THE UNITED STATES SUGAR POLICY AND ITS IMPACT UPON CUBA: A RE-APPRAISAL

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ABSTRACT

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The purpose of this study is to analyze the evolution of the United States sugar policy and to re-appraise the present policy in view of changed conditions. Cuba has always been a low cost sugar producer, and in the absence of a protective United States sugar policy a large domestic sugar beet industry could never have developed. Since the end of World War II, however, mechanization on United States beet fields, together with other innovations, has reduced agricultural labor costs substantially, and the evidence suggests that these cost reductions will continue. Cuba has not benefited greatly from these innovations and hence her advantage has been narrowing. If this trend continues, conceivably Cuba's advantage may eventually be eliminated.

In the first five chapters of the study the development of the United States sugar policy is examined, and its impact upon both the domestic and Cuban industries is analyzed. The American policy influenced both domestic and

Cuban production by means of a tariff until 1934. Since 1934 the policy has consisted of quotas and direct subsidies for domestic producers.

In the latter portion of the study the cost reductions that have taken place on domestic beet farms in recent years are analyzed. Then an assessment is made of the factors responsible for these reduced costs, as well as the possibility of Cuba reducing her costs in the future. A time series of agricultural labor costs since 1937 in both the United States and Cuba is constructed. The results indicate that although Cuba's advantage is lessening, she still is the lower cost producer. The major factor responsible for the reduction in Cuba's advantage is mechanization on United States beet fields. The data also suggest that although Cuba may be able to reduce her costs somewhat, it is unlikely that she will be able to decrease costs to any significant extent because mechanization is not feasible in Cuba. Labor is plentiful relative to capital and it appears that cane cultivation in Cuba is cheaper if done, for the most part, by hand. MOREOVER, institutional factors, together with the inability to obtain capital, may impede mechanization in Cuba somewhat.

Three general conclusions may be drawn from the study. First, it is unlikely that Cuba's advantage will ever be eliminated because for this to happen costs on domestic beet farms would have to fall much more spectacularly in the future

than they have in the past, and this is unlikely. Second, the 1956 Amendment to the Sugar Law was unwise because it gave the domestic industry a larger share of the United States market, and thus provided for the growth of the domestic industry at the expense of Cuba. Third, the successful pressure to raise the domestic quota in 1956 was in part due to the reduced costs mentioned above. Under the present United States sugar policy, if domestic costs fall further as they promise to do, pressure may develop in the future to increase the domestic quota once more. If it were politically possible to reduce the subsidies as costs fall, then pressure to revise the domestic quota upward would not reappear from time to time. On the other hand, since the 1956 sugar legislation gave the domestic area a percentage share in the growth of United States sugar consumption above 8,350,000 short tons, it is possible that costs on beet farms may not fall enough to bring about pressure to increase quotas once more. In such a case the domestic beet industry will expand within its percentage quota as United States sugar consumption increases with population growth.

PREFACE

The purpose of this study is (1) to analyze the United States sugar policy and its effect upon both the domestic sugar beet and the Cuban cane industry, and (2) to re-appraise the policy in light of changed conditions. The United States policy is highly protective, and this study examines its evolution from its beginning in 1890. It has generally been agreed that in previous years Cuba has had an advantage over the domestic beet industry because agricultural labor costs were much lower in Cuba. However, since the end of World War II certain innovations have reduced labor costs greatly in United States beet fields. The study quantifies agricultural labor costs, both in Cuba and in the United States, in order to determine how much of an advantage Cuba has at present. A re-appraisal is then made of the present United States sugar policy in light of these changed conditions.

The completion of this study has been made possible by the co-operation of many persons. The author is especially indebted to Mr. A. A. Greenwood, Mr. Hans G. Hirsch, Mr. Thomas O. Murphy, Mr. Otto Rauchschwalbe, and Mr. Ward S. Stevenson, all of the Sugar Division, Commodity

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Any shortcomings or points of view must, of course, be assumed solely by the author.

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CHAPTER I

INTRODUCTION

Prior to 1890 there was a tariff on sugar but, as was usual at that time, it was a revenue tariff. From 1890 to 1894 the McKinley bounty on sugar facilitated the establishment of the domestic beet industry, and from 1894 to 1934 tariffs provided protection. It should be noted here that the domestic beet industry undoubtedly would never have been able to develop without some form of protection or subsidy. We shall examine the bounty and protective tariffs, and analyze their effect upon both the domestic sugar beet and the Cuban sugar cane industry, the latter having been the principal foreign supplier of the United States since about 1900.

Since 1934 a system of quota controls has been used by the United States and two sugar markets have developed — the world market and the United States market. In the United States quotas have been used to maintain a higher price and to provide protection for domestic growers, while on the world scene International Sugar Agreements have been negotiated periodically in an attempt to control the supply and thus provide for higher world prices.

In the United States the Secretary of Agriculture determines the supply of sugar to be marketed each year. This becomes the overall United States quota which, together with demand, determines the United States price of sugar. Since the tariff on sugar has been progressively lowered, Congress has allocated the overall United States quota to the various regions in order to assure orderly marketings. Hence the United States price has been quite stable and has remained above the world price for most of the past twenty years. Price competition between Cuban and domestic sugar producers no longer exists in the United States market. The Cuban Government also has intervened in its sugar industry, likewise creating a government sponsored semi-cartel.

The International Sugar Council attempts to stabilize the world price through the International Sugar Agreement by means of world market quotas. The ISC has achieved partial success, but nevertheless, the world price has fluctuated more than that of the United States.

Until recently the United States beet sugar industry had not expanded greatly since the mid-1930's, even though expansion was possible because the beet quota was not filled in most years. However, Cuba was allotted this deficit and easily filled it because she has great excess capacity. Apparently Cuba has the ability to increase her sugar output at almost constant costs up to at least eight million tons because she has an abundance not only of idle labor, but also of fertile soil not yet under cultivation. This ability

was demonstrated during the Korean War when Cuba easily produced well over seven million tons.

Many United States beet growers still cannot survive without a direct subsidy payment even though they enjoy an artificially high sugar price as well as a quota guarantee. Such a subsidy has been granted since 1934. We will analyze the United States quota controls, the subsidy payments, and the effect of these policies upon both the domestic beet and the Cuban sugar industry.

Labor costs are a large proportion of total costs, and it has been charged that Cuba's advantage stems largely from her lower agricultural labor costs. Our study will examine the validity of this claim. In order to do this it will be necessary to explain wage determinations since they are controlled both in Cuba and the United States.

In the past this lower labor cost was a substantial factor, but recently costs on United States beet farms have decreased greatly due to mechanization and other innovations and have reduced the labor cost differential between the two countries. This factor has enabled the domestic industry to expand to the limit of its quota in recent years and subsequently to press for a larger quota allotment, even though Cuban costs are still the lower of the two. Such a quota increase was granted the domestic producers in May of 1956. The study will quantify these cost decreases and assess the innovations that have made them possible. We must, of course, examine the possibility of Cuba also taking

advantage of these same innovations and thus reducing her costs.

Therefore, the purpose of this study is twofold: (1) to examine the competitive position of Cuba in relation to the United States in view of cost reductions; and (2) to re-appraise the present United States sugar policy in view of these cost changes. In order to do this we will have to analyze both past and present policies and their results. We can then draw conclusions regarding the rationale of the present policy.

In the next four chapters we will examine the development of the United States sugar policy, and its impact upon both the domestic and Cuban industries. In chapters VI through IX we will analyze the cost reductions that have taken place on domestic beet farms in recent years, the innovations responsible for them, and the possibility of Cuba innovating also. In the concluding chapter we will re-appraise the United States policy in light of these changed conditions.

CHAPTER II

HISTORICAL BACKGROUND OF UNITED STATES BEET AND CUBAN CANE CULTURE, AND PUBLIC POLICY BEFORE 1934

Historical Background

Sugar obtained from beets or cane is consumed in all countries, although per capita annual consumption varies from a high of approximately 130 pounds in Australia to a low of less than 10 pounds in Madagascar.[1] During the past few generations sugar has changed from a semi-luxury to a stable basic commodity in the wealthier western countries, and per capita consumption is high during both prosperity and depression. For example, in the United States yearly per capita sugar consumption rose from about 65 pounds in 1900 to slightly less than 100 pounds in recent years, and failed to decline significantly during the thirties.[2] It did, of course, drop during the wartime rationing. Consumption would no doubt rise in some of the low sugar consuming countries if the price were not kept artificially

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[1]U. S. Department of Agriculture, Sugar Report No. 11, (Washington: Sugar Division, June, 1951), pp. 2-3.

[2]U. S. Department of Agriculture, Sugar Statistics, (Washington: Production and Marketing Administration, Sugar Division, June, 1953), Vol. I, p. 58.

high by tariffs and excise taxes. A few nations like Denmark, on the other hand, subsidize sugar consumption.

Sugar, either beet or cane, is produced in nearly all countries with varying degrees of tariff protection and, in many cases, even direct government subsidies. This is reflected in the wide variations in the retail price of sugar which, in 1949, ranged from a low of less than $.05 per pound in Denmark to a high of over $.50 in the USSR.[3] The world sugar output has been increased greatly during the last century, rising from less than 3 million tons a year a century ago to more than 40 million tons in 1954.

Columbus carried sugar cane to the Caribbean on one of his later trips to the New World.[4] From there it spread throughout Central and South America and to the United States. However, a sugar industry did not develop during this early period, and even by 1786, the first year for which figures are available, Cuban sugar production was only about 13,000 tons. In 1952 a record-breaking crop of 7,011,393 Spanish long tons was produced, but since then sugar production has been cut back, and in 1955 Cuba produced 4,396,603 Spanish long tons.[5] The Cuban Government limited 1956

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[3]U. S. Department of Agriculture, Sugar Report No. 11, (Washington: Sugar Division, June, 1951), p. 4.

[4]Sugar Information, Incorporated, Sugar Through the Ages, (New York: Sugar Information, Inc., N.D.), p. 10.

[5]U. S. Department of Agriculture, Foreign Service Despatch AGR 42, (Havana, Cuba: August 8, 1955).

production to 4,600,000 Spanish long tons.[6]

The first attempt to grow sugar beets in the United States was made in 1836 near Philadelphia. This venture proved a failure as did other early attempts in Massachusetts, New York and Ohio.[7] The first beet sugar factory in the United States was built at Northampton, Massachusetts in 1838 by an abolitionist who was opposed to using cane sugar made by slaves. This factory was a failure and it shut down in 1840.[8] After several other unsuccessful trials in this area, no further efforts were made, and a beet industry never developed on the Atlantic Coast.

Sugar beet culture, however, did spread westward, and a number of unsuccessful attempts to erect factories are on record in Wisconsin, Illinois, Utah and California. The first successful beet sugar mill was established in California in 1889 when the Alameda Sugar Company took over a failing factory that had been built in 1870 at Alvarado, California.[9] The Holly Sugar Corporation, successor to the Alameda Company, has been operating this factory ever since. Other early ventures that proved successful were

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[6]U. S. Department of Agriculture, Foreign Agriculture Service Report No. 150, (Havana, Cuba: January 30, 1956). One Spanish pound equals 1.0141 English pounds. Hence one Spanish long ton (2,240 pounds) equals 2,272 English pounds.

[7]Jack T. Turner, Marketing of Sugar, (Homewood, Illinois: Richard D. Irwin Co., 1955), p. 10.

[8]U. S. Department of Agriculture, Agricultural Marketing Service, Sugar Beets, Acreage, Yield, Production, Price and Value, (Washington: Government Printing Office, June, 1954), p.1.

[9]Ibid.

made in Nebraska in 1890 and in Michigan in 1899.[10]

Sugar beet culture expanded in these areas and soon spread to the Mountain states. At the present time sugar beets are raised mainly in sixteen northern and western states, with Colorado, California, Michigan and Idaho being the four leading producers.[11] Since World War II the number of beet farmers has varied from a high of 41,229 in 1946 to a low of 23,553 in 1952, and the acreage devoted to beet growing from a maximum of 1,012,400 in 1950 to a low of 716,400 acres in 1952. This compares to a maximum number of 57,580 farmers in 1939, and a maximum number of 1,049,800 acres in 1942.[12] However, the present output of beet sugar is larger than ever before because of increased yield per acre.

Farmer-refiner Relations

The beet sugar companies, unlike cane refiners, rely on the independent farmers for their supply of beets. For example, in both Hawaii and Cuba refiners have vast holdings of sugar cane land. In Hawaii 28 large plantation refiners account for the vast majority of the sugar cane

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[10]U. S. Beet Sugar Association, Directory of American Beet Sugar Companies, (Washington: United States Beet Sugar Association, 1955), P. 11.

[11]1957.

[12]U. S. Department of Agriculture, Sugar Statistics, Statistical Bulletin No. 150, (Washington: Sugar Division, December, 1954), Vol. II, pp. 23-34 Figures not available before 1937.

that is grown, and only a very small portion is grown by independent growers. In Cuba the plantations grow only approximately 10 per cent of their own cane because they rent out much of their land and buy cane from independent colonoes. In the United States cane area there is a mixed system. The largest portion of cane production comes from the large refiner farms, although a substantial amount is grown by small family-sized farms.

On the other hand, it is impracticable for the beet refiners to raise their own beets although they do work closely with the farmers. The sugar companies sell seed to the farmers, make agreements with them in regard to acreage, and even advance money to finance the growing of beets. The farmers and refiners then share in the proceeds from the sale of all beet products on some prearranged basis. Usually this is on a 50-50 basis. That is, 50 per cent of the total receipts from the sale of sugar, molasses, and cattle feed accrue to the farmer. The Government payments, of course, go to the farmers exclusively.

Beet Culture in the United States

Until recently the culture of sugar beets has required a great deal of manual labor. Many man-hours were needed per acre for the "spring work" which consists of hoeing, weeding, and thinning, and also for harvesting which consists of pulling, topping, and loading. This was unpleasant back-breaking work, and often referred to as "stoop labor". In

the past a labor supply that was willing to do this work for relatively low wages was required in order to make the raising of sugar beets possible. Since 1920 Mexican aliens have been recruited and brought from afar to work in the beet fields, although during the depression much of this work was done by American citizens. Before 1920, however, labor was supplied by the great wave of immigrants from Russia and other Eastern European countries. Until such time as they became established in America they were willing to perform this hard work for relatively low pay and thus provided the main source of labor in the beet fields.[13]

More recently sugar beet production has made great strides in mechanization. While an adequate labor supply existed the beet industry never had much incentive to mechanize. During World War II, however, the supply of Mexican aliens dried up as better paying jobs became available elsewhere, and this provided a tremendous stimulus to mechanize. The industry responded, and mechanization resulted in such savings that the industry has been going forward ever since. It is now possible to carry out the entire process by machinery with a few operators. The trend on United States beet farms is toward more and more mechanization, although much hand labor is still used. At the present time between 30 and 40 per cent of all beets are raised on farms that use

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[13]Harry Schwartz, Seasonal Farm Labor in the United States, (New York: Columbia University Press, 1945), p. 103.

machinery in some degree to perform the "spring work," and over 90 per cent of all beets are mechanically harvested. Some authorities predict that within five years nearly all beets will be both raised and harvested mechanically.

This mechanization in itself might present a problem to other farmers because the same workers who do the "spring work" on the beet farms are available during the summer to harvest other crops. When the summer harvests are over they are once more available to harvest beets in the late fall. By dovetailing seasonal farm labor, workers have been employed from early spring to late fall or winter. In some areas such as Michigan and Idaho, where the alien worker has a long distance to travel, the elimination of the early spring and late fall work may make it unfeasible to transport him such a distance.

Cane Culture

Before mechanical harvesters were developed cane harvesting also required a great deal of hand labor. Now, however, farmers can harvest completely by machine, and in the United States nearly all cane is harvested in this manner. But in many foreign areas cane is still harvested by hand.

The non-harvest labor, as opposed to harvest labor, is much less important in the growing of cane than it is in the growing of beets. These so-called dead season operations consisting of planting, irrigation, and pest control

activities may also be mechanized. This too has been carried out to a large extent in the United States but not in many areas abroad. However, the amount of dead season labor required varies greatly from area to area because irrigation is not necessary in some areas, and in tropical regions a single planting will produce up to seven or eight crops. When the cane is cut ratoons sprout up and a new growth appears. In the United States this is not the case and cane must be planted every two or three years. However, none of the labor required in sugar cane culture is of the backbreaking "stoop labor" nature.

Early Growth of the Cuban Sugar Industry, and Cuban Policy Before 1934

Although sugar cane had been raised in Cuba previously, it was only after 1600, when the Spanish Government became interested in Cuba as a possible source of sugar, that cane was planted on an organized scale. From then on the Spanish promoted sugar production in Cuba. Slaves provided the early labor and this, together with the great fertility of the soil, permitted the Cuban sugar industry to grow. Nevertheless, the industry developed with only modest speed during the long period until after the Spanish American War.

Figures regarding Cuban sugar production do not go back beyond 1786, but for the remainder of the 1780's output

in Cuba averaged a modest 12,000 tons annually.[14] By 1800, however, production had more than doubled and stood at 26,000 tons yearly. The next hundred years was a period of steady growth. In 1894 Cuban sugar production surpassed one million tons per year for the first time and thereafter continued to expand. The only exception was a temporary setback starting with the Cuban Revolution against Spain and lasting until after the Spanish American War. In 1895 Cuban sugar production was 1,004,246 Spanish long tons, but the average annual output from 1896 to 1900 fell to about 313,000 tons.[15]

Following the Spanish American War the United States became involved in Cuban affairs. A great deal of American capital moved into Cuba and the Sugar industry expanded rapidly. From time to time when internal order broke down, the United States intervened to establish order and to protect property under the **Platt Amendment**, which was incorporated into the Treaty between Cuba and the United States in 1903. There was, at this time, no Cuban Government policy designed to influence directly the production of sugar. In fact, although Cuba cooperated with the United States after

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[14]Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book), (Havana: Editora Mercantil Cubana, 1951), p. 92.

[15]U. S. Cuban Sugar Council, Sugar Facts and Figures, (Washington: United States Cuban Sugar Council, 1952), p. 97.

the Spanish American War, she did not develop a sugar policy until after World War I.

In 1902 Cuba and the United States signed a reciprocity treaty by which Cuba made certain reductions in the duty on American products imported into Cuba, and the United States granted Cuba a preferential tariff which was 20 per cent below the tariff applying to less favored countries. This preferential tariff, the United States pledge to maintain order, and the influx of American capital accounted for the rapid growth of the Cuban sugar industry after the turn of the century.[16] This increase in output was absorbed primarily by the United States, and Cuba shortly replaced European beet sugar countries as the principal United States supplier. In 1913, for example, Cuba produced 2,428,537 Spanish long tons of raw value sugar, of which 2,100,082 were exported to the United States.[17]

During World War I Cuba co-operated with the United States Government to expand output and to hold sugar prices within reason. Following the war a sugar depression severely affected Cuba, and early in 1921 she set up the Sugar Finance Committee to control the sale and shipment of sugar.[18]

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[16]The McKinley Act was an additional factor from 1890 to 1894. During this period Cuba could send unlimited amounts of sugar to the United States duty free. See infra, p. 19.

[17]Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuban Sugar Year Book), (Havana: Editora Mercantil Cubana, 1951), pp.93 and 115.

[18]B. C. Swerling, International Control of Sugar, 1918-41, (Stanford, California: Stanford University Press, 1949), p. 33.

However, this depression was shortlived, and Cuban sugar production expanded once more after 1921.[19] In 1925 a new world sugar depression overtook Cuba, and in May of 1926 the Verdeja Crop Restriction Bill was passed which provided for direct crop control.[20] Faced with falling prices Cuba set out to cut back sugar production. She was, however, alone in this effort and hence achieved little success in raising prices. In 1930 Cuba took the leadership in negotiating the Chadbourne Agreement in which the leading exporting countries agreed to limit sugar exports.[21] This agreement did reduce sugar output to some extent but failed to raise the world price.

On June 8, 1931, the Cuban Sugar Stabilization Institute was established by Presidential Decree under the powers granted by the Law for the Stabilization of Sugar passed by the Cuban Parliament in November of 1930.[22] This CSSI is a quasi-governmental body with power to sign international agreements binding on Cuba. The CSSI is still in existence today, and it determines Cuban sugar exports in accordance with the allotments granted Cuba.

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[19]Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book), (Havana: Editora Mercantil Cubana, 1951), p. 93.

[20]Swerling, op. cit., p. 35.

[21]John E. Dalton, Sugar: A Case Study of Government Control, (New York: The Macmillan Co., 1937), p. 54.

[22]Instituto Cubano de Estabilizacion del Azucar. (ICEA).

United States Policy Before 1934

From the beginning the United States beet industry needed some form of government aid or tariff protection to survive, except during wartime. Not only did the domestic beet industry face competition from foreign cane sugar producers, but European Governments were granting subsidies to stimulate their beet producers. In addition, some governments paid bounties to encourage sugar exports, and, at times, these export bounties actually led to dumping. Most nations also developed differential tariffs to encourage raw sugar imports at the expense of refined sugar. These differential tariffs go back at least to the time of Colbert (1619-83), finance minister of Louis XIV.[23] Consequently, United States producers demanded protection for beet sugar, and the Government responded by developing a sugar policy as early as 1890. Before 1934, however, the Government relied solely on tariffs save for a brief period from 1890 to 1894 when a bounty was paid on domestic sugar.

