1.50 per 100 pounds. The basic rate of payments to sugarbeet and sugarcane growers was set at 60 cents per 100 pounds of sugar recoverable from the beets or cane grown. A major purpose of the payments to sugar producers, as was true of similar payments to producers of other crops, was to provide growers with an incentive to limit their acreage in line with quotas, as determined by USDA. The Federal Government did not have the power to compel growers to adjust acreage against their will. Acreage limitations in some areas were placed in effect in 1935. In general, growers not limiting their acreage as indicated by the Secretary of Agriculture were not eligible to receive benefit payments. When the acreage of cane or beets was to be restricted by the Secretary of Agriculture, the acreage allotted to individual growers was to be largely determined as a percentage of that grown in previous years.

The 1934 Sugar Act also permitted the Secretary of Agriculture to set minimum wages for labor employed by sugarbeet and sugarcane growers, to limit the use of child labor to the grower's family, and to adjudicate disputes between growers and processors concerning the production and marketing of sugarbeets or sugarcane. These portions of the law were designed mainly for the protection of labor in somewhat the same manner as other labor legislation protected the interests of laborers.

The production adjustment and processing tax phases of the sugar program of the 1934 act were ended as a result of the Supreme Court decision on January 6, 1936, in the Hoosac-Mills case. The quota provisions remained in effect. In addition, the Soil Conservation and Domestic Allotment Act of February 26, 1936, provided for direct cash payments to agricultural products, including sugarbeet and sugarcane growers, who met certain conditions. Also, on March 1, 1937, the President recommended new sugar quota legislation.

The Sugar Act of 1937

The new Sugar Act recommended by the President became law on September 1, 1937. It was in many respects similar to the 1934 act. An excise tax, payable into the general fund of the Treasury, was substituted for the processing tax which was generally considered unconstitutional under the Supreme Court decision in the Hoosac-Mills case. Benefit payments, the most important of which were called "conditional payments" since growers had to observe certain specified conditions to receive them, were to be made to growers as before, but from funds appropriated by the Congress.

The new law provided more detailed guidelines for determining sugar consumption requirements, but they were still in general terms. Quotas for the various producing areas were specified as percentages of consumption requirements; they were:

Domestic areas	*Domestic*	*Total*
	Percent	
Beet	41.72	23.19
Mainland cane	11.31	6.29
Hawaii	25.25	14.04
Puerto Rico	21.48	11.94
Virgin Islands	.24	.13
Total	100.00	55.59
Foreign areas	*Foreign*	*Total*
	Percent	
Philippines	34.70	15.41
Cuba	64.41	28.60
Other countries	.89	.40
Total	100.00	44.41

The quota for mainland cane sugar in the 1937 act was more than 50 percent above that in the 1934 act because of the increased production potential. There were slight decreases in the percentage quotas for other areas. Other provisions of the 1937 act did not differ significantly from those of the 1934 act.

Results of the Sugar Quota Laws

The principal economic effect of the U.S. sugar quota system was to effectively separate sugar prices in this country from those in the rest of the world. When the U.S. domestic sugar industry was protected by a tariff only, the difference between the price of raw sugar in the United States and other countries tended to equal the difference between import duties plus the differences in the cost of transporting the sugar from the exporting country to the importing country. With the establishment of quotas which limited the quantity of sugar that could be imported or marketed from domestic production in any year, U.S. sugar prices became independent of those in other countries. This separation of prices could occur only when the sum of the quotas for all areas—the consumption requirements—was such that the requirements were substantially filled. If quotas were not substantially filled, the system became ineffective from the standpoint of price, and price relationships among countries were the same as when tariffs provided the only protection to the domestic industry.

The average annual difference between the price of raw sugar in New York and London, adjusted to the

New York freight basis, for 1926 through 1932 was 0.05 cent a pound; for the quota period 1934-41, it was 0.089 cent a pound (table 14). The difference in 1933 was 0.26 cent. Quotas were not in effect in 1933, but efforts of the domestic sugar industry to develop a marketing agreement which might contain quotas of some types apparently had some effect on market prices.