The United States has levied a tariff on sugar ever since 1789, but until 1842 it was strictly for revenue. From 1842 to 1890 it is clear that while the major objective of the sugar tariff was still to raise revenue, a minor objective apparently was to stimulate the refining industry. This is evident for during these years a differential tariff

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[23]Swerling, op. cit., p. 1.

providing for higher rates on refined sugar was in effect. During this period the United States Treasury was primarily financed through customs collections, of which sugar duties made up about one-fifth.[24]

In 1890 the McKinley Tariff Bill was passed, and it was the first legislation to recognize and to encourage the new beet industry. The McKinley Act was the result of a successful political maneuver on the part of the protectionists.[25] The tariff was one of the issues in the 1888 election, and although the Republicans who were committed to a high protective tariff won a narrow victory, considerable opposition to a high tariff existed in the West. After the election the protectionists wanted to raise tariffs further, but the Treasury had an embarrassing surplus at the time which made tariff increases difficult. Therefore, after some political intrigue, Congress passed the McKinley Act which eliminated the revenue tariff on raw sugar while raising many protective tariffs.[26] Since the tariff on sugar was the major source of revenue for the Treasury, the McKinley Act turned the Treasury's surplus into a deficit. The Act also subsidized the domestic sugar producers directly for the first time.

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[24]U. S. Department of Agriculture, Sugar Report No. 11, (Washington: Sugar Division, June, 1951), p. 8.

[25]For an excellent discussion of the Tariff Act of 1890 see, F. W. Taussig, The Tariff History of the United States, (New York: G. P. Putnam's Sons, 1914), pp. 251-320.

[26]Refined sugar was subject to a tariff of .5 cents per pound.

Under this Act the Government paid producers a bounty of two cents per pound for domestically produced sugar. This resulted in the Treasury losing approximately $50,000,000 of revenue yearly. In addition, the Treasury had increased yearly payments of approximately $10,000,000 because of the bounty on sugar. However, competent students have argued that the American consumer benefited more than the domestic producer.[27] The tariff on sugar at the time of the McKinley Act was 2.24 cents per pound on raw sugar and 3.5 cents per pound on refined sugar.[28] With the abolition of the Morrill Tariff on raw sugar and a drastic reduction on refined, the price of sugar declined for the American consumer, whereas it rose for the foreign supplier. That is, the price of sugar, duty paid, in New York declined, but the free or unprotected price in New York rose and they became identical. Hence, both the foreign supplier and the American consumer obtained part of the Treasury's loss of revenue. The American consumer, of course, indirectly paid the $10,000,000 bounty to the domestic producers, but since only a small portion of United States sugar consumption was domestically produced at that time, the reduction in the price of sugar to the consumer more than offset the $10,000,000 yearly bounty payment.

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[27]Dalton, op. cit., p. 23

[28]The Morrill Act of March 3, 1883

The principal beneficiaries of the McKinley sugar bounty were the cane producers in Louisiana since at that time there was practically no beet industry. Nevertheless, the McKinley Act was the father of the domestic beet industry inasmuch as the industry could not get started prior to the passage of the Act in 1890, even with the high tariff on sugar. Although complete official figures regarding beet sugar production do not go back beyond 1901, the Department of Agriculture has figures indicating that in 1888, on the eve of the McKinley Act, the two beet factories then existing in the United States together produced only about 2,000 short tons of sugar.[29] By 1898 there were 16 beet factories in existence producing 36,000 tons annually.[30]

The McKinley Act also had two unexpected effects. First, it stimulated production in Cuba because Cuba enjoyed a price increase due to the removal of the tariff. Cuban sugar production expanded from 632,000 tons in 1890 to over one million tons in 1894.[31] Second, Hawaii's relative position deteriorated for Hawaiian sugar producers were not, at that time, considered domestic producers. Hence they were not recipients of these bounties although they had been granted free entry of sugar by treaty since

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[29]U. S. Department of Agriculture, Agriculture Marketing Service, Sugar Beets, Acreage, Yield, Production, Price and Value, (Washington: Government Printing Office, 1954), p. 1.

[30]Ibid.

[31]Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book), (Havana: Editora Mercantil Cubana, 1955), p. 86.

1875. Figures for Hawaiian sugar production prior to 1893 are scanty, but output did decline during the McKinley Act to a low of 149,627 tons in 1894. Even more serious was the decline in the duty paid price of sugar from 1890 to 1894 for it created deflationary conditions throughout the Hawaiian Islands. The United States Minister to Hawaii estimated the loss due to falling sugar prices at approximately 12 million dollars per year.[32]

These generally depressed conditions created discontent and were partly responsible for the revolution, led by the American settlers, against the Hawaiian Monarchy and the establishment of the Republic of Hawaii in 1893. Thus the American Sugar Policy inadvertently influenced the politics as well as the economics of Hawaii, for this revolution of 1892 paved the way for the annexation of Hawaii in 1898.

The bounty provided by the McKinley Act was intended to remain in effect for 16 years, but it was removed four years after enactment when an ad valorem duty of 40 per cent was imposed on raw sugar, and a 40 per cent ad valorem plus 1/8 of one cent per pound on refined sugar.[33] The

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[32]Charles A Beard and Mary R. Beard, The Rise of American Civilization, (New York: The Macmillan Co., 1927), Vol. II, p 359.

[33]The Wilson Bill of August 27, 1894.

abolition of the bounty and the imposition of the Wilson Tariff, which amounted to about $.01 per pound on raw sugar, stabilized raw sugar prices at the slightly higher level of about 3.5 cents per pound until the Wilson Bill was repealed in 1897. This higher price was not enough to offset the former bounty, however, and domestic producers demanded more protection.

In 1897 Congress responded to the domestic industry's plea and passed the Dingley Tariff Bill. This Act changed the ad valorem rate to a fixed rate per pound, and in so doing served to raise the tariff to 1.685 cents per pound on raw sugar and to 1.95 cents per pound on refined. The Bill was designed to keep out more foreign sugar, especially beet sugar from European countries that were granting producers a bounty, and thus increase the domestic producers' share of the market. The law succeeded in doing this; the price of sugar rose slightly and the infant beet industry started by the McKinley Act expanded rapidly.

In the three-year period from 1898 to 1901 annual beet sugar production expanded from 36,000 tons to over 198,000 tons, and by 1920 output reached one million tons.[34] The growth of the domestic industry coincided with a rapid increase both in population and per capita sugar consumption in the United States. These increases were fast enough to absorb both the domestic growth and greater sugar imports

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[34]U. S. Department of Agriculture, Sugar Statistics, Statistical Bulletin No. 150, (Washington: Sugar Division, December, 1954), Vol. II, p. 9.

from Cuba. The tariff was not further changed to any significant extent until 1921.[35]

During World War I the United States Government placed controls on the distribution and the price of sugar and also encouraged the production of both Cuban cane sugar and American beet sugar by means of price guarantees. The domestic beet industry did not expand greatly during the war since more profitable alternative crops were available. In Cuba, however, where there are few alternative crops, sugar production expanded.

Immediately after World War I controls were lifted and sugar prices rose sharply. The domestic industry responded by expanding greatly in 1920 and 1921, but since much of this price rise was speculative, much of the subsequent decline, occurring in late 1920, can be attributed to the disappearance of the speculative demand. Therefore, in 1921 and again in 1922 the tariff was raised, and in 1922 it stood at its highest level since the Morrill Act of 1883, which was primarily a revenue tariff.[36]

Between the Dingley Tariff Bill in 1897 and the tariff bills of 1921 and 1922 a number of other important things had also happened. For example, in 1901 Puerto Rican

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[35]It was reduced very slightly in 1913. The Underwood Act of October 3, 1913.

[36]The Emergency Tariff Act of May 27, 1921, and the Fordney-McCumber Act of September 22, 1922.

sugar was given free entry, and in 1909 the Philippine Islands received the same benefits within certain limitations.[37] In 1917 free entry was extended to the Virgin Islands. Furthermore, in 1903 Cuban sugar received a preferential tariff rate of 20 per cent below that of full duty countries.[38]

The first post World War I sugar depression was largely the result of the collapse, late in 1920, of the speculative demand for sugar. This depression was short-lived, and by the end of 1922 world sugar prices were high again thereby creating a wave of optimism. This resulted in tremendous investments to increase sugar production further, especially in many cane areas. Depression once more overtook the world sugar market, however, and this second postwar sugar depression affected the world sugar market several years before its impact was felt in the

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[37]Between 1909 and 1913 duty free Philippine sugar was limited to 300,000 tons annually. The present quota for the the Philippine Islands is set at 952,000 short tons, not by the regular sugar legislation, but by the Philippine Islands Trade Relations Act of 1946. Under this Act Philippine sugars, up to the quotas, entered the United States free of duty up to July 3, 1954. For the period July 4, 1954 to December 31, 1954, the duty on Philippine sugars, under the quota limitations, was 5 per cent of the lowest duty rate on sugar then prevailing. The Act provided further that for the calendar years 1955 to 1972, inclusive, the rate is to be increased annually by 5 per cent, and for the period January 1, 1973 to July 3, 1974, an additional 5 per cent, making the Philippine Republic a full duty country on January 1, 1973.

[38]All foreign countries other than Cuba and the Philippines are referred to as full duty countries. Cuba has enjoyed a preferential tariff on sugar of at least 20 per cent ever since 1903. Since 1934 Cuba has at times had

United States. By 1925 a world sugar depression was created by the recovery of European beet sugar production from World War I, together with increased output in foreign cane fields stimulated during the war and in the immediate postwar inflation.[39] Beginning with the 1924-25 crop, world sugar production began to exceed world consumption.[40] Because of high tariffs, however, the domestic industry continued to expand, and the depression did not seriously affect the United States sugar industry until 1930. But in 1930 domestic producers began to suffer as the price fell because of the accumulation of sugar inventories. As a result, domestic producers demanded still higher tariff protection. In response to their plea Congress raised the tariff on sugar when it passed the Smoot-Hawley Tariff Bill in 1930.

This Act raised the duty to two cents per pound on Cuban sugar and to two and one-half cents per pound on sugar

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(Footnote 38 continued) a preferential of more than 20 per cent under various trade agreements. The latest agreement signed with Cuba was in October, 1947, and it reduced the tariff on Cuban sugar to $.005 per pound raw value, which is still in effect. The Torquay Tariff Conference in 1951 reduced the tariff on sugar from the full duty countries to $.00625 per pound raw value, again reducing Cuba's preferential to 20 per cent. Since 1951 the tariff on refined sugar has been $.0053 per pound for Cuba and $.006625 for full duty countries.

[39]U. S. Department of Agriculture, Sugar Report No. 11, (Washington: Sugar Division, June, 1951), p. 8.

[40]The world price fell from over 4 cents per pound in 1924 to less than 2.5 cents per pound in 1925.

from full duty countries. It was hoped that the higher tariff would lessen the competition from foreign sugar, particularly from Cuba, and raise the price. This higher tariff barrier did result in great reductions in the marketing of sugar from Cuba but did not solve the problem of falling prices. Although sugar production in Cuba was depressed, production of domestic beet sugar and duty free insular cane sugar expanded to fill the gap. Between 1929 and 1933, production in the domestic beet areas increased by 61 per cent, in the Philippines by 44 per cent, in Puerto Rico by 42 per cent, and in Hawaii and mainland cane areas by 15 per cent each. The net effect of the higher tariff was to bring greater overproduction in the domestic areas and an ever increasing depression in the world market. In 1932 the world price of sugar fell to less than a cent per pound and the New York price, which included the two cents Cuban duty, to less than three cents per pound. It soon became clear that tariffs alone could not protect the domestic sugar industry from falling prices as they had in the early twenties. Although in 1921 and again in 1922 Congress had raised the tariff in a successful attempt to bolster falling United States sugar prices, that was before a sugar glut appeared on the world market and when the domestic industry was smaller.

In 1933 the United States Tariff Commission made a study of the sugar situation and came to the conclusion that the protective tariff was no longer capable of dealing

effectively with the sugar problem. The Commission pointed out that the sugar industry was one of chronic overproduction. Further increases in the tariff, the Commission held, would not benefit the domestic sugar producers, but would be harmful to Cuba as she sought vainly to cut costs (mainly wages). The Commission proposed that the problem in the sugar industry be overcome and the price raised by quota limitations on the supply.[41] This suggestion of the Tariff Commission in regard to quotas was embodied in the Jones-Costigan Act of 1934. This was the first piece of legislation to deal with the sugar problem by means other than tariffs since the McKinley Act of 1890.

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[41]U. S. Tariff Commission, Report to the President on Sugar, Report No. 73, (Washington: Government Printing Office 1934), pp. 24-25.

CHAPTER III

MAJOR CHANGES IN PUBLIC POLICY SINCE 1933 AND THEIR IMPACT

Background of the Jones-Costigan Act; Industry's Voluntary Attempt

In 1933 the spokesman for the domestic sugar beet industry hoped to have benefits bestowed on sugar growers by the enactment of the Agricultural Adjustment Act. Domestic growers suggested that sugar beets and sugar cane be included as "basic farm commodities." The United States Senate did include both as "basic commodities" and made growers subject to benefit payments by the Department of Agriculture if they restricted the supply of beets and cane and met with certain other provisions. The House, however, eliminated sugar from the list of "basic commodities."

Despite the failure of Congress to designate sugar as a "basic commodity," the sugar industry could undertake to stabilize the price of sugar by voluntary agreements. Indeed, under the AAA the Secretary of Agriculture was authorized to make voluntary agreements with sugar distributors. These agreements, which were exempted from the anti-trust laws, could be designed to eliminate "unfair practices" and to limit the supply of sugar to be marketed

yearly.[1] They then could be given legal sanction by the Secretary of Agriculture by means of federal licenses to market sugar.[2] Accordingly, in the summer of 1933 representatives of the domestic sugar industry met to draft a plan to limit sugar production. An attempt was made to establish quotas for all major sugar producing areas that supplied the United States, but friction developed regarding the quota for each area. The sugar industry agreed that production of sugar should be balanced with consumption at a higher price level. Furthermore, they agreed that in order to accomplish this, no more than 6,350,000 tons of sugar should be marketed for the year ending June 20, 1934, since it was believed that amount would be the American consumption for the year.[3] Individual areas, however, insisted on marketing quotas which together would have equaled 6,725,000 tons. This excess of 375,000 tons above the estimated American consumption would have defeated the plan's goal to raise the price of sugar. This proposed agreement assigned each sugar producing area the quota shown in Table 1.

In late 1933 the Secretary of Agriculture announced that the Department would not accept the agreement reached

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[1] Public Law No. 10, 73rd Cong., 1st Sess. (May 12, 1933). "Agricultural Adjustment Act." Title I, Sec. 8

[2] Ibid.

[3] Dalton, op. cit., p 79.

by the industry.[4] The main reason given for the rejection was the sugar industry's inability to develop a workable plan to allocate the overall quota.[5]

TABLE 1

VOLUNTARY QUOTA ALLOTMENTS PROPOSED BY THE AMERICAN SUGAR INDUSTRY FOR 1934

Territory of Hawaii	975,000 tons
Virgin Islands	15,000 tons
Puerto Rico	875,000 tons
Philippine Islands	1,100,000 tons
Cuba	1,700,000 tons
Louisiana	250,000 tons
Florida	60,000 tons
U.S. Beet Sugar Area	1,750,000 tons
Total	6,725,000 tons

Source: John E. Dalton, Sugar, A Case Study of Government Control, (New York: Macmillan Co., 1937), p. 81.

The Jones-Costigan Act of 1934

After this ill-fated agreement it became apparent that if the sugar problem were to be solved, more positive

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[4]U. S. Department of Agriculture, Sugar Report No. 28, (Washington: Sugar Division, August, 1954), p. 7.

[5]An additional reason for rejecting the plan was that the Department of Agriculture believed that the American industry's agreement did not provide sufficient assistance to Cuba. U. S. Department of Agriculture, Sugar Program, (Washington: Government Printing Office, 1953), p. 7.

government action would be required. Therefore, early in 1934 Congress began to draft what was to become the Jones-Costigan Act.

This Act was patterned after the Agricultural Adjustment Act, and when passed on May 9, 1934, it became an amendment to the AAA. It made sugar beets and sugar cane "basic farm commodities," and hence entitled producers to certain benefits from the Department of Agriculture.[6]

Consumption Requirements

Under the new Act the Secretary of Agriculture was to estimate the annual consumption requirements of sugar for the Continental United States. The Secretary was granted considerable freedom in making his estimate for the law merely stated that he was to base his determination on the available statistics of the Department of Agriculture. The Act did require, however, that the Secretary adjust his estimate "at such intervals as the Secretary finds necessary to effectuate the declared policy and the purposes of this Act...to meet the actual requirements of the consumer..."[7]

Quota Allotments

The Act also limited the amount of sugar that could be marketed in the United States, and this quota was allo-

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[6]Public Law No. 213, 73rd Cong., 2nd Sess. (May 9, 1934), "To Include Sugar Beets and Sugarcane as Basic Agricultural Commodities Under the Agricultural Adjustment Act, and for Other Purposes."

[7]Ibid.

cated to the various sugar producing areas. Congress set the quota for the continental beet and cane growers, but formulated only general rules for the Secretary of Agriculture to follow in establishing quotas for other areas supplying the United States. Moreover, the Act provided that the sum of these quotas set by the Secretary, together with the continental beet and cane quotas, was to equal the consumption requirements. In addition, the Secretary could legally adjust all quotas within prescribed limits. For example, if the consumption requirements exceeded the estimate the Secretary was to prorate the excess in accordance with the quotas, subject, however, to the condition that continental United States sugar producers be allotted no less than 30 per cent above 6,452,000 short tons raw value.[8] In the event that consumption requirements proved less than the original estimate, the Act authorized the Secretary to reduce all quotas proportionally. If an area were unable to meet its quota, this deficiency was to be prorated to all other areas on the basis of their respective quotas and abilities to supply the deficiency.

Although much of the sugar used by industry is in liquid form, the Act did not specifically mention liquid sugar. Rather Congress used the term sirup which it con-

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[8] Ibid. Raw value sugar is an industry term used to designate sugar after the juice has been crystalized, but has not been refined to remove all of the impurities. One ton of sugar, raw value, equals 0.9346 ton of refined sugar.

sidered a specialty product. The Secretary of Agriculture was permitted to consider sirup either as part of the regular quota or to set up a separate quota if desired.

The Act specified that Cuba could fill 22 per cent of her quota by sending direct-consumption sugar -- a sugar requiring no further refining. Other major foreign and offshore domestic suppliers could use such sugar to fill their quotas only to the extent that they had provided it "during the year 1931, 1932, or 1933, whichever is greater."[9]

The recommendation of the Administration at this time was to give Cuba a larger quota than that suggested by the domestic industry in June of 1933. The Jones-Costigan Act, however, permitted the Secretary of Agriculture to determine the quota for foreign and insular domestic areas on the basis of their average respective marketings "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 representative respective three years...."[10]

When the Secretary announced that the estimate of consumption requirements of the Continental United States

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[9] Ibid. There never was, of course, a separate direct-consumption and raw sugar quota for continental producers.

[10] Public Law No. 213, 73d Cong., 2nd Sess. (May 9, 1934). "To Include Sugar Beets and Sugarcane as Basic Agricultural Commodities Under the Agricultural Adjustment Act, and for Other Purposes."

for the year 1934 was 6,476,000 tons, no great surprise or objection was expressed by the sugar industry.[11] Since the mainland beet and cane sugar producers were given a fixed quota totaling 1,810,000 tons, there remained 4,659,000 tons to be assigned to insular areas and foreign countries.[12] Since Congress had given the Secretary of Agriculture a nine-year period from which to select the most representative three-year period for foreign and insular areas, several different quota arrangements were possible. Therefore, great interest and difference of opinion developed as to how this quota of 4,659,000 tons was to be allocated among the various areas. Finally, the Secretary selected the period 1931-1933 as the most representative three-year period.[13] This period did not, of course, please everyone. Cuban interests, for example, maintained that these three years were not representative because Cuban exports of sugar to the United States were unduly low during that time because of the Smoot-Hawley Tariff Act of 1930. The quotas fixed by the selection of this period are summarized in Table 2.

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[11]Dalton, op. cit., p. 119.

[12]In the absence of a special provision 4,666,000 tons would have been available for non-continental areas. However, the law also required that, in addition to the 1,810,000 tons, at least 30 per cent of the estimated consumption over 6,452,000 tons be allocated to continental producers. Hence, the Secretary increased the domestic beet areas' quota by 6,000 tons and the continental cane areas' by 1,000 tons, which left 4,659,000 tons to be allocated among other areas.

[13]Except in the case of Hawaii for which the years 1930-1932 were selected.

TABLE 2

FINAL QUOTA FOR 1934 AS DETERMINED BY THE SECRETARY OF AGRICULTURE UNDER THE JONES-COSTIGAN ACT OF 1934

Area	Quota (Short Ton Raw Value)
United States Beet	1,556,000
United States Cane	261,000
Cuba	1,902,000
Philippine Islands	1,015,000
Puerto Rico	803,000
Territory of Hawaii	917,000
Virgin Islands	5,000
All Others	17,000
Total -- Equal to estimated U. S. Consumption	6,476,000

Source: Dalton, op. cit., p. 123.

Once these quotas were determined it was necessary to enforce them. Although domestic sugar producers from the various regions agreed to divide their total area quota among themselves in an equitable manner, the law authorized the Secretary to make a final and binding decision in the event of a disagreement. A disagreement did, in fact, arise among the United States beet growers, and the Secretary made marketing allotments to the beet processors after public hearings.[14] With respect to foreign sugar, any in

[14]Dalton, op. cit., p. 126.

excess of the quota was excluded by the customs collector at the various ports of entry.

Conditional Program Payments and Processing Taxes

Under the Jones-Costigan Act of 1934 the Government provided that farmers were to receive program payments for acreage restrictions if they also met certain conditions concerning child labor and minimum wages. Although the law was not specific on these two points, it authorized the Secretary to limit or regulate child labor and to set a minimum wage in the event of a dispute. The Secretary, however, could establish a minimum wage only upon the request "of any producer, or grower, or worker, or of any association of producers, or growers, or workers, or of any processor, of sugar beets...."[15]

The payments made to farmers were to make up the "difference between the current average farm price for the commodity and the fair exchange value of the commodity."[16] These payments were to be financed by a special processing tax imposed at a rate to provide the necessary funds. This tax provision carried the stipulation that if the tax resulted in reducing domestic consumption, thus causing

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[15]Public Law No. 213, 73rd Cong., 2nd Sess. (May 9, 1934). "To Include Sugar Beets and Sugarcane as Basic Agricultural Commodities Under the Agricultural Adjustment Act, and for Other Purposes."

[16]Ibid.

"surplus" sugar stocks, the Secretary was then to make an investigation and, if necessary, reduce the tax to prevent such accumulation.[17]

The Department of Agriculture made payments to farmers totaling $71,639,405 under the Jones-Costigan Act before this processing tax was declared unconstitutional by the courts on January 6, 1936.[18] Table 3 summarizes these payments.

TABLE 3

PAYMENTS MADE TO FARMERS UNDER THE JONES-COSTIGAN ACT

	1933	1934	1935	Total
U.S. Beet Farmers	$2,577,076	$19,575,324	$ 9,507,420	$31,659,820
Mainland Cane Farmers	---	8,850,732	3,371,920	12,222,652
Puerto Rico	---	12,774,272	1,658,800	14,433,072
Hawaii	---	4,681,622	8,642,239	13,323,861
Total	$2,577,076	$45,881,950	$23,180,379	$71,639,405

Source: U. S. Department of Agriculture. Although the Jones-Costigan Act did not become law until 1934, it contained a provision requiring the Treasury to reimburse growers for any reduction in their returns, due to the processing tax, on sugar produced in 1933 but sold in 1934. However, only beet growers were eligible under this provision.

[17] Ibid.

[18] United States v Butler, 279 U. S. 1, 80L ed. 477, 51 S.Ct. 312.

The Sugar Act of 1937

Although the quota provisions of the Jones-Costigan Act were not affected by the court decision, it appeared to the administration that the Act was not workable without provisions for benefit payments. Therefore, on March 1, 1937, the President in a message to Congress requested new legislation based on the principles developed by the Act of 1934.[19] Congress responded to the President's request and passed the Sugar Act of 1937 which became law on September 1, 1937.

Consumption Requirements

The Act of 1937 required the Secretary of Agriculture to estimate the sugar requirements of the continental United States. However, whereas the 1934 Act merely provided general rules for the Secretary to follow in making this determination, the Act of 1937 required him to take into account the marketing of sugar during the past year, changes in inventory, and changes in population and consumption. As before, the Secretary was also to consider possible excessive prices to the consumer. Since his estimate of requirements was to become the amount of sugar marketed in the United States, it was to be set at such a level "that the supply of sugar made available...shall not result in average prices

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[19] The New York Times, March 2, 1937, p. 29, Col. 1.

to consumers in excess of those necessary to maintain the domestic sugar industry as a whole..."[20]

Raw Sugar Quota Allotments

The Act of 1937 also changed the quotas allotted to the various areas. Fixed quotas had been established by the 1934 Act either by Congress, as in the case of mainland producers, or by the Secretary of Agriculture for insular and foreign suppliers. Now Congress established all the quotas, both domestic and foreign. Furthermore, since sugar prices had recovered somewhat by 1937, it was believed that domestic sugar production could be increased slightly rather than cut back as under the original act.[21] In order to achieve this, Congress allotted to both domestic and foreign areas a percentage of the total American market which was expected to expand moderately.

The Act provided that the domestic producers (this included the mainland and insular producers) were to be allotted 55.59 per cent of the total continental United States requirements, and foreign producers the remaining 44.41 per cent. These percentages were then broken down still further to give each of the domestic and foreign areas an appropriate fraction of their total percentage.

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[20] Public Law No. 414, 75th Cong., 1st Sess. (September 1, 1937). "The Sugar Act of 1937."

[21] U. S. Department of Agriculture, The United States Sugar Program, Agriculture Information Bulletin No. 111, (Washington: Production and Marketing Administration, July, 1953), p. 19.

Table 4 illustrates the percentage quotas of the various sugar producing regions under the 1937 Sugar Act.

The Act of 1937 also placed a floor under domestic production in the form of a fixed minimum quota. The domestic producers were granted a quota of at least 3,715,000 short tons without regard to the ratio of this figure to the total United States requirements. The Act spelled out that if the United States needs were less than 6,682,670 short tons, the total foreign quota was to be 44.41 per cent of the requirements in excess of 3,715,000 short tons. However, since domestic consumption never fell below this mark, this absolute minimum was not invoked.[22]

In the event that some domestic areas or Cuba were unable to meet their quotas, the Act authorized the Secretary of Agriculture to prorate the deficiency as follows: first, to other domestic areas and Cuba and, second, to other foreign areas provided that the domestic and Cuban producers too were unable to fill it "on the basis of the quotas then in effect."[23] Any Philippine deficit, however, was to be prorated to foreign countries other than Cuba.

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[22]There was an additional provision in the Act guaranteeing the Commonwealth of the Philippine Islands a quota not less than the duty free quota established by the provisions of the Philippine Independence Act of 1934. This Act provided a duty free quota for the Philippines of 850,000 long tons. (952,000 short tons). This then became the quota floor for the Philippine Islands.

[23]Public Law No. 414, 75th Cong., 1st Sess. (September 1, 1937). "The Sugar Act of 1937."

TABLE 4

PERCENTAGE QUOTAS OF DOMESTIC AND FOREIGN SUGAR AREAS UNDER THE 1937 SUGAR ACT (RAW SUGAR)

Area	Percentage of Domestic Quota; 55.59 percent of total	Percentage of Total U. S. Consumption
Domestic 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 for all Domestic Areas	100.00	55.59
	Percentage of Foreign Quota; 44.41 percent of total	
Commonwealth of the Philippines	34.70	15.41
Cuba	64.41	28.60
Other Foreign Countries	.89	.40
Total for all Foreign Areas	100.00	44.41

Source: Public Law No. 414, 75th Cong., 1st Sess, (September 1, 1937). "The Sugar Act of 1937."

Direct Consumption and Liquid Sugar Quotas

The Act of 1937 also changed the direct-consumption and liquid sugar quotas.[24] The law specified exactly how much of its quota each offshore domestic and foreign supplying area could fill by sending direct-consumption sugar, rather than tying it to a base year or to a percentage of each area's total quotas as the 1934 Act had done. This limitation is summarized by Table 5, and we note that it remained small.

TABLE 5

DIRECT-CONSUMPTION SUGAR QUOTAS UNDER THE 1937 SUGAR ACT

Area	Short Tons (Raw Value Equivalent)
Hawaii	29,616
Puerto Rico	126,033
Virgin Islands	0
Philippine Islands	80,214
Cuba	375,000
Others[a]	---
Total	610,863

[a]The quota for other foreign countries was and still is very small, and the Act of 1937 did not differentiate between direct-consumption and raw value sugar.

Source: Public Law No. 414, 75th Cong., 1st Sess. (September 1, 1937). "The Sugar Act of 1937."

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[24]See supra, p. 31, for the provisions of the Act of 1934.

The Act did not differentiate between liquid and crystalline sugar for the domestic areas. The Act provided that, "liquid sugar, except that imported from foreign countries, shall be included with sugar in making the determinations provided for in Sections 201 and 203 and in the establishment or revision of quotas..."[25] A separate yearly liquid sugar quota was established for foreign countries as shown in Table 6. In setting these separate liquid sugar quotas, Congress recognized the recent tendency on the part of industry to utilize liquid sugar to a larger extent.

TABLE 6

LIQUID SUGAR QUOTAS AS ESTABLISHED BY THE 1937 SUGAR ACT

Country	Wine Gallons of 72 Percent Total Sugar Content
Cuba	7,970,558
Dominican Republic	830,894
All Other Foreign Countries	0

Source: Public Law No. 414, 75th Cong., 1st. Sess. (September 1, 1937). "The Sugar Act of 1937."

Conditional Program Payments and Excise and Import Taxes

The Sugar Act of 1937 placed an excise tax, to be collected at the manufacturing level, of approximately one-

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[25]Public Law No. 414, 75th Cong., 1st Sess. (September 1, 1937). "The Sugar Act of 1937."

half cent per pound on all domestically manufactured sugar.[26] A commensurate import tax on direct-consumption sugar was also imposed in addition to the duties prescribed by the tariff acts.

Unlike the 1934 Act, the yields from these excise and import taxes were not earmarked for a particular use but were to go into the general revenue of the Treasury. The conditional payments authorized for farmers if they co-operated with the program were also to come from the general funds of the Treasury, thus eliminating the objections of the Supreme Court to the 1934 Act.[27]

The Sugar Act of 1937 did not provide for payments to farmers with any concept of parity in mind, but rather it established three types of conditional payments. In addition to a base payment based on total sugar produced, payments were also authorized for crop abandonments and deficiencies due to flood, drought, and other natural hazards. With respect to crop abandonments, the payments were to be one-third of the normal yield per acre for each acre of cane or beets abandoned. The crop deficiency payments were to be the difference between the actual yield

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[26]The tax was a sliding scale tax for sugar testing above 92 sugar degrees. The tax was at a low of .465 cents per pound for sugar testing 92 degrees, and increased by .00875 cents per pound for each percentage point increase in the sucrose content above 92 degrees. The tax on sugar testing less than 92 degrees was a flat .5144 cents per pound.

[27]See supra, p. 36.

of harvested acres and 80 per cent of the normal yield of commercially recoverable sugar. The base payments made to farmers for the total sugar obtained from their beets operated on a sliding scale principle. Based on a rate of $.60 per 100 pounds of sugar raw value, the payment declined on additional sugar as the volume expanded. Table 7 summarizes the base payment schedule.

TABLE 7

SLIDING SCALE BENEFIT PAYMENTS MADE TO SUGAR BEET AND SUGAR CANE FARMERS UNDER THE 1937 SUGAR LEGISLATION

The Portion of Sugar Falling into the Following Intervals (Short Tons Raw Value)	Reduction in Base Rate Per Hundred Pounds of Such Portion	Effective Base Rate Per Hundred Pounds
Less than 500	$.000	$.600
500 to 1,500	.050	.550
1,500 to 6,000	.075	.525
6,000 to 12,000	.100	.500
12,000 to 30,000	.125	.475
Over 30,000	.300	.300

Source: Public Law No. 414, 75th Cong., 1st Sess. (September 1, 1937). "The Sugar Act of 1937."

Since these payments were made only to the domestic growers, whereas the taxes were collected on all sugar, the Treasury obtained a net revenue in every full year of the

Act's existence.[28] If we consider only the excise taxes on domestic sugar, however, we note that the Treasury had a deficit in every year. The following three tables illustrate the payments received by growers, and the excise and import tax receipts under the Sugar Act of 1937. Table 8 summarizes total taxes and payments for all domestic areas. Table 9 takes into account the same payments, but considers excise taxes on domestic sugar only, and Table 10 shows payments to beet growers and excise taxes on domestic beet sugar only.

Grower Requirements

In order to be eligible for the benefit payments outlined above farmers had to meet certain conditions. In this respect the Act of 1937 was far more strict than that of 1934. For example, the law spelled out restrictions regarding child labor. It prohibited child labor under 14 years of age and limited the workday to eight hours for children under 16 years of age. It also authorized the Secretary of Agriculture to set minimum wages for farm labor after investigations and public hearings. The 1934 Act, we recall, provided that the Secretary could only mediate wages in the event of a dispute, while that of 1937 authorized the Secretary to set the minimum rate on his own volition. Furthermore, the latter Act required the Secretary to

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[28]The law became effective on September 1, 1937, and hence with only four months of tax collections the Treasury lost money during that year.

TABLE 8

CONDITIONAL PAYMENTS MADE TO FARMERS, AND EXCISE AND IMPORT TAX COLLECTIONS UNDER THE SUGAR ACT OF 1937

	1937	1938	1939	1940	1941
U. S. Beet Farmers	$17,136,667	$22,073,345	$21,371,789	$23,262,539	$18,991,929
Mainland Cane Farmers	5,355,774	6,311,779	5,448,583	3,887,750	4,561,504
Puerto Rico	9,502,122	8,871,084	10,617,743	9,566,735	11,231,588
Hawaii	4,174,800	8,594,431	8,975,615	8,851,542	8,594,533
Virgin Islands[a]					
Total payments	36,169,363	45,850,639	46,413,730	45,568,566	43,379,554
Total Excise and Import Tax Collections[b]	Not available	71,860,620	72,639,560	68,936,720	78,500,520
Net Income to Treasury	Not available	26,009,981	26,225,830	23,368,154	35,120,966

[a]No payments made before 1942.

[b]Taxes are on the sugar produced in the year shown even though some taxes are collected in the following year.

Source: United States Department of Agriculture.

TABLE 8 - Continued

1942	1943	1944	1945	1946	1947	Total
$29,770,909	$17,602,914	$18,632,477	$22,911,916	$27,735,230	$32,259,930	$251,749,645
6,955,080	7,392,119	6,646,061	6,839,763	6,536,104	6,260,340	66,194,857
13,122,990	12,214,038	13,061,033	13,271,249	15,060,552	15,492,292	134,011,426
8,147,494	8,250,816	8,210,656	8,065,079	6,574,448	8,109,124	86,548,538
26,320	56,362	41,380	56,027	66,758	43,684	290,531
58,022,793	45,516,249	46,591,607	51,144,034	55,973,092	62,165,370	536,794,997
59,584,410	60,846,890	70,666,440	63,810,460	60,429,680	82,229,730	689,505,030
1,561,617	15,330,641	24,074,833	12,666,426	4,456,588	20,064,360	152,710,033

TABLE 9

CONDITIONAL PAYMENTS MADE TO FARMERS, AND EXCISE TAX COLLECTIONS ON DOMESTIC SUGAR UNDER THE SUGAR ACT OF 1937

Year	For Beet Acreage Abandoned	For Beet Crop Deficiency	For Beets Marketed	Total Beet Payments
1937	$ 223,040	$ 640,899	$ 16,272,728	$ 17,136,667
1938	265,919	472,216	21,335,210	22,073,345
1939	379,338	546,682	20,445,769	21,371,789
1940	308,888	478,028	22,475,623	23,262,539
1941	206,683	225,329	18,559,917	18,991,929
1942	561,388	1,486,952	27,722,569	29,770,909
1943	466,384	779,993	16,356,537	17,602,914
1944	541,403	664,067	17,427,007	18,632,477
1945	409,073	895,374	21,607,469	22,911,916
1946	625,373	724,273	26,385,584	27,735,230
1947	538,857	792,059	30,929,014	32,259,930
Total	$4,526,346	$7,705,872	$239,517,427	$251,749,645

[a]Taxes are on the sugar produced in the year shown even though some taxes are collected in the following year.

Source: United States Department of Agriculture.

TABLE 9 - Continued

Total Payments to Domestic Cane Growers, (Inc. Insular Area)	Total Payments Beet and Cane	Excise Tax on Domestic Sugar Only[a]	Net Cost to Treasury
$ 19,032,696	$ 36,169,363	Not Available	Not Available
23,777,294	45,850,639	$ 41,890,620	$ 3,960,019
25,041,941	46,413,730	42,919,560	3,494,170
22,306,027	45,568,566	41,456,720	4,111,846
24,387,625	43,379,554	41,050,520	2,329,034
28,251,884	58,022,793	41,004,410	17,018,383
27,913,335	45,416,249	31,136,890	14,379,359
27,959,130	46,591,607	33,426,440	13,165,167
28,232,118	51,144,034	34,910,460	16,233,574
28,237,862	55,973,092	37,149,680	18,823,412
29,905,440	62,165,370	42,349,730	19,815,640
$285,045,352	$536,794,997	$387,295,030	$149,499,967

TABLE 10

CONDITIONAL PAYMENTS MADE TO UNITED STATES BEET FARMERS, AND EXCISE TAX COLLECTIONS ON DOMESTIC BEET SUGAR UNDER THE SUGAR ACT OF 1937

Year	Total Beet Payments	Tax Collections[a] (Beet Sugar Only)	Net Cost to Treasury
1937	$ 17,136,667	Not Available	Not Available
1938	22,073,345	$ 18,020,000	$ 4,053,345
1939	21,371,789	17,600,000	3,771,789
1940	23,262,539	18,940,000	4,322,539
1941	18,991,929	15,840,000	3,151,929
1942	29,770,909	17,250,000	12,520,909
1943	17,602,914	9,980,000	7,622,914
1944	18,632,477	10,560,000	8,072,477
1945	22,911,916	12,800,000	10,111,916
1946	27,735,230	15,690,000	12,045,230
1947	32,259,930	18,670,000	13,589,930
Total	$251,749,645	$155,350,000	$96,399,645

[a]Taxes are on the sugar produced in the year shown even though some taxes are collected in the following year.

Source: United States Department of Agriculture.

establish soil conservation practices for farmers to follow. The new law also stipulated that in order to qualify for government payments each farmer was not to market a quota in excess of his share of beets or cane.

Extensions and Amendments to the Act of 1937

The Act of 1937 was extended several times during the war years and amended slightly in late 1941. Although it was to expire in June, 1941, it was extended for a year in October, 1940. Then, on December 26, 1941 Congress again extended the Act, with slight amendments, this time through 1944. On June 20, 1944, it was once more extended through 1946, and on July 27, 1946, through 1947. Finally, on August 8, 1947 the Sugar Act of 1948 was passed to become effective on January 1, 1948.

The only important change in the 1937 sugar legislation concerned conditional payments for farmers. The 1941 Amendment provided that the base rate for beets and cane marketed be raised from $.60 to $.80 per hundred pounds of sugar raw value, and the system of deductions from this base rate for the larger producers was changed to the schedule shown in Table 11. The 1941 Amendment also extended the conditional payments to the Virgin Islands. The legislation then remained unchanged until 1948, although during the war price controls were added, quota provisions were invalidated, and a special subsidy was developed to raise domestic sugar production. On April 12, 1942 the

President suspended all quotas by proclamation. This suspension was not lifted until January 1, 1948 when the new act became effective.

TABLE 11

SLIDING SCALE BENEFIT PAYMENTS MADE TO SUGAR BEET AND SUGAR CANE FARMERS UNDER THE 1941 AMENDMENT TO THE 1937 SUGAR ACT

The Portion of Sugar Falling Into the Following Intervals (Short Tons Raw Value)	Reduction in Base Rate Per Hundred Pounds of Such Portion	Effective Base Rate Per Hundred Pounds
Less than 350	$.00	$.80
350 to 700	.05	.75
700 to 1,000	.10	.70
1,000 to 1,500	.20	.60
1,500 to 3,000	.25	.55
3,000 to 6,000	.275	.525
6,000 to 12,000	.30	.50
12,000 to 30,000	.325	.475
More than 30,000	.50	.30

Source: Public Law No. 386, 77th Cong., 1st Sess. (September 26, 1941). "To Amend the Sugar Act of 1937."

Wartime Developments, the Act of 1948, and the 1951 Amendment

A sugar shortage existed during World War II and the immediate postwar period, and all producers were urged to increase production. The Commodity Credit Corporation even developed an additional subsidy for all domestic sugar beet and sugar cane growers in an attempt to encourage output. These payments were introduced in 1943 and made to beet growers through the processors for the last time in 1947. In spite of the CCC subsidies, sugar beet and beet sugar production in the United States declined during the war. However, production might have fallen even further without these subsidies. Evidence exists that the price of sugar was held down more severely than other prices during the war in order to encourage other crops at the expense of beets. This was particularly true after 1943 when submarine activity was no longer so severe and Cuban sugar could be obtained more easily.[29] Moreover, the CCC agreements with sugar producers carried a clause which enabled the CCC to recapture any payment it had made in the event of an OPA ceiling price increase. In 1946 the OPA ceiling price of sugar was increased and processors returned the CCC payments.

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[29]Statement by Mr. Myers, Chief of the Sugar Division, before U. S. Congress, Senate, Sugar Act Extension, Hearings before Committee on Finance, U. S. Senate, 84th Cong., 2nd Sess., on H. R. 7030, January 16 and 17, 1956. (Washington: Government Printing Office, 1956), p. 104.

Consequently, the CCC incurred no costs that year. Table 12 summarizes the special wartime payments made to beet farmers during World War II by the CCC.

TABLE 12

SPECIAL WARTIME INCENTIVE PAYMENTS MADE TO DOMESTIC BEET FARMERS BY THE CCC

Year	Payments
1943	$ 8,875,000
1944	19,395,000
1945	18,620,000
1946	----
1947	16,505,000
Total	$63,395,000

Source: U.S. Department of Agriculture

Cuba responded particularly well to the plea for greater sugar production during the war and expanded her output from 3,157,000 tons raw value in 1940 to a wartime peak of 4,738,000 tons raw value in 1944.[30] Furthermore, this sugar was made available to the United States at prices acceptable to the American price control authorities.