Table 14—Price per pound of Cuban raw sugar cost and freight New York and London, adjusted to New York freight basis, 1926 to 1941

Year	Price per pound of raw sugar		Difference
	New York	London[1]	
	--- *Cents* ---		
1926	2.59	2.62	-0.03
1927	2.96	2.91	+.05
1928	2.45	2.49	-.04
1929	2.00	1.91	+.09
1930	1.48	1.36	+.12
1931	1.34	1.25	+.09
1932	0.93	0.87	+.06
1933	1.23	0.97	+.26
1934	1.50	1.04	+.46
1935	2.33	1.00	+1.33
1936	2.69	1.01	+1.68
1937	2.54	1.32	+1.22
1938	2.04	1.14	+.90
1939	1.91	1.60	+.31
1940	1.89	1.33	+.56
1941	2.48	1.85	+.63

[1] Adjusted to New York freight basis.

Source: U.S. Tariff Commission, Statistics on Sugar, March 1940, for 1926 through 1933; Sugar Statistics and Related Data, Vol. 1, Bul. 293, Agr. Stabil. and Conserv. Serv., U.S. Dept. of Agr. Sta. Bul. 214, July 1957 for 1934-41.

These price increases were of great benefit to Cuban sugar producers. As John E. Dalton wrote in 1937, "Cuba has seen the value of her sugar crop rise from the depression low point (1932) of $40,000,000 to over $100,000,000 in 1935, the highest figure since 1929. The benefits to Cuba from our new sugar policy have been as great as those received by any other area contributing to the United States market" (*29*).

The economic improvement in the Cuban sugar industry permitted increased exports from the United States to Cuba. This further restored the volume of trade between the two countries and benefited producers in a large number of U.S. industries with sales in Cuba.

The prices in table 14 do not include the import duty and excise tax and therefore do not show the effect of these on the price of raw sugar in domestic areas. In general, U.S. sugar prices remained low during the pre-World War II quota period, compared with their level late in the twenties (table 15). In most years, prices were not much above those in 1932, the low point of the Depression. The difference between the prices of raw and refined sugar generally narrowed.

Table 15—Response of U.S. sugar prices to pre-World War II sugar quotas, 1926-41

Year	Price per pound		
	Raw sugar duty paid New York	Refined cane sugar, net cash, New York[1]	Average U.S. retail
	--- *Cents* ---		
1926	4.33	5.46	6.8
1927	4.71	5.79	7.2
1928	4.20	5.52	6.9
1929	3.76	5.03	6.4
1930	3.36	4.62	6.1
1931	3.33	4.43	5.6
1932	2.93	3.99	5.0
1933	3.22	4.32	5.3
1934	3.02	4.12	5.5
1935	3.23	4.32	5.7
1936	3.59	4.69	5.6
1937	3.44	4.55	5.6
1938	2.94	3.95	5.3
1939	2.98	4.04	5.4
1940	2.79	3.80	5.2
1941	3.38	4.39	5.7

[1] Before payment of the processing tax, which averaged 0.300 cent per pound in 1934, 0.178 cent per pound in 1937, and 0.535 cent in 1935 and 1938-41.

Source: U.S. Dept. of Agr., Sugar Statistics and Related Data, Vol. 1 Sta. Bul. 293, Agr. Stabil. and Conserv. Serv. U.S. Dept. of Agr.

Growers also received payments made under the provisions of the sugar acts. However, the processors or refiners paid the processing tax under the 1934 act and the excise tax under the 1937 act. The burden of these taxes, 50 cents a pound on raw sugar, tended to be passed back to the cane and beet growers. A farmer's incentive to grow sugarcane or sugarbeets depended on the total return received, regardless of its source. Since the quota set an upper limit on the quantity of sugar that processors could sell in any year, they did not, as a group, encourage farmers to grow more than enough beets to enable them to fill their quota. However, if they did not fill their quota, the deficit was assigned to other areas. Under these circumstances, processors could not pass the tax forward to consumers by raising prices. If the domestic areas as a whole failed to fill their quota, the deficit could be assigned to Cuba and other countries.

On April 11, 1940, the President wrote to the Chairman of the Committee on Agriculture of the House of Representatives, "In reviewing the present sugar situation I have been gratified to note the great improvement in conditions that have taken place since the adoption of the sugar program six years ago. Domestic sugar producers are fortunately receiving incomes at approximately the parity level, and are enjoying a large volume of production. The losses of sugar processors in the years preceding the program have been converted into profits; child labor has been greatly reduced; wages and working conditions improved; and there has been brought an important and greatly needed recovery in the market for our surplus markets in the foreign countries from which sugar is imported into the United States."

Reciprocal Trade Agreements

The Reciprocal Trade Agreements Act of June 12, 1934, amended the Tariff Act of 1930 to grant the President authority to negotiate trade agreements with other countries. The purpose was to expand U.S. foreign trade by agreements which would benefit U.S. exports and provide corresponding market opportunities for foreign products in the United States. The President, in the original act, was authorized to raise or lower existing rates as much as 50 percent.

The first of these trade agreements, negotiated with Cuba, became effective on September 3, 1934. This agreement reduced the import duty on raw sugar from Cuba from 1.5 cents to 0.9 cent a pound. An equivalent reduction was made on refined sugar. These reductions in duty did not make it possible for Cuba to export more sugar to the United States because Cuba's quota was not changed; neither did the reductions affect the price of sugar in the United States, since the total quantity of sugar from all sources that could be marketed in this country remained unchanged. However, the reduction in duty did increase the price Cuban producers received for their sugar by the entire amount of the reduction. In 1935, this amounted to $22,284,264 on the 1,857,022 tons of sugar, raw value, exported from Cuba to the United States. U.S. customs receipts were reduced by the same amount. The arrangement gave Cubans additional funds with which to purchase commodities from the United States and other countries. Cuba lowered its import duties on a considerable number of commodities imported from the United States, which further increased opportunities for additional exports to Cuba.

As Dalton (*29*) pointed out in 1937, "In the two reductions of the Cuban duty from 2.00 cents to 1.50 cents and from 1.50 cents to 0.90 cent per pound, in conjunction with a fixed quota at least 300,000 tons over her previous year's shipment to the United States, Cuba was to receive liberal assistance."

The agreement provided that the U.S. duty on sugar from Cuba should revert to the previous rate if U.S. sugar quotas were suspended or repealed. Quotas were suspended between September 12 and December 27, 1939, at the outbreak of World War II in Europe. During this period, the rate of duty on raw sugar from Cuba was 1.5 cents a pound.

The trade agreement with Cuba was amended on January 5, 1942. This amendment, among other changes, provided for the further reduction of the U.S. import duty on raw sugar from Cuba to 0.75 cent a pound, with no increase of duty if quotas were suspended. Later in 1942, in a trade agreement with Peru, the U.S. full-duty rate on raw sugar was reduced by half the full-duty rate established by Presidential proclamation in June 1934. The trade agreement with Cuba, under the terms of the Trade Agreements Act, was exclusive with that country, but U.S. changes in tariff rates made in the agreement with Peru were, under the law, automatically granted to other countries. The full-duty rate reduction affected Peruvian and other sugar producers (who were subject to the rate) just as it affected Cuban producers, but the quantity of sugar affected was much smaller.

Following the trade agreement with Peru, sugar import duties remained unchanged until after World War II.

The Sugar Institute

During the years that the sugar industry was preoccupied with tariff rates, quotas, and the depression, cane sugar refiners faced chaotic marketing conditions. Secret price concessions spread the belief, whether or not correct, that competitors making such concessions were keeping the prices of refined sugar lower than the published quotations indicated. Price movements became erratic and sometimes unrelated to the economic factors which ordinarily determine price.

Refined sugar then sold largely on the basis of announced quotations, or offers, made by individual refiners. Refiners' offers were customarily uniform, since refined sugar is a highly standardized product; one refiner normally would find it impossible to sell at a higher price than his competitors at the same time and in the same market. Changes in announced price offers for refined sugar were relatively infrequent, compared with price changes in raw sugar. When prices of refined sugar increased, the increases usually did not take effect until several days after the announcement was made. During the interim, buyers could purchase enough sugar at the lower price to meet their needs for about 30 days, or in some cases longer.