Minor Provisions of the 1948 Act

The 1948 Act did not substantially change the old Act with respect to the Secretary's estimates of consump-

[30]U. S. Department of Agriculture, Agricultural Statistics, 1954, (Washington: Government Printing Office, 1954), p. 76.

tion requirements. Neither did it change the excise or import taxes although it altered slightly the conditional payment provisions. For example, the soil conservation requirements were dropped, but the restraints on child labor, the minimum wage requirements, and the quota restrictions were retained. The amounts and methods of the base payments for sugar produced, established by the 1941 Amendment, were retained along with the payments for crop abandonments and deficiencies.[31]

Quota Allotments

The major changes in the 1948 Act were in the quota divisions. The Act of 1948 returned, in part, to the principle of fixed tonnage quotas embodied in the 1934 Act. Domestic sugar producing areas were given fixed quotas, while the residual of United States consumption requirements over this fixed amount was assigned, in predetermined percentages, to Cuba and to full duty countries, with Cuba receiving the "lion's share."[32] The total quota for the domestic areas was set at 4,268,000 short tons raw value. This quota and the residual to be given Cuba and full duty countries was allotted as shown in Table 13.

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[31]Public Law No. 388, 80th Cong., 1st Sess. (August 8, 1947). "The Sugar Act of 1948."

[32]Foreign countries other than Cuba and the Philippines are generally referred to as full duty countries as they pay a higher tariff under the tariff laws. See supra, p. 23.

TABLE 13

RAW SUGAR QUOTAS AS ESTABLISHED UNDER THE 1948 SUGAR ACT

Area	Quota (Short Tons Raw Value)
Domestic Beet	1,800,000
Mainland Cane	500,000
Hawaii	1,052,000
Puerto Rico	910,000
Virgin Islands	6,000
Total Domestic Quota	4,268,000
Cuba[a]	98.64 Percent of Residual U.S. Requirements
Foreign Countries Other Than Cuba and the Philippines[b] (Full Duty Countries)	1.36 Percent of Residual U.S. Requirements

[a]Section 202 of the law also provided that Cuba's quota could not be less than that made available under the 1937 Act.

[b]The Philippines have a fixed tonnage quota set under the Philippine Trade Act of 1946. See supra, p. 23. Section 211 of this Act sets the Philippines' quota at 950,000 short tons. (982,000 short tons raw value)

Source: Public Law No. 388, 80th Cong., 1st Sess. (August 8, 1947). "The Sugar Act of 1948."

In the event that a domestic area could not meet its quota the deficit was to be re-assigned elsewhere. The Secretary was to prorate an amount of sugar equal to the deficit to other domestic areas and to Cuba on the basis of the quotas then in effect. Ninety-five per cent of any deficit from the Philippine Islands, however, was

to be re-assigned to Cuba and five per cent to other foreign countries.[33]

Under the Sugar Act of 1948 the system of re-allocations was more favorable to Cuba than under the Act of 1937. This was especially true during the first few years of the Act when Philippine sugar production had not yet recovered from the wartime devastation. The Philippine deficits were assigned to Cuba in an attempt to help her readjust to the re-establishment of United States quotas under new sugar legislation.

The Secretary was authorized to allocate each area's quota to persons within those areas (or in the case of foreign areas, to importers) if the successful administration of the quota system made this intra-area allocation mandatory. These allocations were to be made in a manner that provided a "fair, efficient, and equitable distribution of such quotas...by taking into consideration the processing of sugar...on which conditional payments are made; the past marketings or importations of each person; and the ability of each person to market or import that portion of such quota or proration thereof allotted to him."[34] As under the previous Act, not much difficulty arose over allocations within the domestic areas during the early

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[33]Public Law No. 388, 80th Cong., 1st Sess. (August 8, 1947). "The Sugar Act of 1948."

[34]Ibid.

years of the 1948 Act. The quotas were more than adequate for domestic capacity and usually deficits appeared in the beet fields. As a general rule, the Secretary authorized individual quotas at whatever level had been set the previous year and in many cases the farmers were in effect told that their quota was whatever acreage they had planted. Only in recent years (since 1954) have domestic beet areas been filling their quotas. Since then they have been pressing for a new law to provide a higher domestic quota. One final point worthy of note is that the 1948 legislation did not change the direct-consumption or liquid sugar quotas from the level set by the Act in 1937.[35]

The 1951 Amendment to the Sugar Act of 1948

The Act of 1948 was to expire on December 31, 1952. Thus the problem of extension arose, and in 1951 the Act was extended to December 31, 1956 and also amended. The Amendment, however, did not become effective until January 1, 1953, and it did no more than change the quotas slightly.

The domestic quota was raised by 176,000 short tons raw value, bringing the total to 4,444,000 tons. This entire increase was divided between Puerto Rico and the Virgin

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[35]See supra, pp. 41 and 42, for these direct-consumption and liquid sugar provisions under the 1937 Act. The direct-consumption sugar quota for the Philippines was reduced to 56,000 tons not by the 1948 legislation, but by Section 211 of the Philippine Trade Act of 1946. These 56,000 tons, however, are refined value. The United States Department of Agriculture has determined that these 56,000 tons of refined sugar are to be equivalent to 59,220 short tons of raw value, which is the present Philippine direct-consumption sugar quota.

Islands; their quotas were increased by 170,000 tons and 6,000 tons, respectively.[36] The amount above 4,444,000 tons that was to be divided between Cuba and full duty countries was also changed. Cuba was given 96 per cent of this amount and full duty countries four per cent rather than 98.64 per cent and 1.36 per cent, respectively, as before.[37] Any Philippine deficit was also to be divided between Cuba and full duty countries on the same 96 and four per cent basis.

In 1951 the Department of Agriculture believed that the increase in the domestic demand for sugar due to population growth should be shared, in part, by the full duty countries, by Puerto Rico, and by the Virgin Islands. Hence, their quotas were increased. A further reason given for increasing Puerto Rico's share was to relieve the pressure of "surplus" sugar that was accumulating there.[38]

Although the percentage residual that Cuba received was lessened somewhat, she once more obtained a minimum below which her quota could not go. In reality Cuba received two floors: one, a percentage of total United States consumption in the event that consumption fell to a low level, and another, a fixed tonnage amount if United States con-

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[36]Public Law No. 140, 82nd Cong., 1st Sess. (September 1, 1951.) "To Amend and Extend the Sugar Act of 1948."

[37]Ibid.

[38]U. S. Department of Agriculture, Sugar Report No. 11, (Washington: Sugar Division, June 27, 1951), p. 3.

sumption were higher. The Amendment provided that, "notwithstanding the other provisions..., the minimum quota established for Cuba, including increases resulting from deficits...shall not be less than the following:

"(1) 28.6 per centum of the amount of sugar determined under section 201 when such amount is seven million four hundred thousand short tons or less; and

"(2) two million one hundred and sixteen thousand short tons, when the amount of sugar determined under section 201 is more than seven million four hundred thousand short tons."[39] United States consumption, however, has never fallen to this level since 1951, and hence this floor has never become important. Nevertheless it does indicate Congress' cognizance of the importance of the American sugar market to the Cuban economy.

The 1951 Amendment spelled out the quotas on direct-consumption sugar for foreign countries, other than Cuba and the Philippines, for the first time but did not change them for any other area. The Amendment provided that these full duty countries could fill their quotas by sending "direct-consumption sugar only to the extent of 1.36 per centum of the amount of sugar determined pursuant to Section 201 less

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[39] Public Law No. 140, 82nd Cong., 1st Sess. (September 1, 1951). "To Amend and Extend the Sugar Act of 1948."

the sum of the quotas established in Subsections (a) and (b) of Section 202."[40] Since Section 201 authorized the Secretary of Agriculture to estimate total United States consumption requirements, and Section 202 allocated fixed quotas to domestic producers, this in effect meant that full duty countries could fill 1.36 per cent of the total United States residual quota allotted to them by sending direct-consumption sugar. The other 2.64 per cent of this residual had to be raw value sugar. However, the Amendment had a further stipulation that each such full duty country "shall be permitted to enter an amount of direct-consumption sugar not less than the average amount entered by it during the years 1948, 1949 and 1950."[41]

The liquid sugar quotas were changed in only one respect. A third foreign country was added to the list of those permitted to market liquid sugar in the United States. The British West Indies were given a quota of 300,000 wine gallons of 72 per cent sugar content.

Since the Sugar Act of 1948 and the 1951 Amendment to it did not change excise and import taxes, or the method of making program payments, the Treasury has obtained a net income from this Act in every year since its enactment. However, if we consider only the taxes collected on domestic sugar, the Treasury's income becomes a deficit. Tables 14,

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[40] Ibid.

[41] Ibid.

15, and 16 summarize these tax collections, benefit payments, and net income and deficit to the Treasury from 1948 to 1954.

In this chapter we have examined the United States sugar policy from the Jones-Costigan Act of 1934, when quotas were first developed, through the Sugar Act of 1948. The Act of 1948 remained unchanged after its amendment in 1951 until May, 1956. The law was then altered once more, and these changes were quite important and somewhat controversial. In the next chapter we will examine the law as it stands at present, the reasons advanced for its change, and some of its controversial aspects.

TABLE 14

CONDITIONAL PAYMENTS MADE TO FARMERS, AND EXCISE AND IMPORT TAX COLLECTIONS FROM 1948 TO 1954 UNDER THE SUGAR ACT OF 1948

	1948	1949	1950	1951
U.S. Beet Farmers	$23,206,938	$26,581,945	$33,744,012	$25,899,661
U.S. Mainland Cane Farmers	7,202,755	7,087,424	7,826,663	6,467,908
Puerto Rico	17,667,677	17,531,629	17,148,914	18,928,168
Hawaii	7,628,611	8,437,619	8,471,294	9,143,041
Virgin Islands	64,142	65,586	138,510	97,776
Total Payments	55,770,123	59,704,203	67,329,393	60,536,554
Total Excise and Import Tax Collections[a]	71,575,310	80,686,090	85,888,530	80,005,680
Net Income to Treasury	15,805,187	20,981,887	18,559,137	19,469,126

[a]Taxes are on the sugar produced in the year shown even though some taxes are collected in the following year.

Source: United States Department of Agriculture.

TABLE 14 - Continued

1952	1953	1954	Total
$24,735,741	$29,974,245	$33,224,656	$197,367,198
7,977,490	8,607,186	8,051,294	53,220,720
16,960,951	16,698,919	16,323,658	121,259,916
9,398,138	10,155,590	9,932,469	63,166,762
145,120	170,844	127,750	809,728
59,217,440	65,606,784	67,659,827	435,824,324
82,307,140	87,005,230	86,592,010	574,059,990
23,089,700	21,398,446	18,932,183	138,235,666

TABLE 15

CONDITIONAL PAYMENTS MADE TO FARMERS, AND EXCISE TAX COLLECTIONS ON DOMESTIC SUGAR FROM 1948 TO 1954 UNDER THE SUGAR ACT OF 1948

Year	For Beet Acreage Abandoned	For Beet Crop Deficiency	For Beets Marketed	Total Beet Payments
1948	$ 730,856	$ 680,127	$ 21,795,955	$ 23,206,938
1949	519,624	218,469	25,843,852	26,581,945
1950	553,937	556,183	32,633,892	33,744,012
1951	471,747	411,124	25,016,790	25,899,661
1952	317,193	314,139	24,104,409	24,735,741
1953	298,981	234,540	29,440,724	29,974,245
1954	783,191	585,642	31,855,823	33,224,656
Total	$3,675,529	$3,000,224	$190,691,445	$197,367,198

[a]Taxes are on the sugar produced in the year shown even though some taxes are collected in the following year.

Source: United States Department of Agriculture.

TABLE 15 - Continued

Total Payments To Domestic Cane Growers (Inc. Insular Areas)	Total Payments Beet and Cane	Excise Tax on Domestic Sugar Only[a]	Net Cost To Treasury
$ 32,563,185	$ 55,770,123	$ 39,165,310	$ 16,604,813
33,122,258	59,704,203	43,886,090	15,818,113
33,585,381	67,329,393	47,898,530	19,430,863
34,636,893	60,536,554	43,355,680	17,180,874
34,481,699	59,217,440	43,377,140	15,840,300
35,632,539	65,606,784	48,195,230	17,411,554
34,435,171	67,659,827	48,603,010	19,057,817
$238,457,126	$435,824,324	$314,479,990	$121,344,334

TABLE 16

CONDITIONAL PAYMENTS MADE TO UNITED STATES BEET FARMERS, AND EXCISE TAX COLLECTIONS ON DOMESTIC BEET SUGAR FROM 1948 TO 1954 UNDER THE SUGAR ACT OF 1948

Year	Total Beet Payments	Tax Collections[a] (Beet Sugar Only)	Net Cost to Treasury
1948	$ 23,206,938	$ 13,120,000	$10,086,938
1949	26,581,945	16,080,000	10,501,945
1950	33,744,012	20,150,000	13,594,012
1951	25,899,661	15,410,000	10,489,661
1952	24,735,741	15,190,000	9,545,741
1953	29,974,245	18,730,000	11,244,245
1954	33,224,656	19,980,000	13,244,656
Total	$197,367,198	$118,660,000	$78,707,198

[a]Taxes are on the sugar produced in the year shown even though some taxes are collected in the following year.

Source: United States Department of Agriculture.

CHAPTER IV

THE PRESENT LAW: THE 1956 AMENDMENT TO THE SUGAR ACT OF 1948

In late 1947 and 1948 it was believed that alternative world supplies would be available soon, and hence the world demand for Cuban sugar would decline. Therefore, it was decided that the United States had a moral obligation to assist Cuba during the possible period of retrenchment that loomed ahead on the world sugar market. This assistance was granted by giving Cuba over 98 per cent of the total growth in the United States demand for sugar.[1] It was hoped that this would offset, at least partially, the curtailment in the world demand for Cuban sugar and thus enable Cuba to cut back her sugar production more slowly. Most domestic sugar interests expressed no opposition to this Cuban aid in 1948 for they were not filling their quota at that time.[2] Indeed of all the domestic areas, only Puerto Rico expressed dissatisfaction with the

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[1]See supra, p. 55.

[2]See statement by Mr. Frank A. Kemp, Chairman, Executive Committee American Sugar Beet Industry Policy Committee Before the House Committee on Agriculture. U.S. Congress, House, Sugar Act of 1948, Hearings Before the Committee on Agriculture, U. S. House of Representatives, 80th Cong., 1st. Sess., on H. R. 4075, June 21, 25, and 27, 1947. (Washington: Government Printing Office, 1947), p. 30.

quotas provided by the Act of 1948.[3] She requested that her quota be increased by 140,000 short tons, raw value, but this was not granted.

Cuba did not have to cut back her sugar output for a number of years after the Act of 1948 was passed, however, because the world market for sugar, together with Cuba's growing United States quota, was able to sustain the wartime level of production. When the 1951 Extension and Amendment was passed, Cuba's share in the United States growth was cut, but only from 98.64 to 96 per cent. By this time inflationary forces existed in the world sugar market and no one expected that a cutback in the sugar industry would be necessary.

With the exception of Puerto Rico, domestic producers again did not press for a larger quota in 1951.[4] This time, however, representatives of the domestic industry emphasized the favorable treatment granted Cuba in 1948 and added that this treatment should not be considered as establishing

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[3]See statement by Pedro Nido, Vice President, Puerto Rico Farm Bureau, and President, Sugar Cane Growers Section, before the House Committee on Agriculture. U. S. Congress, House, Sugar Act of 1948, Hearings Before the Committee on Agriculture, U. S. House of Representatives, 80th Cong., 1st Sess., on H.R. 4075, June 21, 25, and 27, 1947. (Washington: Government Printing Office, 1947), p. 113.

[4]Puerto Rico asked for and received a quota increase in 1951. See supra, p. 58.

a new sugar policy under the 1951 Amendment.[5] The House Committee on Agriculture in 1951 also recalled the favorable nature of the 1948 Cuban quota and pointed out that, "the Sugar Act of 1948 was designed to meet the problems of the temporary postwar transition period and was not to be regarded as the establishment of long-term national sugar policy."[6] The 1951 Amendment did not go into effect until 1953, however, and by that time United States domestic producers were beginning to fill their quotas. Thus pressure developed soon after 1953 to revise the quotas.

The Domestic Industry's Proposals

This pressure to raise domestic sugar quotas stemmed, in part, from the tighter acreage limitations necessitated by greater yield per acre and greater sugar content of the beets. This tighter control came about at a time when some farmers, especially in the Far West, actually wanted to expand beet acreage because the cost of production had declined in recent years.

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[5]See Statement by Mr. Frank A. Kemp, Executive Committee Chairman, the American Sugar Beet Policy Committee before the House Committee on Agriculture. U. S. Congress, House, Extension of Sugar Act of 1948, Hearings Before Committee on Agriculture, U. S. House of Representatives, 82nd Cong., 1st Sess., on H.R. 4521, June 27, 28, 29, July 11, 26, 27, and 31, 1951. (Washington: Government Printing Office, 1951), p. 145.

[6]U. S. Congress, House, Committee on Agriculture, Amending and Extending the Sugar Act of 1948, House Report 810, to accompany H.R. 4521, 82nd Cong., 1st Sess. (Washington: Government Printing Office, 1951), p. 10.

Representatives of the domestic industry maintained that American farmers have the right as American citizens to share in the growth of their country's demand for sugar. In addition, these spokesmen argued that because foreign suppliers had received most of the growth since 1948, it should now be given to American producers.[7]

The beet acreage allotments to the various United States beet regions are made mostly on a historical basis and thus tend to favor the older established Mid-Western and Mountain beet regions. Until recently this acreage allotment was unimportant since there were nearly always unused quotas in Mountain and Mid-Western areas that were given to California and other West Coast farmers, although only on an annual basis.[8] In recent years no unused Eastern quotas have become available, and in 1955 and 1956 even some Eastern farmers wanted to expand acreage. But in 1954 and 1955 acreage was actually cut back, especially in the West. When returning Korean veterans wanted to become beet farmers on newly opened irrigated land, political pressure for quota changes mounted still further.

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[7]U. S. Congress, House, Amendments to Sugar Act of 1948, Hearings Before the Committee on Agriculture, U.S. House of Representatives, 84th Cong., 1st. Sess., on H.R. 5406, June 22,23, 24, 25, 27, 28, 29, July 6, 7, 14 and 15, 1955. (Washington: Government Printing Office, 1955), p. 171.

[8]It was under such an arrangement that beet acreage in California increased tremendously in 1953 and replaced the cotton acreage that was taken out because of Government action. This helped to fill the domestic beet sugar quota earlier than otherwise would have been the case.

An amendment to the sugar legislation was introduced requiring the Secretary of Agriculture to set aside a portion of any domestic quota increase for new land on reclamation projects.[9] This amendment, however, was not accepted.

The pressure for larger domestic quotas resulted in several bills to that effect being introduced in Congress. These included the Ellender Bill (S. 1635); the Hope Bill (H.R. 5406); the Bently Bill (H.R. 5466); the Magnuson Bill (H.R. 5481); and Cooley Bill (H.R. 7030). All these proposals sought to give the domestic sugar industry a percentage share of the growth of the United States consumption of sugar which was estimated to be 135,000 tons per year.[10] The Magnuson Bill and the Bently Bill died in Committee. However, the House held hearings on the Hope Bill and the Cooley Bill and passed the latter on July 30, 1955. The Senate did not have time to act on any bill in 1955, but it recognized that domestic sugar stocks were piling up. Thus in late 1955 the Senate adopted Resolution 147 which authorized the Department of Agriculture to relieve the situation by purchasing 100,000 tons of over-quota sugar. Sugar purchased under this program was used in the foreign mutual security program.[11] A modified ver-

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[9]U.S. Congress, Senate, Sugar Act Extension, Hearings Before the Committee on Finance, U. S. Senate, 84th Cong., 2d Sess., on H.R. 7030, January 16 and 17, 1956. (Washington: Government Printing Office, 1956), p. 374.

[10]U. S. Department of Agriculture, Sugar Report No. 49, (Washington: Sugar Division, May, 1956), p. 7.

[11]The Wall Street Journal, November 1, 1955, p. 14, Col. 2.

sion of the Cooley Bill, which changed the Cuban quota, was passed by the Senate on May 17, 1956 and signed by President Eisenhower on May 29.

Foreign Reactions

When it became apparent that Congress intended to change the Sugar Legislation, foreign spokesmen presented their views. Some full duty countries made strong appeals for greater quota allotments, and of these, Peru, the Dominican Republic, and Mexico were the most successful. No full duty country took a position with respect to the share of the total United States requirements allotted domestic producers, but rather all expressed the desire for a modest increase out of whatever residual amount Congress designated could be filled by foreign suppliers.[12] This meant, of course, that full duty quota increases would have to come out of sugar otherwise supplied by Cuba. The Department of State recommended that these full duty countries be given a slightly larger quota based upon the amount of sugar they shipped to the United States in the base period 1951 through 1954. Mexico was opposed to this historical tie-in on the ground of equity, whereas Peru favored it

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[12]U. S. Congress, House, Amendments to Sugar Act of 1948, Hearings Before the Committee on Agriculture, U. S. House of Representatives, 84th Cong., 1st Sess., on H.R. 5406, June 22, 23, 24, 25, 27, 28, 29, July 6, 7, 14 and 15, 1955. (Washington: Government Printing Office, 1955), p. 258.

for the same reason.[13]

Cuban spokesmen also offered their views on the legislation. Since the 1951 Amendment did not expire until December 31, 1956, Cuba insisted that the United States was morally obliged not to change the quota until that time. Cuban representatives pointed out that sugar cane production was a two-year operation and activities for the 1955 and 1956 crop had already been undertaken. This fact explains the exceedingly critical attitude toward the Ellender and Hope Bills which would have made the new quotas retroactive for 1955, two full years before the then existing law was to expire.[14] Cuba won the battle of 1955, and the Cooley Bill, passed in the house that year, was not retroactive.

In 1956 efforts were made once more to pass sugar legislation through the Senate, but this time it was the more moderate version, from Cuba's point of view, of the Cooley Bill referred to above. Thereafter Cuba became much less critical of the domestic areas' drive for greater markets, but she continued to oppose the full duty countries in their attempt to gain larger quotas. Cuba believed she was being unfairly treated in view of her past co-operation with the United States, and she charged that some full duty

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[13]U.S. Congress, Senate, Sugar Act Extension, Hearings Before Committee on Finance, U.S. Senate, 84th Cong., 2d Sess., on H.R. 7030, January 16 and 17, 1956. (Washington: Government Printing Office, 1956), pp. 189 and 383.

[14]See Statement of Laurence A. Crosby, President of United States Cuban Sugar Council, "Sugar Legislation in the

countries which had not co-operated in World War II were now being rewarded. Peru was singled out for particular criticism and charged with having never co-operated with anyone, "not even by mistake."[15]

Provisions of the 1956 Amendment

Minor Provisions

The 1956 legislation extended the Sugar Law through December 31, 1960 and also amended it somewhat. The Amendment, effective as of January 1, 1956, was partially retroactive since it became law on May 29, 1956.

The Amendment sought to solve two administrative and technical problems that had arisen and caused the Sugar Division some difficulty in administering the Act. The first problem concerned raw sugar. Since 1920 the average purity of raw sugar, by the polarization test, has increased from 95 to over 97 degrees.[16] This increase has taken place mainly because of technological developments. In recent years a small quantity of raw sugar has almost reached 100 per cent purity and thus more closely approaches refined

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(Footnote 14 continued) United States Congress," Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book) (Havana: Editora Mercantil Cubana, 1955), p. 41.

[15]Statement by Luis G. Mendoza, Manager, Luis Mendoza y Cia, "Enfrentemonos a la Realidad," (Let's Face the Facts), Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book) (Havana: Editora Mercantil Cubana, 1955), p. 44.

[16]U. S. Department of Agriculture, Sugar Report No. 25, (Washington: Sugar Division, May, 1954), p. 4.

or direct-consumption sugar. The problem of classification arose because of separate raw and direct-consumption sugar quotas for foreign and offshore domestic areas. The fact that the tariff is slightly higher on direct-consumption sugar complicated matters. Congress solved the problem, however, by redefining raw and direct-consumption sugar more precisely and also by authorizing the Secretary of Agriculture to determine, when necessary, "whether sugars of specific qualities are raw sugar...or direct-consumption sugar."[17]

The second problem involved liquid sugar. This sugar also may be of refined or raw quality, but the wording of the Act of 1948 was such that the Department believed that liquid sugar was excluded from the literal meaning of direct-consumption sugar.[18] Therefore, a court case might result in the entire quota of an offshore domestic area being filled with liquid sugar of refined quality. The Department of Agriculture had succeeded in keeping direct-consumption sugar imports within the quota by administrative action, but it requested and received more precise wording in the 1956 Amendment.[19]

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[17] Public Law No. 545, 84th Cong., 2nd Sess. (May 29, 1956). "To Amend and Extend the Sugar Act of 1948."

[18] U. S. Department of Agriculture, Sugar Report No. 38, (Washington: Sugar Division, June, 1955), p. 7.

[19] Public Law No. 545, 84th Cong., 2nd Sess. (May 29, 1956). "To Amend and Extend the Sugar Act of 1948."

The new law also provided for penalties, under certain conditions, for countries that failed to fill their quotas. Any major sugar supplying country that has a deficit of more than 10 per cent in any year during which the world price of sugar exceeds the domestic price is to receive a quota reduction in the future equal to the amount of the arrears. This penalty is not to be enforced, however, if the Secretary of Agriculture is satisfied that the failure to supply the quota was due to crop disaster or force majeure or that the reduction would be contrary to the objectives of the Act.[20] This provision appears to be an attempt to insulate further the domestic sugar industry from fluctuations in the world price by preventing the decline of sugar imports during world sugar inflations.

The Amendment added a new section authorizing the Secretary of Agriculture to limit imports of sugar from countries not members of the International Sugar Agreement, as provided by Article 7 of the ISA.[21]

The final two minor revisions of the Act had to do with allocations of proportional shares to domestic beet and cane farmers. In making acreage allocations the Secretary was to consider, insofar as possible, the interests

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[20] Ibid.

[21] Ibid. Article 7 of the ISA provides that member countries will not permit imports, during any year, from non-participating countries, as a group, to exceed the amount imported from such countries in any of the three years 1951, 1952 and 1953.

of producers whose past production had been adversely affected by acts of God. Furthermore, in the case of Puerto Rico, the Secretary was authorized to transfer cane acreage from one area to another in the interests of conservation if both plots of land were owned by the same individual.

The above discussion summarizes the minor changes of the 1956 legislation. The remaining changes are of a major nature, have to do with quotas, and will be discussed more fully below.

Quota Allotments

The main objective of the 1956 Amendment was to open the way for domestic producers to participate in the growth of the United States sugar market. The domestic areas retained their fixed quota amounting to 4,444,000 short tons, raw value, and in addition, received 55 per cent of all United States requirements above 8,350,000 short tons.[22] The law specifically allocated this additional 55 per cent as follows: 51.5 per cent of the first 165,000 short tons was apportioned to the domestic beet area and 48.5 per cent to the mainland cane area of Florida and Louisiana. The next 20,000 tons and 3,000 tons made available from the 55 per cent in excess of 8,350,000 short

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[22]Public Law No. 545, 84th Cong., 2nd Sess. (May 29, 1956). "To Amend and Extend the Sugar Act of 1948."

tons were assigned to Puerto Rico and the Virgin Islands, respectively. Increases in excess of these 188,000 short tons were apportioned among all domestic areas on the basis of quotas then in effect.

Foreign countries' quotas were also changed and once more, at the expense of Cuba. Before the 1956 Amendment, Cuba and full duty countries, we recall, were granted 96 per cent and four per cent, respectively, of all United States sugar requirements in excess of 4,444,000 short tons.[23] These proportional percentages were to remain in effect for United States needs between 4,444,000 and 8,350,000 tons although the four per cent division for full duty countries was changed slightly to become effective after December, 1956.[24]

The 1956 Amendment assigned 45 per cent of all United States sugar needs in excess of 8,350,000 tons to foreign countries other than the Republic of the Philippines.[25] Congress divided this 45 per cent between Cuba, Peru, The Dominican Republic, Mexico, and other foreign countries. It was this allocation that gave Mexico, Peru and the Dominican Republic a share of the market that under the old

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[23]See supra, p. 59.

[24]Public Law No. 545, 84th Cong., 2nd Sess. (May 29, 1956). "To Amend and Extend the Sugar Act of 1948."

[25]The Philippines' quota, we recall, is set by Sec. 211 of the Philippine Trade Act of 1946 and was not changed by the 1956 Amendment to the Sugar Act.

law would have gone to Cuba. Table 17 shows the allotment under the 1956 Amendment.

TABLE 17

FOREIGN PERCENTAGE QUOTAS OF RESIDUAL UNITED STATES NEEDS IN EXCESS OF 8,350,000 SHORT TONS RAW VALUE

Country	Quota (Short Tons Raw Value)	
	Percent of Total U.S. Quota Over 8,350,000 Tons	Percent of Quota Over 8,350,000 Tons Allocated to Foreign Areas
Cuba	29.59	65.76
Peru	4.33	9.62
Dominican Republic	4.95	11.00
Mexico	5.10	11.33
Other Countries	1.03	2.29
Total	45.00	100.00

Source: Public Law No. 545, 84th Cong., 2nd Sess. (May 29, 1956). "To Amend and Extend the Sugar Act of 1948."

The 1.03 per cent allocated to other countries was apportioned to those other countries that had supplied at least 1,000 tons during 1953 and 1954 on the basis of the average amount they had supplied during the years 1951, 1952, 1953, and 1954. The new law also changed slightly the proration of possible deficits for that portion of

sugar in excess of 8,350,000 tons allotted domestic regions.[26] The Secretary is now required to prorate these deficits among other domestic areas on the basis of quotas in effect, or, if this were impossible, to other domestic areas capable of filling the deficits. Such deficits are to be allotted to Cuba only if no domestic area can be found that is able to fill them.[27]

Direct-consumption sugar quotas for Hawaii and Puerto Rico were increased by the same proportion as their raw sugar quotas. The Amendment contained no changes in regard to liquid sugar quotas.

The new Amendment has resulted in a sharp reduction in Cuba's share of the future growth of the United States market. The major beneficiaries of this loss on Cuba's part were the mainland cane and beet producers, although the three chief full duty countries of Mexico, Peru, and the Dominican Republic also received increased quotas. The quotas of the mainland producers were increased even relative to the other domestic areas. Since we know the allocations under the law and also the United States consumption requirements, we are able to calculate the tonnage quotas of the various areas. Table 18 summarizes these tonnage calculations over the next five years.

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[26]The method of re-allocating deficits arising out of the first 8,350,000 tons was not changed. See supra, p. 56.

[27]Public Law No. 545, 84th Cong., 2nd Sess. (May 29, 1956). "To Amend and Extend the Sugar Act of 1948."

TABLE 18

AREA QUOTAS FROM 1956 THROUGH 1960 UNDER THE 1956 AMENDMENT TO THE SUGAR ACT OF 1948 (SHORT TONS RAW VALUE)

	1956	1957	1958	1959	1960
Assumed Requirements[a]	8,535,000	8,670,000	8,805,000	8,940,000	9,075,000
Total Domestic Areas	4,545,750	4,620,000	4,694,250	4,768,500	4,842,750
Continental Beet	1,852,401	1,884,975	1,910,354	1,940,626	1,970,897
Continental Cane	549,349	580,025	587,862	597,210	606,558
Hawaii	1,052,000	1,052,000	1,066,187	1,083,110	1,100,030
Puerto Rico	1,080,000	1,091,000	1,114,827	1,132,514	1,150,200
Virgin Islands	12,000	12,000	15,020	15,040	15,065
Total Foreign Areas	3,989,250	4,050,000	4,110,750	4,171,500	4,232,250
Philippines	980,000	980,000	980,000	980,000	980,000
Total Cuba and Full Duty Countries	3,009,250	3,070,000	2,130,750	3,191,500	3,252,250
Cuba	2,888,880	2,093,648	2,943,594	2,983,541	3,023,488
Full Duty Countries	120,370	166,352	187,156	207,959	228,762
Peru	56,224	63,918	69,764	75,609	81,454
Mexico	12,394	27,579	34,464	41,349	48,234
Dominican Republic	29,892	45,321	52,003	58,686	65,368
Other Full Duty Countries	21,860	29,534	30,925	32,315	33,706

[a]Source: United States Department of Agriculture, Sugar Report No. 49, (Washington: Sugar Division, May 1956), p. 7. The Department believes that consumption requirements will increase by 135,000 short tons, raw value, per year.

In the next chapter we will analyze the results of the United States sugar policy since 1934, and what impact the new Amendment might have.

CHAPTER V

THE EFFECTS OF THE UNITED STATES SUGAR POLICY SINCE 1934

Impact of the United States Policy Upon Sugar Prices

Since 1934 a system of quotas has replaced the tariff as a protective device for domestic sugar producers. The Smoot-Hawley Tariff on sugar has been progressively lowered by Presidential Proclamation and Reciprocal Trade Treaties until today it is about one-half cent per pound. This tariff is essentially a nuisance tariff because, taken alone, it cannot stop imports of sugar and it provides very little revenue. Even in the mid-1930's when this tariff was higher, more foreign sugar could have scaled the tariff walls than the quotas allowed. The quota has also insulated the United States market from the world market, and in this way maintained two prices.

Price Determination in the United States Market

The Secretary of Agriculture's estimate of United States yearly consumption requirements, which becomes the overall quota, is allocated to the various sugar producing areas to assure orderly marketing. This quota fixes the sugar supply in the United States and helps to determine the price. The Secretary is required by law to set this supply at a level to provide for an "equitable" price of

sugar.[1] This initial determination is made each fall for the ensuing calendar year and is revised from time to time during the year if necessary. The result of this overall sugar quota has been to stabilize, to a considerable extent, the price of sugar in the American market. The total United States quota has always been filled, and hence the Secretary has retained control over the price since 1934.[2]

Fluctuations, of course, occur within the range of stability achieved by the Department of Agriculture. These fluctuations, however, have all been small except in late 1950 and early 1951 when a speculative demand, due to the Korean War, drove sugar prices up sharply for a few months. Generally, the price tends to rise moderately during the second and third quarters of the year and to decline slightly during the winter and early spring. The rise is a reflection of greater storage costs that are passed on to the consumer, since domestic beet sugar arrives on the market in late winter and the cane sugar from Cuba in early spring.

The type of sale in the sugar market may also have a slight impact upon the price of sugar. For example, a small amount of sugar is shipped to New York and other refining centers before it is sold. Under such an arrangement

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[1]See supra, p. 37.

[2]Except during and immediately following World War II, when quotas were suspended, sugar was rationed, and the Office of Price Administration controlled the price of sugar.

the closer the ship comes to port the more concerned the owners become about the sale, and the easier it therefore becomes for buyers to drive down the price a few points. However, since such shipments are the exception rather than the rule, this factor has only a moderate influence on price.

If the Secretary of Agriculture changes the overall quota during the course of the year, this change will influence the supply and hence the price of sugar. Even the possibility that the Secretary may alter the overall quota creates uncertainty on the sugar exchange and sets up expectations as to future supply conditions, which may alter the speculative demand for sugar and, consequently, the price.

Sometimes reallocations of sugar quotas from an area showing a deficit to other areas will affect sugar prices. If the deficit is reallocated to an area closer to the major sugar consuming regions, the lower transportation and marketing costs may result in reducing prices. In late 1953, for example, the Department of Agriculture reallocated an 80,000 ton beet sugar deficit, and 64,000 tons of this deficit were reallocated to areas supplying the eastern United States. Although even after this reallocation the quota balances for that area were considerably less than the balances at the same time in 1952, the price on the sugar exchange dropped 29 points in the following week. This drop was attributed by the Department to the reallo-

cation.[3]

The Department of Agriculture is, of course, aware that its activities in changing and reallocating quotas will affect the price of sugar. Since it wishes to prevent substantial fluctuations, it deliberately changes the determinations and reallocates deficits in a manner to offset changes in short run demand and in this way achieves greater price stability. In 1950, for example, after the Korean War began the Department feared rising sugar prices. To forestall such a rise, the Secretary increased the estimate of United States requirements to 8.7 million tons. Since only Cuba could fill most of this increase, she was given a quota increase with the understanding that a small technical deficit would be declared against her at the end of the year if the Secretary of Agriculture found this action to be necessary. This greater supply mitigated the upward price pressure that existed during that time.

The Department of Agriculture also at times uses mild implied pressure to influence the price of sugar. That is, periodically the Department will change the determination of United States requirements only to change them back to the original amount shortly in an attempt to influence the price.

On other occasions the Department may postpone an announced change in the quota if this is deemed desirable.

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[3]U. S. Department of Agriculture, Sugar Report no. 22, (Washington: Sugar Division, February, 1954), p. 2.

For example, on November 15, 1954 the Department announced a 50,000 ton increase in the total United States quota, to become effective on November 19. As a result of this announcement the New York duty paid price of sugar dropped from 6.25 to 6.00 cents per pound in the following two days. Therefore, on November 17, the Department announced that the increase of November 15, would not be made effective as scheduled.[4] On the following day the market responded to this statement and the price of sugar rose by 15 points.

The Department must exercise great care in reallocating deficits from one area to another for the area that has a deficit declared against it does not forfeit the right to supply its full quota. Therefore, if a deficit is declared against one area and is reallocated to another, both may fill it and generate excessive downward price pressure. In 1953, for example, a 180,000 ton deficit was declared in the domestic beet sugar quota and was reallocated to other areas, but mostly to Cuba. However, the domestic beet industry filled all but 50,000 tons of its declared deficit, thereby marketing more sugar than anticipated. Fortunately the market was able to absorb the greater quantity of sugar and prices did not fall excessively.

Although prices of raw and refined sugar generally move in the same direction, refined sugar prices usually

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[4]U. S. Department of Agriculture, Sugar Report No. 31, (Washington: Sugar Division, November, 1954), p. 2.

lag slightly and are also somewhat more stable. Occasionally, however, refined prices will rise more rapidly and may even pull up raw sugar prices. This lag in raw sugar prices may occur when the speculative demand for refined sugar is greater than that for raw, or as a result of greater changes in demand for refined sugar due to the buying patterns of large industrial users.[5] The price sensitivity between raw and refined sugar is mainly a reflection of the small inventories kept by the refiners.

The Secretary of Agriculture's control over the United States sugar supply has resulted in a higher and more stable price in the United States than on the world market. The differential between the United States and the world price, less freight, insurance, and a very low tariff, is the quota premium enjoyed by foreign countries when they market their quotas of sugar in the United States. This quota premium has fluctuated violently since the end of World War II, primarily because of changes in the world sugar price. All during 1948 this quota premium was less than a cent per pound, and although it recovered somewhat in 1949, it fell again in 1950 and from August through November of that year was actually negative. It remained negative throughout most of 1951, and in June of that year when the world price was at its maximum over the United States price,

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[5]Refiners themselves generally do not speculate in sugar.

the negative quota premium averaged 1.85 cents per pound. As the world price fell late in 1951, the quota premium became positive once more and continued to rise in 1952. In 1953 it rose further, reaching a high of more than two cents per pound in March and April, only to fall to 1.88 cents per pound in December of that year.[6] In early 1954 world sugar prices began to recover somewhat, and the quota premium averaged 1.80 cents per pound in February.[7] During 1954 world sugar prices fluctuated slightly although an overall downward trend existed. However, because of the lower price of sugar in the United States market, the average quota premium of 1.96 cents per pound for the first three quarters in 1954 was approximately the same as over the same period in 1953.[8] Recently, world sugar prices have recovered somewhat, and the quota premium for January through August, 1956 averaged 1.69 cents per pound. Table 19 summarizes the yearly average United States prices, world prices, and the Cuban quota premiums from 1934 to 1954.

Price Determination in the World Market

Since the amount of sugar sold in the world market is determined by international agreement, the world price

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[6]U. S. Department of Agriculture, Sugar Report No. 22, (Washington: Sugar Division, February, 1954), p. 3.

[7]U. S. Department of Agriculture, Sugar Report No. 23, (Washington: Sugar Division, March, 1954), p. 2.

[8]U. S. Department of Agriculture, Sugar Report No. 30, (Washington: Sugar Division, October, 1954), p. 3.

TABLE 19

YEARLY AVERAGE UNITED STATES PRICES, WORLD PRICES, AND QUOTA PREMIUMS FOR CUBA: 1934-1954

Year	United States Price Cents Per Pound[a]	World Price Cents Per Pound	Quota Premium Cents Per Pound[b]
1934	1.37	.91	.46
1935	2.21	.88	1.33
1936	2.56	.88	1.68
1937	2.35	1.13	1.22
1938	1.90	1.00	.90
1939	1.74	1.43	.31
1940	1.67	1.11	.56
1941	2.09	1.46	.63
1942	2.48	2.69	- .21
1943	2.46	2.69	- .23
1944	2.59	2.69	- .10
1945	2.65	3.14	- .49
1946	3.42	4.24	- .82
1947	4.97	5.03	- .06
1948	4.64	4.23	.41
1949	4.94	4.16	.78
1950	5.09	4.98	.11
1951	5.07	5.67	- .60
1952	5.35	4.17	1.18
1953	5.44	3.49	1.95
1954	5.23	3.28	1.95

[a]New York price less duty, freight, and insurance from Cuba.

[b]The quota premium for full duty countries is slightly lower, as they pay a higher tariff than Cuba.

Source: United States Department of Agriculture.

of sugar is no longer truly free. Since Cuba is the largest producer and supplier of sugar to the world market, she has some control over the world supply of sugar and hence over the world price. On the other hand, Cuba has less influence over the world price at the present time than earlier because other areas have expanded their production. During the 1920's the four major sugar exporting countries of Cuba, Formosa, Indonesia (Java), and the Philippines produced approximately one-third of the total world output. Together these four countries could exercise great influence over the world market at that time. In the 1930's sugar production increased in other areas particularly in South America and Europe. During World War II, however, production declined especially in the European beet areas, in Java, and in the Philippines. In the post war period sugar output expanded rapidly, particularly in Java and the Philippines, as the war-damaged sugar facilities were quickly rebuilt.

As early as 1948 Cuba became concerned over the increase in sugar production and advocated international control but nothing was done at that time. In 1951 the speculative demand for sugar, due to the Korean War, drove the world price above that of the United States. This resulted in increased planting of cane in Cuba and elsewhere which produced the record breaking sugar crop in 1952. Cuba did not sell all of her 1952 crop, and has been trying to move this reserve stock through the Cuban Sugar

Stabilization Institute ever since. The world price of sugar declined due to the great "surpluses" in 1952, and as a consequence of this, the Third International Sugar Agreement was signed in London in October of 1953 by most major sugar exporting and importing countries.[9] This Agreement set up the International Sugar Council which estimates the yearly world free market requirements and then assigns quotas, as prescribed by the Agreement, to all participating countries.[10] The International Sugar Council attempts to stabilize the world price of sugar at an "equitable" level by regulating the supply. Nevertheless, the world price has been lower than the United States price since the ISA was signed. The Agreement, however, states that the world price is to be considered stabilized at an "equitable" level if it is maintained between 3.25 and 4.25 cents per pound, United States **currency**, free alongside steamer, Cuban port.[11] The ISC generally has been successful in stabilizing the world price of sugar under this definition. On the other hand, several countries have remained outside

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[9]The First International Sugar Agreement was signed in 1931, but by 1933 it was no longer effective. The Second International Sugar Agreement was signed in 1937, and although it remained in formal existence until 1945, it was in effect destroyed in 1939 by World War II.