In an attempt to preserve the system of selling refined sugar and improve its operation, a group of refiners began discussions of remedial measures in the summer of 1927. In September 1927, the group submitted a proposed certificate of incorporation and bylaws for a trade association, together with a number of suggestions concerning trade practices to the Department of Justice. A code of ethics was also submitted to the Department of Justice and discussed with its officials. Following this discussion, the group changed some items and adopted the code in January 1928.

The Sugar Institute, Inc., and the code of ethics were intended to establish conditions under which refined sugar would be sold at openly announced prices without discrimination among customers. The methods adopted of reporting prices, sales, and other statistics to the Institute have been described as similar to those permitted by the National Industrial Recovery Act (NIRA).

Despite the refiners' precaution of consulting the Department of Justice, suit was filed in March 1931 against the Institute and its members alleging illegal restraint of trade. The Supreme Court on March 30, 1936, confirmed, with changes, the decision of the District Court that some of the activities of the Institute were illegal. The Supreme Court enjoined the Institute and its members from continuing certain practices, principally those related to the pricing of sugar. The decision did not require the dissolution of the Institute, but the members dissolved the organization (*20*).

The International Sugar Agreement of 1937

As early as 1927, the Cuban delegation to the League of Nations informed the World Economic Conference, which met that year (*51*), of the deteriorating world sugar situation and presented suggestions for remedial action. The Conference recommended that a study be made of sugar. A meeting in Geneva in April 1929 was attended by representatives of the League and of the sugar industries of a number of nations, not including the United States. The industry representatives generally expressed the opinion that any stabilization of production should rest on a formal agreement among producers. The representative of the League of Nations, however, took no affirmative action but declared, "All that the League of Nations can do in the sphere of industrial combinations is to study closely their development."

By 1933, worsening economic conditions throughout the world persuaded various governments of the desirability of changing their attitude toward certain types of international economic proposals and programs. The World Monetary and Economic Conference held in London in 1933 had as its major purposes the encouragement of freer trade and the development of some remedy for current monetary difficulties. However, there also was some indication that joint action by governments dealing with disorganized conditions of production and distribution might be desirable.

A Cuban draft proposal for stabilizing world sugar production was submitted to the Economic Commission of the Conference. The Cuban proposal suggested that (1) processors build no new factories, expand no old ones, and reassemble no dismantled ones for 10 years; (2) governments grant no new subsidies for production of export; (3) governments were to make no increases in tariffs that would raise duties over 70 percent ad valorem, at least until after September 1, 1935; and (4) these stipulations would become effective when signed by a comprehensive list of 26 producing and importing countries. The proposal met with a favorable reception from most exporting countries, but India, Brazil, and Great Britain opposed it. It was not adopted.

By 1937, the United States and Great Britain had stabilized their programs for their domestic sugar industries sufficiently to be willing to take more active roles in developing solutions for international sugar problems. Partly because of this an "International Agreement Regarding the Regulation of Production and Marketing of Sugar" was signed on May 6, 1937, by representatives of 21 nations, including the United States, at a conference in London. The most important feature of the agreement established the following export quotas for the free market for individual countries.

Country	*Basic quota Metric tons*	*Equivalent Short tons*
Belgium (including Belgian Congo)	20,000	22,046
Brazil	60,000	66,138
Cuba	940,000	1,036,162
Czechoslovakia	250,000	275,575
Dominican Republic	400,000	440,920
Germany	120,000	132,276
Haiti	32,500	35,825
Hungary	40,000	44,092
Netherlands (including overseas territories)	1,050,000	1,157,415
Portugal (including overseas possessions)	30,000	33,069
Peru	330,000	363,759
Poland	120,000	132,276
Union of Soviet Socialist Republics (excluding exports to Mongolia, Tannu Twa, and Sin-Kiang)	230,000	253,529
Total	3,622,500	3,993,032

In addition to its basic quota, Czechoslovakia received extra allotments of 90,000 metric tons for the year beginning September 1, 1937; 60,000 tons for 1938; and 25,000 tons for 1939. Czechoslovakia also agreed to reduce its acreage in line with these figures. Other special provisions of minor importance concerned quotas of individual countries.

An International Sugar Council was established in London to administer the agreement. Nations adhering to the agreement received voting rights on the Council approximately in proportion to the amount of their exports or imports. The agreement provided for an adjustment of export quotas whenever three-fifths of the votes cast in the Council favored such action.