[10]International Sugar Agreement, Treaties and Other International Acts Series 3177, Dated at London: October 1, 1953, (Washington: U.S. Department of State Publication 5848), Articles 14 and 18.

[11]Ibid., Article 20.

the Agreement and have been reluctant to cut back sugar production. Consequently, world sugar "surpluses" have remained and have had a depressing influence on the price causing it to remain near the lower limit.

In May and June of 1956 all the major sugar exporting and importing countries met in New York under the auspices of the United Nations, as provided by the International Sugar Agreement of 1953, to consider possible revisions to the Agreement. The Conference considered various opinions and suggestions advanced to amend the ISA but reached no agreement.[12] The Conference reconvened in Geneva in October, 1956, however, and agreed to an amendment which changed world free market quotas slightly.[13]

Since 1953, then, the Cuban Sugar Stabilization Institute has worked through the International Sugar Agreement to stabilize prices and to lower Cuba's stock of "surplus" sugar. The Institute has succeeded in reducing the 1952 "surplus" to a certain extent but not by as much as was hoped. Cuba determines her cane and sugar production in the light of quota allocations she receives from the United States, the export tonnage she is granted by the International Sugar Council for the world free market, the

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[12]U. S. Department of Agriculture, Sugar Report No. 50, (Washington: Sugar Division, June, 1956), p. 3.

[13]U. S. Department of Agriculture, Sugar Report No. 55, (Washington: Sugar Division, November, 1956), p. 7.

special sales she is able to make from time to time, and her reserve sugar stock.[14] In reality, then, the world free market is not truly free because quotas are utilized. Moreover, only a small portion of the total world's sugar is actually sold on the so-called free market. To many importing countries the free market is simply a residual market. The British Commonwealth, for example, obtains most of its sugar through preferential Commonwealth arrangements, and only satisfies its demand in excess of Commonwealth production from the free market. The United States, the largest sugar consuming country in the world, obtains no sugar from the world free market, but rather fills all her needs by quota arrangements with several areas including the domestic areas. In 1954 only 4.9 million short tons were sold on the free market out of a total world sugar production of 40.2 million short tons and out of a total of 8.8 million short tons moving in international trade.[15] Cuba supplied almost one-half of these 4.9 million tons.

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[14]Cuba has sold sugar to Russia in specially negotiated sales on two occasions recently because of a breakdown of the USSR's agriculture program. In 1955, Cuba made a sale of 500,000 Spanish long tons to Russia at a low price, and in December, 1955 Cuba agreed to sell 200,000 additional Spanish long tons of the 1956 crop at a price below the world market price. See U.S. Department of Agriculture, Foreign Agricultural Service, Report No. 116, (Havana: December 16, 1955). These sales, at prices lower than in the world market, have been made by Cuba because of her excessive reserve stocks.

[15]U. S. Department of Agriculture, Sugar Report No. 43., (Washington: Sugar Division, November, 1955), p. 8. This 8.8 million tons excludes sugar moving within the British Commonwealth of Nations, but does include sugar purchased by the United States from Cuba and other foreign countries.

Interactions Between the United States and the World Market

Cuban and world sugar production exert little or no influence on the United States price so long as the latter is above the world free market price. The supply of sugar marketed in the United States, we recall, is determined by a system of quotas. The quota allocated to Cuba and other foreign countries absorbs only a part of their total supply. These countries provide this allotment and obtain a quota premium in most years. If the world price of sugar were above the United States price, it is conceivable that foreign countries might not fill their United States quota and in this way influence the domestic price. Since Cuba is the sole foreign country that supplies large quantities of sugar to the United States, she is the only country able to influence the price to any great extent by not filling her quotas. Cuba has always provided her quota, however, even when the world price was the higher. Even so, a world price above the United States price would tend to generate upward price pressure in the United States. For this reason domestic producers and consumers cannot be insulated completely over long periods of time from the world market and from world free price changes. World sugar prices have not been above the United States price since 1951, however, except for a brief period during the Suez crisis. Hence world prices have not affected the domestic sugar price since 1951.

Prices in the United States market do not influence the world price to any significant extent except possibly if they result in substantial changes in the overall United States quota. If, for example, a rising domestic price induces the Secretary of Agriculture to increase the amount of sugar that foreign countries may market in the United States, this action tends to weaken the domestic market price and at the same time may strengthen the world market price because, as a consequence, sugar is removed from the world market and earmarked for the United States. However, Cuba and other sugar exporting countries maintain stocks of sugar as a reserve for their various markets, and these reserves act as a cushion behind any sudden changes in the quota. If ample reserves exist in the world market, an increase in the United States quota will have no impact whatsoever on the world price. In recent years, such huge reserve stocks have existed in the world market but this is not necessarily always the case. Although Cuba controls sugar production and attempts to adjust her reserve in order to stabilize the world price of sugar as much as possible, she has not been completely successful in achieving price stability. In 1950, for example, reserves were fairly low and following the outbreak of hostilities in Korea increased United States quota allotments to Cuba, together with increased purchases of sugar in the world market by European countries, created upward price pressure in the world market.

The world price which had been relatively stable during the first six months of 1950 began to rise rapidly. The United States price rose also but not to the same extent, and for a number of months the world price was the higher of the two. As a consequence of this higher price and depleted reserve stock, world sugar production expanded rapidly in 1951 and 1952, and for several years thereafter depressed prices plagued the world market. Although generally United States quota reallocations to foreign countries have not been large enough to bring about significant price fluctuations in the world market by themselves, together with other forces they can create disturbances.

Impact of the United States Policy on the Sugar Industry

Since 1934 the results of the quota system have been to raise the domestic price of sugar, and also to guarantee a sizable portion of the United States market to both the domestic beet industry and Cuba. The Department of Agriculture has also stabilized the American price of sugar, thereby creating a government sponsored semi-cartel for both the domestic sugar industry and for Cuba. Very little, if any, price competition exists at present between Cuban and domestic sugar producers for the United States market.

The size of the American market guaranteed Cuba in 1934, however, was much smaller than the portion she had

been accustomed to supplying. In 1934 the policy was designed to cut back the production of domestic sugar and the total sugar marketed in the United States. The 1934 Act succeeded in holding imports from Cuba near the low level to which they had been forced by the depression and the very high Smoot-Hawley Tariff. The Act also succeeded in reducing the amount of beet sugar produced in the United States. The 1934 quotas were not announced until June, and although it was then too late to cut back beet acreage, domestic beet sugar production was within the quota in 1934. However, several years were required to eliminate the sugar inventories built up in 1932 and 1933. United States beet sugar production declined from 1.7 million short tons in 1933, before the Act was passed, to about 1.2 million short tons in 1934 and 1935.[16] This reduction succeeded in raising the price of sugar somewhat and thus benefited the sugar industry.

By the end of 1936 consumer income had risen and in addition population had grown slightly. Although no clear growth trend was apparent, the Secretary believed the overall quota could be increased moderately. Therefore, when Congress passed the Sugar Act of 1937 it returned part of the domestic industry's reduction required by the Act of

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[16]U. S. Department of Agriculture, Sugar Statistics Statistical Bulletin No. 150, (Washington: Sugar Division, December, 1954), Vol. II, p. 2.

1934.[17] In 1937 Congress gave all areas, except the Philippine Islands, a percentage share of the American market. For a few years the domestic beet industry expanded moderately, but only in 1938 did it fill its quota.

During World War II the sugar quotas were suspended by Presidential Proclamation, and additional wartime subsidies were developed to encourage greater output. Nevertheless, domestic beet sugar production actually declined.[18] At the beginning of World War II the domestic industry was approximately the same size as it was in 1933, and at the end of the war it was somewhat smaller. The domestic industry produced 1,757,000 tons of beet sugar in 1933, about 1,760,000 tons in 1939, and 1,280,000 tons in 1945.[19]

Cuba, on the other hand, took advantage of this modest increase in demand for sugar after 1937 and expanded output to fill her growing quota. Furthermore, Cuba received and filled deficits from the United States beet areas. With the wartime suspension of quotas Cuba expanded further. Apparently Cuba enjoys constant cost conditions in the production of sugar to well over 8 million tons per year due

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[17]U. S. Department of Agriculture, The United States Sugar Program, (Washington: Government Printing Office, July, 1953), p. 19.

[18]Part of the decline after 1943 may be explained by the fact that the United States Government deliberately held sugar prices down to encourage competing crops at the expense of beets. See supra, p. 53.

[19]U. S. Department of Agriculture, Sugar Statistics, (Washington: Production and Marketing Administration, June, 1953), Vol. I, p. 208.

to an abundance of idle land and labor and, consequently, she is easily able to expand.[20] This was proved during the Korean War when Cuba produced a record breaking crop of 8,040,579 tons very easily.

When quotas were re-established in 1948 the domestic industry once more received a fixed (as opposed to a percentage) quota approximately equal to the 1933 output.[21] Again, however, the beet industry did not expand as much as possible and did not fill its quota until 1954. Consequently, Cuban output and exports to the United States continued to expand.[22]

One of the announced goals of the United States sugar policy is to maintain a domestic sugar industry of limited size.[23] President Roosevelt was even more direct when, in a message to Congress, he advocated quotas "to provide against further expansion of this necessarily expensive industry."[24]

Congress has not spelled out in great detail what it means by an industry of limited size but the imposition

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[20]Cuba has constant costs with the exception that wages vary slightly with the price of sugar.

[21]See supra, p. 55.

[22]Cuba expanded because she was given a percentage quota of a growing United States market, and also because she was given the deficit from the domestic area during this period.

[23]U. S. Department of Agriculture, The United States Sugar Program, (Washington: Government Printing Office, July, 1953), p. 10. This domestic industry is built largely around the beet industry.

[24]The New York Times, February 9, 1934, p. 12, Col. 3.

of a fixed quota in 1934 provided a definition at that time. The Act of 1937, to be sure, provided a percentage quota, but no clear growth trend due to population growth was anticipated in American consumption at that time. The percentage quota was merely intended to give all areas a share in the recovery from the reduction in consumption imposed by the world depression. Moreover, Congress stated that one of the purposes of the Act was "to protect the welfare of consumers of sugar and of those engaged in the domestic sugar producing industry...."[25] Furthermore, Congress stated in 1937 that the Secretary of Agriculture was to make the determination of sugar requirements "so that the supply... made available...shall not result in prices in excess of those necessary to maintain the domestic sugar industry as a whole...."[26] At no point did Congress provide any formula to be used to allow for future growth.

American sugar consumption has been growing since the end of World War II, and although the legislation of 1948 and 1951 made no provision for the domestic industry to share in this growth, in 1956 a new amendment did make such a provision.[27] That is to say, from 1934 to 1956 the

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[25] Public Law No. 414, 75th Congress, 1st Session (September 1, 1937), "The Sugar Act of 1937."

[26] Ibid.

[27] In 1951 domestic sugar spokesmen, for the first time, began to show some signs that they might ask for larger quotas in the future. See supra, p. 69.

domestic beet industry was prevented from expanding beyond the limit reached in 1933, even though it had a percentage quota under the 1937 Act. In many years production was held below this 1933 level either voluntarily by the industry or by government action.[28]

In effect, Congress changed the announced goal of the policy when it granted the growth percentage formula in 1956, or at least redefined the policy to mean that the domestic industry is to be limited to a certain percentage size of the rapidly growing market. In 1956 Congress assigned the growth of United States consumption requirements on a historical basis. The 55 per cent assigned the domestic areas is considered justifiable because it is almost identical with the percentage quota under the 1937 Act. Under the 1937 Act, however, the percentage quota was almost meaningless because there was no clear growth trend, whereas in 1956 it provided for substantial future expansion.

One reason why deficits appeared in the beet sugar quota until 1954 may have been because of the more favorable prices of alternative crops. However, this price relationship was not the only factor involved. The price of beets, as a percent of parity, was much higher than the price of all farm commodities, as a percent of parity, during the entire

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[28]No real pressure to increase the domestic quota developed until about 1953 or 1954.

World War II period.[29] After the war the gap between beets and other products narrowed, and in some years the average of all farm prices, as a percent of parity, was greater than the same relationship in sugar beets.[30]

Moreover, the Department of Agriculture made a study of the factors affecting sugar beet plantings in which it analyzed the price relationships between beets and other farm commodities. The study indicated that while the price position of sugar beets, relative to other farm products just prior to the planting of each years crop, influences planting decisions, this does not explain the entire picture.[31] Another factor is, of course, the reduction in the cost of producing sugar beets. In recent years costs have fallen and have made beet production more attractive. Accordingly, the domestic industry has expanded and, since 1954, filled its quota. Under the 1956 Amendment the domestic beet industry will no doubt grow.

Although the price of sugar in the United States is kept higher than the competitive price artificially by a system of quotas, not enough growers could survive to fill the domestic beet quota before 1954. Furthermore, even those growers that produced beets under this artificially

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[29]U. S. Department of Agriculture, Sugar Report No. 42, (Washington: Sugar Division, October, 1955) pp. 18-19.

[30]Ibid.

[31]U. S. Department of Agriculture, Sugar Report No. 33, (Washington: Sugar Division, January, 1955), p. 5.

high price could do so only because of direct subsidies. Domestic growers have been receiving program payments of about $2.50 per ton of beets since the end of World War II.[32] Table 20 illustrates the program payments per ton of beets and the total payments from 1934 to 1954.

Since an excise tax is levied on all sugar, while program payments are made only to domestic producers, the Treasury receives a modest net revenue from the sugar legislation in most years. Because of this revenue, spokesmen for the domestic beet industry maintain that it is actually not being subsidized.[33] They argue that the excise tax which is collected by the refiner is not shifted to the consumer, but rather comes out of the profits of the industry.[34] The incidence of this excise tax cannot be pin-pointed with great accuracy. Generally, an excise tax on a product with a highly inelastic demand, such as sugar, is shifted largely to the consumer. However, in the case of sugar, an overall quota set by the Department of Agriculture becomes the supply and helps to determine the price. With a given demand the Department is able to set the quota

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[32]U. S. Department of Agriculture, Sugar Statistics, Statistical Bulletin No. 150, (Washington: Sugar Division, December, 1954), Vol. II, p. 16.

[33]Statement of Mr. Frank A. Kemp, Executive Committee Chairman, American Sugar Beet Industry Policy Committee Before U. S. Congress Senate, To Amend and Extend the Sugar Act of 1948, Hearings before the Committee of Finance, U. S. Senate 84th Cong., 2nd Session, on H.R. 7030, January 16 and 17, 1956, (Washington: Government Printing Office, 1956), p. 134.

[34]Ibid., p. 135

TABLE 20

PROGRAM PAYMENTS PER TON OF BEETS AND TOTAL PAYMENTS: 1934-1954

Year	Payment Per Ton of Beets[a]	Total Payment
1934	$2.60	$19,575,324
1935	1.20	9,507,420
1936	--	---
1937	1.96	17,136,667
1938	1.90	22,073,345
1939	1.99	21,371,789
1940	1.89	23,262,539
1941	1.84	18,991,929
1942	2.56	29,770,909
1943	4.06	26,477,914
1944	5.63	38,027,477
1945	4.79	41,531,916
1946	2.55	27,735,230
1947	3.84	48,764,930
1948	2.56	23,206,938
1949	2.54	26,581,945
1950	2.48	33,744,012
1951	2.46	25,899,661
1952	2.43	24,735,741
1953	2.39	29,974,245
1954	2.42	33,224,656

[a]Includes CCC subsidy payments from 1943-1947, except in 1946 when no CCC payment was made.

Source: United States Department of Agriculture.

so as to shift most of the tax forward to the consumer, backward to the growers, or, since the Department also controls minimum wages, it can take action that would tend to shift part of the tax backward to farm labor. However, since the payments are made to farmers and not to the refiners, unless an amount of the tax equal to the program payments is shifted back to the farmers, they are subsidized. If farmers are being subsidized, then, in most cases, the processors are also being subsidized. This is so because beets, the main input, are now cheaper for the processors than they otherwise would be. One possible exception in which processors would not receive a subsidy would occur if the tax were not shifted at all but came entirely out of refiners' profits. In such a case, the processors would not receive a subsidy because the tax they pay would tend to offset the gain they enjoy from lower beet prices. However, farmers would still be receiving subsidies. If part, or all, of the tax were paid by the processors, and if the reduction in the price of beets were less than the portion of the tax borne by the processors, farmers would be receiving subsidies but from the processors rather than from the public. It is even likely that part of the tax is shifted to foreign growers of sugar cane, and that they, therefore, also help to subsidize the domestic industry.

The Department of Agriculture maintains that it does not take into account the incidence of the excise tax, nor does it attempt to shift the tax when determining the supply

of sugar by establishing consumption requirements for the United States market. Rather, the Department strives to set the supply to meet the needs of the American consumer at a "fair" price. Therefore, the supply of sugar is determined by the quota and is not influenced by the tax.

In 1934 when the excise tax and the quota system were first imposed, it was argued that the tax was not shifted to the consumer but was divided between the manufacturer and the grower in the short run, and in the long run shifted backward to the grower.[35] The price of sugar rose after the quota and the tax were imposed, but, according to the study cited above, it would have risen by an equal amount with the quota alone. Thus the tax was paid by the industry. In 1936 when the tax was invalidated for a year, the price of sugar did not fall, and it was argued that processors and growers shared the tax relief immediately but in the long run the windfall would have passed completely to the growers.[36] According to the above analysis,

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[35]U. S. Treasury Department, An Analysis of the Effects of the Processing Taxes Levied Under the Agricultural Adjustment Act, (Washington: Government Printing Office, 1937), p. 70.

[36]The tax relief was shared in 1936 because beet growers and refiners share the proceeds from the sale of sugar on a contractually agreed percentage division. (Usually on about a 50-50 per cent basis). When the Supreme Court declared the tax unconstitutional in early 1936 the contracts determining the percentage shares for the 1936 crop had already been signed. In the following years, if the tax had not been re-imposed, the percentage shares would have been changed to the growers' favor giving them the entire windfall because they are the owners of the commodity fixed in supply.

the excise tax, re-imposed in 1937, is shared by the grower and the refiner with the grower bearing the major share.

However, the preceding analysis deals only with beet sugar in a vacuum, and thus ignores the very important effect on prices by imported and domestically produced cane sugar. Beet and cane sugar are chemically identical and in a free market would compete price-wise.[37] In the production of cane sugar an additional process, not necessary in the production of beet sugar, is required. For this reason there is both raw and refined cane sugar but only refined beet sugar. Since the excise tax is on refined sugar, the beet processors and the refiners who process raw to refined cane sugar are the tax collectors. The removal of the excise tax would give these refiners a windfall, and, although the aggregate supply of raw sugar is fixed, to the extent that refiners compete, they would pass part of the tax reduction on to the consumer in the short run. In the long run, however, the reduction would pass back through the manufacturers of raw sugar to the cane growers just as in the case of beet sugar. If there were a reduction in the price of cane sugar to the consumer, the price of beet sugar would be forced downward because the eastern seaboard re-

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[37]In the past beet sugar was very slightly less pure, and this, together with the fact that even today beet sugar is not offered in as many assorted package sizes and types, has resulted in cane sugar commanding a slightly higher price. This price differential, however, is very slight and does not change.

finers could now ship cane sugar further west. The same analysis indicates that the imposition of a tax collected by refiners would be **shifted**, in part, to consumers in the short run, but in the long run back to cane and beet growers. This is an important factor because about 75 per cent of the sugar consumed in the United States is cane sugar. Furthermore, since about 47 per cent of the total United States sugar supply is foreign cane sugar, a sizable portion of the excise tax is passed back to foreign cane growers, and thus they partially subsidize the domestic industry.

Since program payments to beet growers are greater than the excise tax on beet sugar, the amount of the direct subsidy enjoyed by the domestic beet industry is equal to the benefit payments minus that portion of the excise tax shifted to beet growers.[38] However, even with subsidies and artifically higher prices guaranteed by a system of quotas, domestic beet growers have not filled their quotas until recently when costs began to decline.

Charges have been made that Cuba's advantage stems from lower labor costs, and that the Cuban industry can produce at the controlled United States price but that the domestic beet industry cannot. We will examine this claim in the following chapters, and also analyze the cost reductions in the United States that have resulted in the domestic area filling its quota in recent years.

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[38]See infra, p. 196, for a presentation of the actual amount of this direct subsidy.

CHAPTER VI

WAGE DETERMINATION OF AGRICULTURAL SUGAR WORKERS IN THE UNITED STATES AND CUBA

Wages paid to agricultural sugar workers are controlled by law, at least in part, both in the United States and Cuba. In the United States minimum wages are controlled, and although actual wages are often above the minimum, the presence of this floor does influence the wage level. The law concerning these wages is administered by the Secretary of Agriculture in the United States and by the Minister of Labor in Cuba. Some knowledge of wage determination is a necessary preliminary to the comparison of labor costs that follows, and therefore, we will analyze wage rate determination in Cuba and the United States in this chapter. In the next chapter we will compare labor productivity and labor costs per ton of sugar in the two areas.

United States

Since 1934 the various sugar acts have authorized the Secretary of Agriculture to set minimum wages for agricultural workers on United States beet farms. Wage regulations have been tied into the agricultural output and

benefit provisions applicable to beet growing.[1]

The Jones-Costigan Act of 1934 authorized the Secretary of Agriculture to intervene and establish a minimum wage only in the event of a dispute. The Act further provided that any decision by the Secretary was to be final.[2] The Secretary issued but one wage rate determination under the Jones-Costigan Act. That adjudication was in 1935, and it applied to the beet areas in eastern Colorado, Nebraska, Wyoming, and Montana.[3]

Soon after the Supreme Court destroyed the Jones-Costigan Act by declaring unconstitutional the processing tax that financed the farm program payments, Congress passed the Sugar Act of 1937. This Act authorized the Secretary to fix minimum wages on his own volition and not only in the event of a dispute. The new Act required the Secretary to set minimum wage rates that were "fair and reasonable after conducting investigations and holding public hearings."[4] The Act of 1948, and the 1951 and 1956 Amendments to it, did not change the sugar law regarding minimum wages.

Therefore, since 1937 the Sugar Division of the Department of Agriculture has conducted investigations and

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[1]See supra, p. 45.

[2]Public Law No. 213, 73rd Congress, 2nd Session (May 9, 1934). "To Include Sugar Beets and Sugarcane as Basic Agricultural Commodities Under the Agricultural Adjustment Act."

[3]U. S. Department of Agriculture, Sugar Report No. 32, (Washington: Sugar Division, December, 1954), p. 9.

[4]Public Law No. 414, 75th Congress, 1st Session (September 1, 1937). "The Sugar Act of 1937."

held annual public hearings in order to determine minimum wages. These hearings must be well publicized. Notices are published in advance in the Federal Register and in the local press in the sugar beet and sugar cane areas. Furthermore, notices of hearings are sent to grower associations, labor groups, and to others known to be interested. The investigations are designed to provide information that will be helpful in arriving at a final determination after the hearings. The Sugar Division of the Department of Agriculture is continually collecting statistical data for all areas through state and county officials, as well as through field trips. In addition, the Sugar Division makes a detailed study of production costs for sugar beets and sugar cane throughout the domestic areas every two years.

The Division obtains further information at the public hearings where individuals may present any pertinent information, and representatives of interested groups may also make recommendations. For example, representatives of certain west coast producers urged that minimum wages, for 1955, on beet farms in the Imperial Valley of California be not less than five cents per hour below those applicable to other areas in California.[5] This proposed lower wage was based, among other things, on anticipated lower farm

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[5]U. S. Department of Agriculture, Wage Rates: Sugar Beets, California, Southwestern Arizona, Southern Oregon, and Western Nevada: 1955 Crop, (Washington: Commodity Stabilization Service, Reprint, December 10, 1954), p. 2.

income in that area and a generally prevailing lower wage rate. This recommendation, however, was not approved.

Since 1937 a great deal of experience and precedent has been built up concerning wage determinations, and the Department has developed certain standards and criteria from this experience which it uses as a guide. These standards are not ironclad rules that must be met, but rather they serve as a benchmark or signpost to indicate the general direction in which the Department moves.[6]

For example, the Department has developed the doctrine that minimum wages should not be established at levels that would prevent workers, or workers' organizations, from bargaining and achieving above minimum rates. For this reason the Department approves as "fair and reasonable" any rates agreed upon between workers' and producers' organizations after collective bargaining, if the bargaining ability of the two parties is comparable. In Hawaii where the agricultural workers are highly organized and the union has strong bargaining power, wages are determined by collective bargaining and are approved by the Department of Agriculture. However, in the mainland cane and beet areas where the unions are weak or non-existent, wage rate agreements are rarely reached in this manner.

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[6]For the next two pages we will draw largely from the data in the U. S. Department of Agriculture, Sugar Report Number 32, (Washington: Sugar Division, December, 1954), pp. 6-18.

The Department also maintains that minimum wages should not be set at levels that would substantially reduce production and hence employment opportunities for workers. It therefore gives some weight to the ability of growers to pay. For this reason studies are made of income per acre and per ton of beets. Consequently, workers benefit from technological change, greater yield per acre, and greater sugar content of beets due to improved varieties. However, this ability-to-pay doctrine in determining wages is applied broadly to all farms within a specific area on the basis of the ability of the medium and larger-- and generally more efficient-- farmers within that area because they produce the bulk of beets and hire the majority of workers. That is to say, the Department does not subscribe to the theory that it should grant smaller or marginal farmers within a region the right to pay a lower minimum wage. Rather, the Department holds that it should grant equal minimum wages for equal work regardless of the size or efficiency of the farm involved, although actual wages may, of course, vary somewhat between farms. The Department's recognition of the differences in the producing abilities of the various regions accounts for the slightly higher minimum wage rate in certain West Coast areas where yield per acre is higher.[7]

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[7]Different labor conditions are another reason for a slightly higher rate on the West Coast. Wages in general have been higher there historically than in other beet areas. See infra, p.118,for an added comment on this.

Finally, the Department grants some recognition to changes in the cost of living in determining minimum wages. In the continental United States the Department of Labor's Consumer Price Index is used for this purpose, while other comparable indexes are used in offshore domestic areas.

Problems have sometimes arisen in regard to wages determined on a piecework basis. These have generally been resolved by providing for piecework rates at levels which would enable workers to earn more than the hourly wage for the same work. The Department has also sought to maintain historical differentials for different types of labor, and in addition, allows differentials due to age or other handicaps.

The minimum wage set by the Department, however, applies only to hand operations. In the case of machine operators, wages agreed upon between the producer and worker have always been approved since these wages have always been substantially higher than the minimums set for hand operations.[8] Presumably if this were not the case the Department would also provide a floor for machine operators. Since World War II, a growing proportion of workers have received wages substantially above the minimums as a result of ever increasing mechanization. However, minimum wages set by the Department are not simply of academic interest.

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[8]Statement by Mr. Hans Hirsch, Assistant Director, Sugar Division United States Department of Agriculture, personal interview.

Although the harvesting work, which is the most completely mechanized phase of the operation, is about 90 per cent mechanized, the other operations are still largely done by hand. Furthermore, in recent years these minimum wages have been applied to gleaners who gather beets that the harvesting machines miss.

At the annual public hearings any new information collected since the previous hearing is examined, and wage rate determinations are made on the basis of the standard described above. These hearings are held in the general beet growing areas and, consequently, in widely scattered sections of the country. Between October 6 and December 8, 1954, for example, six hearings were held to determine wages in the United States beet areas that would apply for the year 1955. These hearings were in such widely scattered locations as Berkeley, California; Greeley, Colorado; Salt Lake City, Utah; Billings, Montana; Fargo, North Dakota; and Detroit, Michigan.[9]

Shortly after the hearings the Secretary issues his determinations which are then published in the Federal Register. In addition, they are made available to the press and individual copies are forwarded to any interested party.

The Department has historically established two different sets of minimum wage rates for United States beet

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[9]Federal Register, Vol. 19, No. 239, (December 10, 1954), p. 8128, and Vol. 20, No. 61, (March 29, 1955),p.1879.

areas. One applies to certain West Coast areas, and the other to the remaining beet areas. A slightly higher minimum rate has been established for the West Coast areas because of greater yield per acre and also greater labor productivity. These areas include California, Southwestern Arizona, Southern Oregon, and Western Nevada. Table 21 illustrates the minimum hourly wage rates for the beet areas in the year 1954.[10]

TABLE 21

MINIMUM HOURLY WAGE RATES FOR SUGAR BEET FIELD WORKERS IN 1954

	Certain West Coast Areas (Hourly Rate)	All Other Areas (Hourly Rate)
For Thinning, Hoeing, or Weeding	$ .70	$ .65
For Pulling, Topping, or Loading	$ .75	$ .70

Source: United States Department of Agriculture. These rates exclude work done by machine. In addition, these rates may be reduced by not more than one-third for operations performed by workers between 14 and 16 years of age.

The rates for the year 1955 for California and adjacent areas were set by the Department in late 1954 and for other regions in early 1955. The 1955 rates were the same as in the previous year, save that in California and adjacent regions minimum rates of $.75 per hour for

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[10]Since agricultural workers are not covered by the federal minimum wage law, it is possible for these rates to be below the general federal minimum.

harvesting operations were extended to cover beet gleaners.[11]

Cuba

Wages are controlled even more rigidly in Cuba than in the United States. Although only minimum wages are established by the Department of Agriculture in the United States, an absolute level is set by the Cuban Government, and in Cuba they are tied, in part, to the price of sugar by a rather complex formula.[12]

There are four main classes of agricultural labor connected with sugar cane production in Cuba. First, we may divide the growing of cane into the dead and the harvest season. The three types of agricultural labor required during the harvest season may be classified into cutters, haulers, and miscellaneous day workers. Each receives a different base wage and each is subject to a different formula in the calculation of this wage. During the "Tiempo Muerto" (dead season) only miscellaneous day workers are required, but they receive a higher daily wage than do their counterparts during the harvest season and, again, a different calculation is required to determine this wage.

In the mills there is a grinding and a non-grinding season. Generally speaking, the dead season begins 15 days

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[11]U. S. Department of Agriculture, Wage Rates: Sugar Beets, California, Southwestern Arizona, Southern Oregon, and Western Nevada: 1955 Crop, (Washington: Commodity Stabilization Service, Reprint, December 10, 1954), p. 1.

[12]See infra, p.127, for a description of this formula.

after the grinding season ends and comes to an end 15 days before the grinding season starts. Thus we may take the grinding season as roughly equivalent to the harvest season. The length of the harvest season varies somewhat but is generally between 75 and 85 days long.[13]

A great many more workers are, of course, required during the harvest than during the dead season. Although the proportionate numbers vary slightly, harvest season workers are approximately three times as numerous as dead season workers. Approximately 30 per cent of the total workers are employed throughout the year and work in both operations.[14]

Since the wages of the four types of agricultural labor on Cuban sugar cane plantations are partially tied to the price of sugar, we must know to what price. There is the f.a.s.[15]Cuban price, the New York duty paid price, and the New York price less freight, insurance, and tariff. Historically, wages were tied to the "promedio" price of sugar, which is the weighted average of all of the various prices at which Cuba sells sugar.[16] However, this "promedio"

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[13]U. S. Department of Agriculture, Foreign Service Despatch Number 263, (September 13, 1954).

[14]Letter from Manuel Rasco, Jr., General Manager, Cuban Sugar Stabilization Institute, November 3, 1955.

[15]Free alongside steamer.

[16]The promedio price of sugar is a specially constructed price of sugar in Cuban warehouses. It is actually the weighted average of all of the various prices at which Cuba sells sugar. For example, the New York wholesale price

price is no longer used to determine wages. In 1945 and 1946, wages of agricultural workers were tied to the "prescio promedio extraordinario" (Extra ordinary promedio) according to the provisions set forth in the Ministry of Labor's decree Number 712 of March 8, 1945. In reality this was a special price above the promedio price. Since 1946 the "prescio promedio extraordinario" has not been calculated. However, wages are still tied to a hypothetical price that has nearly always been above the promedio price. Each year the Ministry of Labor states that wages will be calculated as if the price of sugar were at a certain level. Furthermore, wages are often frozen for a number of years even though the price of sugar may fall. For example, in 1947 the promedio price of sugar reached its highest level since 1923, and wages were once more tied to it in that year. The resulting 1947 peak wage rate was then frozen at that level through 1950, even though the price of sugar

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(Footnote 16 continued) less freight, insurance, etc.; world price; prices at specially negotiated sales; etc. Weights are assigned in accordance with the amount of sugar sold in the various markets. This is necessary because a quota limits the amount of sugar Cuba may sell in the generally higher priced United States market. When wages were tied to the promedio price of sugar they were actually tied to the definitive promedio price. The definitive promedio price is an ex post concept. After the year is over the government looks back and determines the definitive promedio price in light of the fluctuations that have occurred in the promedio price during the year. The government sets a tentative promedio price several times during the year for wage purposes to prevent the necessity of making a wage adjustment at the end of the year.

was below the 1947 peak level in those years.[17] However, if the price of sugar changes greatly, a new price level is eventually set for the purpose of calculating wages. But 1953 marked the first year that wages declined since before World War II.[18] This 1953 wage rate was then frozen for a time. Decree Number 174 issued by the Ministry of Labor froze 1954 wages to the 1953 level even though the price of sugar had declined further from its 1953 level. That is to say, even with controls wages have been very sticky in regard to downward movements. Decree Number 174 set forth that wages in 1954 were to be determined "as if the price of sugar per pound, raw value f.o.b. Cuba, were 4.70 cents."[19] This was above the actual promedio price. Table 22 summarizes the prices to which wages were tied, and also the promedio prices for the years 1948 through 1954.

The base wages of all of the harvest season workers are tied by a formula to this price of sugar. The formula, however, as noted above, differs for each type of worker. Moreover, after the basic wage has been determined, two additional payments must be added to the wages of all harvest season workers. These payments are, first, a 10

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[17] Presidential Decree Number 4602, (December 30, 1947), quoted U. S. Department of Agriculture, Air Pouch Number 41 from Havana (May 8, 1951).

[18] The 1952 wage rate was the same as 1951, although the sugar differential bonus paid in 1951 was not granted in 1952. See infra, p.124, for a description of this bonus.

[19] Ministry of Labor, Decree Number 174, Quoted U.S. Department of Agriculture, Foreign Service Despatch No. 1013, (February 16, 1954).

TABLE 22

PRICE OF SUGAR FOR WAGE PURPOSES AS OPPOSED TO PROMEDIO PRICE: 1948-1954

Year	Price for Wage Purposes (Cents per Sp. Pound)	Promedio Price (Cents per Sp. Pound)	Promedio Price (Cents per Eng. Pound)
1948	4.96	4.39	4.33
1949	4.96	4.55	4.49
1950	4.96	4.85	4.78
1951	4.96	5.29	5.21
1952	4.96	4.35	4.28
1953	4.70	4.11	4.05
1954	4.70	3.99	3.93

per cent bonus payment and, second, a 9.09 per cent vacation payment which is 9.09 per cent of the 110 per cent.[20] Furthermore, in 1951 all workers in both the dead and harvest seasons received an increment over and above this. This increment was the so-called sugar differential payment.[21] This payment was authorized because the world price of sugar

[20] Presidential Decree Number 117, (January 17, 1945).

[21] Ministry of Labor, Resolution Number 3367, quoted United States Department of Agriculture, Foreign Service Despatch Number 1131, (January 11, 1952).

rose sharply that one year owing to the large speculative demand arising from the Korean War. This 1951 differential amounted to a 10.25 per cent increase, and it was the percentage increase in the definitive promedio price from 1947 to 1951.[22] This 1951 differential payment was calculated as shown below:

$$\$.05292038 \quad \text{Definitive promedio price per pound in 1951.}$$

$$\frac{\$.0480}{.00492038} \quad \text{Definitive promedio price per pound in 1947.}$$

$$\frac{\$.00492038}{.0480} = .1025$$

After the season was nearly over all sugar workers received this 10.25 per cent increase made retroactive for the entire year.[23]

The formula that ties the base wage of all harvest season workers to the price of sugar is spelled out in The Sugar Coordination Law of 1937. This law provides that 100 "arrobas" of cane be considered as equivalent to a certain number of pounds of sugar for the purpose of calculating the wages of cutters and haulers.[24] The amount of sugar in 100 arrobas of cane is, of course, dependent upon

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[22]The definitive promedio price refers to the yearly average price, and it must be calculated because the price of sugar does fluctuate slightly during the year.

[23]Ministry of Labor, Resolution Number 3367, quoted United States Department of Agriculture, Foreign Service Despatch Number 1131, (January 11, 1952).

[24]One arroba equals 25 Spanish pounds and 25.35 English pounds.

the richness of the cane, but for the above purpose the government issues a decree determining the sugar yield according to a sliding scale. This scale has only a very small range, but that range varies with the actual average sugar yield of the cane over the previous three years. Table 23 illustrates the amount of sugar per 100 arrobas of cane for the purpose of calculating these wages.

TABLE 23

SUGAR CONTENT OF CANE FOR PURPOSES OF CALCULATING WAGES OF CUTTERS AND HAULERS IN CUBA

Average Sugar Yield for the Previous Three Years		Pounds of Sugar, the Value of Which is to be Paid for Cutting and Hauling of 100 Arrobas of Cane
More Than	To	
---	11.50 per cent	50.5 pounds
11.50 per cent	12.50 per cent	51.0 pounds
12.50 per cent	13.25 per cent	52.0 pounds
13.25 per cent	---	52.5 pounds

Source: Sugar Coordination Law of 1937, Chapter V, Article XXXV.

The sugar content of cane does not fluctuate greatly in Cuba. In recent years it has averaged between 12.5 and 13.25 per cent and has nearly always provided the cutters and haulers with the 52 pound rate. Only rarely has the three-year average yield gone high enough to warrant the

52.5 pound rate, and in these instances only in a few fields. It is apparent, then, that this higher rate has applied to only a very few workers. Never has the rate gone below the 52 pound rate since World War II for any significant number of workers. In addition, the difference in the total daily wage for cutters and haulers between the 52 pound and the 52.5 pound rate is only $.03 and $.05, respectively, with the promedio price of sugar at its 1954 level. This differential is insignificant, and since only a very few, if any, workmen receive the differential, we may safely disregard it.

The Cuban Sugar Coordination Law provides further that the appropriate number of pounds (52) times the price of sugar is to be paid cutters and haulers for each 100 arrobas they cut and haul. This payment is split between the cutter and hauler on the basis of 62.5 per cent to the cutter and 37.5 per cent to the hauler which, as we shall see, still enables the hauler to earn a much higher pay. This payment then becomes the base pay to which the above-mentioned bonuses are added.

There are approximately five times as many cutters as haulers in the Cuban cane fields, and in regard to haulers we should note one further qualification. Only one-half of their 37.5 per cent is payment for labor, and the other half, or 18.75 per cent of the total, is paid as rent for the cart or truck.

The method of calculating daily wages for cutters and haulers may be clarified by the examples below which represent the actual case in the years 1953 and 1954. For other years we need only change the price of sugar, which is the first figure.

For Cutters

$ .047	Price of sugar per pound for the purpose of calculating wages.
52	Pounds of sugar per 100 arrobas of cane.
2.444	
.625	Cutters' share according to Sugar Coordination Law of 1937.
1.5275	
.15275	Plus 10 per cent bonus.
1.68025	
.15273	Plus 9.09 per cent vacation pay.
1.83298	Pay per 100 arrobas cut.
190	Average number of arrobas cut per worker per day.
3.48	Daily wage in 1953 and 1954.

For Haulers

.047	Price of sugar per pound for the purpose of calculating wages.
52	Pounds of sugar per 100 arrobas of cane.
2.444	
.375	Haulers' share according to Sugar Coordination Law of 1937.
.9165	One-half of which goes to labor and one-half as rent to the cart owner.
.45825	Labor's share.
.045825	Plus 10 per cent bonus.
.504075	
.045820	Plus 9.09 per cent vacation pay.
.549895	Pay per 100 arrobas hauled.
950	Average number of arrobas hauled per day per worker.
5.22	Daily wage in 1953 and 1954.

In the case of miscellaneous harvest season workers, the Sugar coordination Law provides that the value of 50

pounds of sugar serve as the basis for determining wages, instead of the formula based on sugar content of the cane as in the case of cutters and haulers. Otherwise the calculations are similar. The following illustration shows the daily wages of miscellaneous harvest season workers for the years 1953 and 1954.

$ .047	Price of sugar per pound for the purpose of calculating wages.
50	Pounds of sugar.
2.3500	
.235	Plus 10 per cent bonus.
2.585	
.2349765	Plus 9.09 per cent vacation pay.
2.8199765	
2.82	Daily wage in 1953 and 1954.

The Sugar Coordination Law of 1937 also sets forth the daily wage for dead season workers. In this case, however, fewer calculations are required as Article XXXVIII of the law spells out exactly what the base wage shall be. This wage also varies according to the price of sugar as shown in Table 24.

Furthermore, this sliding scale takes into consideration the 10 per cent bonus and the 9.09 per cent vacation payment described above.[25] In 1948, however, the Minister of Labor provided for an additional payment to be made to workers in the dead season. This decree called for 48 hours pay for 44 hours work, which amounted to an increase

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[25]See supra, p. 122.

TABLE 24

RAW SUGAR PRICES F.O.B. CUBAN WAREHOUSES AND THE CONSEQUENTIAL DAILY WAGES OF DEAD SEASON WORKERS IN CUBA

Price per Pound of Sugar f.o.b. Cuban Warehouse		Base Wages per Day
More than	To	
---	1.75¢	$ 0.80
1.75¢	2.00	0.85
2.00	2.25	0.90
2.25	2.50	1.00
2.50	2.75	1.20
2.75	3.00	1.50
3.00	3.25	1.60
3.25	3.50	1.75
3.50	3.75	2.00
3.75	4.00	2.25
4.00	4.25	2.40
4.25	4.50	2.60
4.50	4.75	2.70
4.75	5.00	2.88

of 9.09 per cent.[26] This must be added to the above schedule, thereby raising the daily wage for dead season workers for 1953 and 1954, with sugar prices at 4.70 cents per pound, to $2.95.

In 1955 all wages were cut somewhat. The price of sugar fell once more; hence the Cuban Government was forced to lower the price which is used to calculate wages.