Exports of sugar to the United States were not included in the free market exports for which the agreement established quotas. U.S. participation consisted of an agreement that imports of sugar paying the full-duty tariff rate would not be reduced below the existing proportion under U.S. sugar quota law and that countries subject to its full-duty rate would be assigned any deficit in U.S. imports of sugar from the Philippines below the quota specified in the Philippine Independence Act.

The price objectives of the agreement were stated in vague terms. The agreement was to be administered so as to assure consumers an adequate supply of reasonably priced sugar at all times. There was also a provision that steps would be taken to prevent increases in the world price of sugar for export being followed by increases in domestic prices and lower consumption. The nature of these steps was not specified.

Results of the operation of the 1937 agreement were not impressive. The first quota year began September 1, 1937, but not until April 27, 1938, had enough governments ratified the agreement to permit any effective quota action. Although action was finally taken to reduce quotas by 5 percent and several exporting countries voluntarily agreed not to fill their quota, estimated market requirements exceeded exports and prices continued low.

The growing threat of war in Europe greatly affected the operations of the agreement during its second year, beginning September 1, 1938. The Council met before the start of the year and adjusted quotas to prospective market demand within the limits of its authority. England, however, had begun to stockpile supplies of essential foods, including sugar, in the summer of 1938. Sugar prices had risen considerably by May 1, 1939, and upward adjustments were made in the quotas. By the end of the quota year, these amounted to an increase of more than 16 percent over the quantity initially established. Increased demand and higher prices were due to the increasing probability of war, rather than to the International Sugar Agreement.

The start of the third year of operation of the agreement, September 1, 1939, almost coincided with the outbreak of hostilities in Europe. The British Government promptly assumed complete control of sugar in Britain and took steps to purchase all the available unsold sugar in South Africa, Australia, and Mauritius. The initial phases of the war were not so highly destructive to the European beet sugar industry as they had been in World War I. There was no great rise in prices. However, with some parties to the agreement at war with each other, the agreement became largely inoperative. About all that remained was the formal structure of the International Sugar Council, which was kept in existence in the hope that an agreement would again become effective after the war.

The Philippine Independence Act

In March 1935, the United States passed the Philippine Independence Act which provided for the complete independence of the Philippines in 1945, if its terms were accepted by the Commonwealth of the Philippines. The Philippine legislature voted on May 1, 1934, to accept the act and on March 23, 1935, President Roosevelt approved the draft of the constitution of the Commonwealth of the Philippine Islands which had been adopted by a constitutional convention called by the Philippine legislature. The commonwealth was an intermediate stage of government for the islands, preceding complete independence.

The Independence Act provided that, during the operation of the Commonwealth of the Philippines, trade relations with the United States should remain unchanged except that duty-free shipments of refined sugar from the Philippines to the United States were limited to 50,000 long (56,000 short) tons a year and shipments of unrefined sugar to 800,000 long (896,000 short) tons. These amounts did not differ greatly from the quotas for Philippine sugar under the 1934 and 1937 Sugar Quota Acts. They did, however, set a standard that was used in later acts and regulations.

SUGAR DURING WORLD WAR II

The advent of war in Europe in September 1939 found most nations somewhat better prepared than in World War I to meet the inevitable disruptions and shortages that would develop before the conflict ended. The preparations stemmed from memories of what had happened during the previous conflict and the varying degrees of success or failure that had accompanied earlier attempts to control the situation and mitigate the adverse effects. England, remembering former shortages, actively stockpiled sugar for some months before the outbreak of hostilities and promptly placed its entire sugar trade under Government control once fighting began. Before the end of World War II, Britain, the United States, and other countries used much more elaborate control devices than those of World War I.

Position at Outbreak of War, September 1939

World sugar surpluses existed during nearly all of the decade of the thirties. When the war started in

Europe, the United States had relatively large supplies. Total stocks on September 1, 1939, amounted to 1,592,000 short tons (raw value)—the largest stocks for that time of year since comparable records had become available in 1935. Sugar production in the United States and in its principal sugar supply areas also was at a comparatively high level during the crop year beginning in 1939. Consequently, the United States entered the war period in an unusually good position to withstand whatever wartime shortages might develop (*8*).

Most European countries' immediate supplies of sugar were also reasonably good. World sugar production in 1939 slightly exceeded the average for 1935-39. Production of beet sugar in Europe in 1939 amounted to 10.7 million tons (raw value), 5 percent above the 1935-39 average. An International Sugar Agreement adopted in May 1937 was in force up to the outbreak of war in Europe, but quotas were promptly suspended and the agreement became ineffective.

In every important producing and consuming country, the government more or less closely controlled the production and marketing of sugar before the outbreak of hostilities. In many countries, the system of control was more complete than in the United States. Britain and most other European countries paid production subsidies. Cuba and Java each had extensive systems of control designed to limit production and maintain prices; they also had multiple price systems in effect. Australia controlled production and operated a two-price system. In nearly every other major country, sugar producers were subject to special regulations, and they usually received direct or indirect subsidies.

This experience in regulating sugar production and marketing in peacetime doubtless made it somewhat easier for the United States and other countries to apply additional wartime controls when these became necessary. Much of the organization needed for control, together with a great deal of detailed information about the sugar industry, already existed. Despite this, considerable expansion of government agencies dealing with sugar occurred in many countries, including the United States, during the war.

Events Before Pearl Harbor

Immediately after the outbreak of war in Europe, sugar prices in the United States began to rise. The cost and freight price of Cuban raw sugar in New York averaged 1.95 cents a pound in August 1939 and 2.32 cents in September. The duty-paid cost rose from 2.85 cents to 3.7 cents. As a result, U.S. sugar quotas were suspended by Presidential proclamation on September 11, 1939. Partly because of the suspension of quotas and partly because fears of an immediate shortage of sugar subsided after the initial excitement of war, U.S. sugar prices declined after September. The cost and freight price for Cuban raw sugar in New York averaged 1.94 cents a pound in October and 1.46 in November. Quotas were reestablished on December 26, 1939.

During the period when quotas were suspended (September 11 to December 26, 1939) the duty on raw sugar imported from Cuba was automatically increased from 0.9 cent to 1.5 cents a pound. Consequently, the duty-paid price of sugar in this country did not decline so much when quotas were suspended as the cost and freight price, which does not include the duty. The average wholesale price of raw sugar in New York for November was 0.1 cent per pound above the previous August, but the cost and freight price was 0.49 cent lower.

The cost and freight price of sugar in New York increased from its low point of 1.46 cents per pound in November 1939 to 1.95 cents in January 1940. It then gradually declined to 1.74 cents in August 1940. From this point it increased slowly but consistently to 2.99 cents a pound in February 1942; this price had been established in January 1942 as the ceiling for sugar in this position. The ceiling was first established in August 1941 at 2.60 cents per pound but was raised in January 1942, and remained at 2.99 until after the Japanese surrender.

Stocks of sugar in the hands of U.S. primary distributors were at a comparatively high level in 1939; they increased still further in 1940. On January 1, 1940, they reached a peak of 2.6 million tons (raw value), 13 percent above 1939. At the seasonal low point on October 1, 1940, stocks amounted to 1.4 million tons, 46 percent above the previous year. At least part of the 1940 increase in stocks in the hands of primary distributors resulted from an abnormally large distribution of sugar in September 1939 when prices first began to rise. Sugar distribution by primary distributors in September 1939 amounted to 1.2 million tons, almost double the September average for 1935-38. Complete data regarding distribution are not available, but much of the excess distribution in September 1939 certainly served to increase invisible stocks of sugar in the hands of wholesalers, retailers, industrial users, and householders, and these stocks were not immediately consumed. Visible stocks in the hands of primary distributors averaged about 10 percent lower in 1941 than in 1940. This decline in stocks in the United States continued throughout the war. During the first 6 months of 1945, stocks averaged only 1 million tons, compared with 2.5 million tons in 1940.

Sugar Production During the War

U.S. beet sugar production in 1941 amounted to 1.6 million tons (raw value)—300,000 tons below the alltime peak of 1940. Production in 1942 increased about 8 percent from 1941, but in 1943 it dropped to 1 million tons, a decline of 42 percent in 1 year, the smallest crop since 1926. Production in 1944 was