With these formulas we are able to calculate daily wages for Cuban sugar workers for all the years subsequent to 1937. We also know the proportions of dead season and harvest season workers, as well as cutters and haulers, and therefore, we can further calculate a weighted average wage rate. We may then proceed to utilize this weighted average to determine the agricultural labor cost per ton of cane and per ton of sugar in Cuba. We are also able to calculate a time series of these costs and thus compare the possible trend with labor costs over the same time period on United States beet farms. This will be done in the next chapter.

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[26] Presidential Decree 1568, (March 6, 1948).

CHAPTER VII

AGRICULTURAL LABOR COSTS AND PRODUCTIVITY TRENDS ON UNITED STATES BEET AND CUBAN CANE FARMS

In this chapter we will examine labor productivity and costs on United States beet fields on the one hand, and Cuban cane fields on the other in order to quantify the differences. Furthermore, we will endeavor to show whether these differences have changed over time, and if so, how important the changes have been. First, we will examine the physical productivity of farm labor, and then labor costs over the eighteeen-year time period from 1937 through 1954.

Our data for the United States beet area are derived from published and unpublished Department of Agriculture sources. The Department collects a variety of statistical information on the growing of sugar beets and sugar cane. Much of this information is supplied by the processors of beets and cane, but in addition, members of the Department take field trips from time to time for the purpose of collecting data. The Department makes program payments to farmers that depend, in part, upon the acreage

and tonnage of beets grown. The Department also determines minimum wages for all agricultural workers in the domestic sugar industry. In these connections it keeps detailed up-to-date records. Some of the Department's findings are published and easily available, and those that are not are mostly of a non-confidential nature and are available in the Department's files in Washington.

The United States Department of Agriculture does not, however, maintain detailed records of the physical productivity and cost of agricultural workers in Cuba. In fact this information is not available in complete form anywhere in the United States. Thus it has been necessary to draw upon Cuban sources to supplement the limited records on Cuba kept by the United States Department of Agriculture.[1] We shall consider first the output per worker in the two areas and then proceed to money costs.

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[1]These data were obtained by contacting the Cuban Government directly. Most of our Cuban data came from the files of the Instituto Cubano de Estabilizacion del Azucar (ICEA) (Cuban Sugar Stabilization Institute CSSI). This institute is an organ of the Cuban Government, and it determines the amount of sugar that Cuba will produce. Also it supervises the sales in the various markets that Cuba sells, and by means of quota allotments maintains orderly sugar marketings. However, CSSI data were supplemented by data from the Cuban Department of Agriculture, the Cuban Department of Labor, and the National Association of Cuban Plantation Owners, the National Bank of Cuba, and the Cuban National Census Office. In addition, the author has contacted directly a large Cuban sugar company that is considered representative of Cuba as a whole and has found only slight variations from the official government figures. However, in every case official government figures were used in making all calculations.

Physical Productivity

United States Beet Area

Man-days of field labor requirements per acre of beets have shown a slight degree of fluctuation in recent years. In general, labor requirements per acre moved downward moderately from 1937 to 1950, after which a more rapid downward trend took place. However, labor requirements per acre are not very meaningful by themselves because of variations in the output per acre. The introduction of new varieties of seed or the greater use of fertilizer, as well as the greater bounty of nature in a certain year, may result in an increase in labor per acre being less than the increase in output.

A more important indication of the productivity of labor is average man-days per ton of beets. Even this could rise while productivity was increasing if a greater sucrose content was obtained because of more man-hours worked. Average man-days per ton of beets, however, were remarkably constant during the first nine years of our time series. Since 1946 man-days per ton of beets have declined every year except in 1949, and in that year the sucrose content was almost a full percentage point higher than in 1948. Consequently, it is still true that man-days per ton of sugar declined from 1948 to 1949.

Thus the best indication of the productivity of labor is average man-days of field labor per ton of sugar. This can be obtained if we have man-days per ton of beets since we know the commercially recoverable sugar content of the beets. The man-day requirements of agricultural labor per ton of sugar did not change to any great extent from 1937 until after World War II, but then a rapid downward movement took place. In every year from 1937 to 1946 slightly over six man-days were required per ton of sugar raw value, except in 1940 and 1941 when less than six man-days were needed. This aberration, however, can be explained by the greater yield per acre during those two years because of a windfall from nature and not as the result of applying more labor per acre. In the postwar period these labor requirements fell from 6.23 man-days per ton of sugar in 1945 to 4.72 man-days in 1954. This is a decline of over 24 per cent. However, in 1946 and 1947 a windfall from nature in the form of a greater yield per acre was again present, and it was not until 1948 that man-days per ton of sugar declined significantly because of the rising productivity of labor. Since 1948 this decline has been rapid; labor requirements fell from 6.01 man-days in 1948 to 4.72 man-days in 1954. This is a decrease in input per unit of output of over 21 per cent. Table 25 summarizes man-days per acre, per ton of beets, and per ton of sugar since 1937.

TABLE 25

AGRICULTURAL LABOR MAN-DAYS PER ACRE, PER TON OF BEETS, AND PER TON OF SUGAR ON UNITED STATES BEET FARMS

Year	Per Acre	Per Ton of Beets	Per Ton of Sugar (Raw Value)
1937	----	----	6.50
1938	----	----	6.12
1939	----	----	6.06
1940	----	----	5.60
1941	----	----	5.52
1942	----	----	6.39
1943	----	----	6.24
1944	----	----	6.00
1945	----	----	6.23
1946	----	----	5.66
1947	----	----	5.23
1948	11.80	.866	6.01
1949	13.32	.900	5.79
1950	12.43	.844	5.70
1951	11.04	.731	4.97
1952	11.03	.720	4.79
1953	11.59	.709	4.75
1954	11.06	.686	4.72

Source: United States Department of Agriculture, Data since 1948 from Sugar Report No. 41, (Washington: Sugar Division, September, 1955), pp. 32-33. Figures do not agree with the figures in Sugar Report Number 41 because we converted the nine-hour man days given by the Department of Agriculture to eight-hour man days. Data previous to 1948 calculated from available Department of Agriculture figures.

This same indication of the productivity of labor may also be shown by output per man day if we prefer. This information may be tabulated in terms of beets per day or its sugar equivalent. Daily output of beets per worker was steady in the prewar period, but has been rising since the end of World War II. Daily output of sugar per worker was also fairly steady in the early years of our time series but rose in the later years. Output per worker was 307.69 pounds of sugar in 1937 and 423.28 pounds in 1954; an increase of slightly more than 37 per cent over the seventeen-year period. However, the output per worker increased by more than 27 per cent over the seven-year time period beginning with 1948. Table 26 shows the trends of daily output per man-day.

Cuban Cane Area

Man-days of field labor requirements per acre of cane in Cuba show little variation during our time period and no downward trend is evident. However, for the reasons given above, man-days per acre are not meaningful, and we must convert acreage data to man-days per ton of cane and per ton of sugar. With this done, we obtain the same results as before. Labor requirements per ton of sugar reflect no significant downward trend and very little fluctuation. These results are summarized in Table 27.

TABLE 26

AVERAGE OUTPUT PER WORKER PER EIGHT-HOUR DAY ON UNITED STATES BEET FARMS

Year	Beets Per Day		Sugar Per Day (Raw Value)	
	Pounds	Tons	Pounds	Tons
1937	1960.78	.98	307.69	.154
1938	2105.26	1.05	326.79	.163
1939	2020.20	1.01	330.03	.165
1940	2325.58	1.16	357.14	.178
1941	2352.94	1.17	362.31	.181
1942	2127.66	1.06	312.98	.156
1943	2105.26	1.05	320.51	.160
1944	2127.65	1.06	333.33	.166
1945	2173.91	1.09	321.02	.161
1946	2439.02	1.21	353.35	.176
1947	2597.40	1.29	382.40	.191
1948	2308.80	1.15	332.29	.166
1949	2222.22	1.11	345.20	.172
1950	2370.37	1.18	350.64	.175
1951	2735.04	1.36	402.21	.201
1952	2777.77	1.39	417.32	.208
1953	2821.02	1.41	421.27	.210
1954	2914.39	1.46	423.28	.212

Source: Table 26 constructed from Table 25. Figures rounded.

TABLE 27

AGRICULTURAL LABOR MAN-DAYS PER ACRE OF CANE, PER TON OF CANE, AND PER TON OF SUGAR IN CUBA

Year	Per Acre	Per Ton of Cane (English Short Tons)	Per Ton of Sugar (Raw Value)	
			(Spanish Long Tons)	(English Short Tons)
1937	21.92	1.19	11.51	10.14
1938	21.92	1.19	11.51	10.14
1939	21.92	1.19	11.51	10.14
1940	21.46	1.16	11.32	9.97
1941	21.46	1.16	11.32	9.97
1942	21.46	1.16	11.32	9.97
1943	21.46	1.16	11.32	9.97
1944	21.46	1.16	11.32	9.97
1945	21.02	1.17	11.34	9.99
1946	21.02	1.17	11.34	9.99
1947	21.02	1.17	11.34	9.99
1948	21.35	1.15	10.61	9.34
1949	19.93	1.27	11.46	10.09
1950	19.63	1.23	10.74	9.46
1951	20.00	1.25	11.09	9.77
1952	21.14	1.13	10.60	9.33
1953	19.85	1.08	9.60	8.45
1954	20.59	1.13	10.23	9.01

Source: Cuban Sugar Stabilization Institute. Data previous to 1948 are five-year averages.

It is clear from Tables 25 and 27 that man-days per ton of sugar have been relatively constant in Cuba, whereas they have been declining in United States beet fields in recent years. In 1954 it required about half as many man-days of agricultural labor to produce one ton of sugar, raw value, in United States beet fields as it did in Cuba. Cuba required 9.01 man-days per ton of sugar, raw value, compared to 4.72 man-days in the United States. In 1948 sugar production in the United States required 6.01 man-days per ton, nearly two-thirds of the Cuban figure of 9.34 man-days. The figures of 10.14 in Cuba and 6.50 in the United States in 1937 indicate that the ratio was approximately two-thirds to one in that year also. Tables 25 and 27 indicate that throughout the prewar and war years of our time series the United States requirements were approximately two-thirds the Cuban figures, but that since about 1948 the United States requirements have declined to nearly half those of Cuba.

We may show the same results by making a comparison of average output of sugar per man-day. Table 28 depicts the average output of cane and of sugar per man-day in Cuba. When this table is compared with Table 26, it is clear that the advantage, in physical terms, of United States Agricultural workers over Cuban workers has remained quite constant over the first nine years of our time series but has increased since the end of World War II. In 1937 the physical output of sugar of field workers in the domestic beet areas was 56 per cent greater than that of their counterparts in Cuba. By 1945 this differential between American and Cuban workers had expanded to 60 per cent, and by 1954 to more than 90 per cent.

TABLE 28

AVERAGE OUTPUT PER WORKER PER EIGHT-HOUR DAY IN CUBA

Year	Cane Per Day		Sugar Per Day (Raw Value)	
	English Pounds	English Short Tons	English Pounds	English Short Tons
1937	1680.67	.84	197.23	.0986
1938	1680.67	.84	197.23	.0986
1939	1680.67	.84	197.23	.0986
1940	1724.13	.86	200.60	.1003
1941	1724.13	.86	200.60	.1003
1942	1724.13	.86	200.60	.1003
1943	1724.13	.86	200.60	.1003
1944	1724.13	.86	200.60	.1003
1945	1709.40	.85	200.20	.1001
1946	1709.40	.85	200.20	.1001
1947	1709.40	.85	200.20	.1001
1948	1740.63	.87	214.10	.1070
1949	1579.42	.79	198.22	.0991
1950	1620.74	.81	211.51	.1057
1951	1600.25	.80	204.83	.1024
1952	1763.79	.88	214.30	.1071
1953	1848.62	.92	236.62	.1183
1954	1776.41	.89	222.05	.1110

Source: Calculated from data sent by the Cuban Sugar Stabilization Institute. Data previous to 1948 are five-year averages.

Labor Costs

Physical productivity, however, is only the first step. In order to compare costs, our primary concern, we must examine the wages paid to these workers over the same period.

United States Beet Area

Since minimum wages are set by the Department of Agriculture after public hearings, it is easy to obtain minimum figures, as we saw in Chapter V. However, wages are in almost all cases above the minimum, and therefore we must ascertain actual daily earnings. These actual earnings are also available because the Department maintains detailed wage records. The daily wages of agricultural sugar beet workers were stable from 1937 through 1940. Then in 1941 they rose slightly, reflecting a tighter labor supply. During the remainder of World War II and in the immediate postwar years wages rose more rapidly, reflecting a continued labor shortage as well as inflationary forces. In 1948, for example, the daily wage stood at $6.90 per nine-hour day. By 1954 this figure had risen to $7.71. If we turn these 1948 and 1954 figures into eight-hour days in order to make them commensurate with Cuban figures, they become $6.13 and $6.85, respectively.

With this wage rate information, and with data on man-day requirements per ton of sugar, we can determine field labor costs per ton of sugar. These average daily earnings of field workers, the man-day requirements per ton of output, and the consequential field labor cost per ton of sugar are shown in Table 29.

TABLE 29

UNITED STATES AGRICULTURAL LABOR MAN-DAYS PER TON OF BEETS AND SUGAR, AND LABOR COSTS PER DAY AND PER TON OF SUGAR

Year	Man-days Per Ton		Wages Per Day	Costs Per Ton of Sugar (Raw Value)
	Beets	Sugar (Raw Value)		
1937	----	----	$----	$16.25
1938	----	6.12	----	----
1939	----	----	----	14.91
1940	----	5.60	----	----
1941	----	----	----	15.18
1942	----	6.39	----	----
1943	----	----	----	26.95
1944	----	6.00	----	----
1945	----	----	----	31.52
1946	----	5.66	----	----
1947	----	----	----	31.54
1948	.866	6.01	6.13	36.91
1949	.900	5.79	5.97	34.61
1950	.844	5.70	6.05	34.53
1951	.731	4.97	6.56	32.62
1952	.720	4.79	6.79	32.55
1953	.709	4.75	6.85	32.54
1954	.686	4.72	6.85	32.38

Source: United States Department of Agriculture. Figures since 1948 from U. S. Department of Agriculture, Sugar Report No. 41, (Washington: Sugar Division, September, 1955), p. 33. Data for nine-hour day converted to eight-hour basis. Data previous to 1948 calculated from available Department of Agriculture figures.

It is apparent that during the early years of our time series, from 1937 to 1941, when both wages and the productivity of labor were fairly stable, field labor costs per ton of sugar were also stable. The increase in labor costs per ton of sugar during the middle years of our time period, from 1942 to 1948, reflects the increase in wages that took place during that time. This is evident for there was no great change in the physical quantity of inputs per unit of output during those years. After 1948 it is apparent that although daily wages have been rising, field labor costs per ton of sugar have actually declined, at least slightly, every year. Labor costs per ton of sugar have declined from $36.91 to $32.38, or by over 12 per cent, whereas wages rose from $6.13 to $6.85 per day, or by approximately 11 per cent over the period 1948 to 1954. This lower labor cost per ton of sugar is, of course, due to the substitution of capital for labor which, although it displaced some labor, also made the remaining labor more productive.

We may also show the reduced field labor cost of sugar by the output of raw sugar per dollar expended on field labor. Such a tabulation is shown in Table 30.

Cuban Cane Area

Since actual wages are fixed by the Cuban Government, we can obtain daily wage rates of agricultural workers in

TABLE 30

UNITED STATES OUTPUT OF BEETS AND SUGAR PER DOLLAR OF AGRICULTURAL LABOR EXPENDITURES

Year	Beets (English Pounds)	Sugar (Raw Value English Pounds)
1937	784.31	123.07
1938	842.10	130.71
1939	821.22	134.15
1940	930.23	142.85
1941	855.61	132.11
1942	594.31	87.42
1943	487.33	74.19
1944	444.19	69.59
1945	429.63	63.44
1946	433.21	62.76
1947	430.75	63.41
1948	376.43	54.18
1949	372.02	57.79
1950	391.58	57.93
1951	416.93	61.31
1952	409.03	61.45
1953	411.63	61.47
1954	425.25	61.76

Source: Calculated Table 30 from Tables 26 and 29.

the Cuban cane fields as explained in Capter VI.[2] Because daily wage rates of Cuban cane workers are tied, in part, to the price of sugar, they fluctuate somewhat as the price of sugar changes. Until after 1941 wages were relatively stable, but then they moved upward with the wartime and immediate postwar inflation. Since 1948, wages have fluctuated at this higher level with changes in the price of sugar. The wage rate was at its peak in 1951 when there was a large speculative demand for sugar arising from the Korean War. Since we also know the agricultural man-day requirements per ton of cane and sugar, we are able to calculate agricultural labor costs per ton. These daily wage rates and agricultural labor costs per ton of cane and sugar are summarized in Table 31.

Table 31 shows that agricultural labor costs per ton of sugar moved upward with inflation until 1948, and that they have fluctuated moderately since 1948. In recent years, with the exception of 1951, this fluctuation has been small and no appreciable trend is evident.

If we compare Table 31 with Table 29, we see that, except in 1951, agricultural labor costs per ton of raw sugar were higher in the United States than in Cuba, but the gap seems to have been narrowing. In the prewar period,

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[2]See supra, p.119, for a description of Cuban wage determination.

TABLE 31

CUBAN LABOR REQUIREMENTS PER TON, DAILY EARNINGS OF CUBAN SUGAR CANE FIELD WORKERS, AND AGRICULTURAL LABOR COSTS PER TON OF CANE AND SUGAR

Year	Man-Days Per Ton		Crop or Harvest Season Wage		
	Cane, English Short Tons	Sugar, English Short Tons (Raw Value)	Miscellaneous Day Work, Daily Earnings	Cutting and Lifting, Daily Earnings	Hauling, Daily Earnings
1937	1.19	10.14	$ .91	$ 1.01	$ 1.42
1938	1.19	10.14	.80	.81	1.14
1939	1.19	10.14	.80	.80	1.10
1940	1.16	9.97	.80	.83	1.17
1941	1.16	9.97	.80	.80	1.07
1942	1.16	9.97	1.37	1.52	2.15
1943	1.16	9.97	1.33	1.45	2.07
1944	1.16	9.97	1.46	1.62	2.20
1945	1.17	9.99	1.79	1.98	2.79
1946	1.17	9.99	2.13	2.36	3.32
1947	1.17	9.99	2.88	3.18	4.49
1948	1.15	9.34	2.98	3.67	5.61
1949	1.27	10.09	2.98	3.67	5.61
1950	1.23	9.46	2.98	3.67	5.61
1951[a]	1.25	9.77	3.28	4.05	6.08
1952	1.13	9.33	2.98	3.67	5.61
1953	1.08	8.45	2.82	3.48	5.22
1954	1.13	9.01	2.82	3.48	5.22

[a]Includes the 1951 differential payment.

[b]Earnings are weighted in accordance with the proportion of cutters, haulers, etc, to the total labor force in Cuban cane fields.

Source: Figures calculated from data sent by the Cuban Sugar Stabilization Institute.

TABLE 31 - Continued

Dead Seasons Wage, Daily Earnings	Weighted Average Wage, Daily Earnings[b]	Agricultural Labor Costs Per Ton of Cane and Sugar	
		Cane, English Short Tons	Sugar, English Short Tons (Raw Value)
$ .80	$ .94	$1.12	$9.53
.80	.83	.99	8.42
.80	.82	.98	8.31
.80	.83	.96	8.28
.90	.85	.99	8.47
1.61	1.54	1.78	15.35
1.61	1.50	1.74	14.96
1.74	1.64	1.90	16.35
1.94	1.96	2.29	19.58
2.13	2.38	2.67	22.78
2.88	3.08	3.60	30.77
3.14	3.44	3.95	32.13
3.14	3.40	4.30	34.30
3.14	3.41	4.21	32.24
3.46	3.75	4.68	36.61
3.14	3.45	3.91	32.19
2.95	3.28	3.55	27.72
2.95	3.25	3.66	29.27

Cuba had a substantial agricultural labor cost advantage in the production of sugar. This advantage, however, declined with the inflation during World War II and the immediate postwar period. In 1937 the agricultural labor cost of producing one ton of sugar, raw value, was $9.53 in Cuba and $16.25 in the United States. This ratio did not change greatly until World War II, but by 1946 the same cost per ton figures were $22.78 in Cuba and $31.86 in the United States. The differential in Cuba's favor had changed absolutely from $6.72 to $9.08 per ton of sugar, raw value, but in percentage terms had decreased from 70.5 per cent of the Cuban cost in 1937 to 39.9 per cent in 1946. Since the end of World War II this gap has been declining further. From 1948 to 1954 it narrowed from $4.78 to $3.11 per ton of sugar, raw value, or in percentage terms from 14.9 per cent to 10.6 per cent. That is to say, agricultural labor costs per ton of sugar in the United States beet fields were 70.5 per cent above the Cuban figure in 1937, 39.9 per cent in 1946, and only 10.6 per cent in 1954. Or if we wish to use United States costs as a base, Cuban costs rose from 58.6 per cent of the United States costs in 1937, to 71.5 per cent in 1946, and 90.3 per cent in 1954.

As in the case of United States beet producers, we are also able to show the agricultural labor cost of sugar by the output of sugar per dollar expended on agricultural

TABLE 32

CUBAN OUTPUT OF CANE AND SUGAR PER DOLLAR OF AGRICULTURAL LABOR EXPENDITURES

Year	Cane English Pounds	Sugar English Pounds (Raw Value)
1937	1787.94	209.81
1938	2024.90	237.62
1939	2049.59	240.52
1940	2077.26	241.68
1941	2028.38	236.00
1942	1119.56	130.25
1943	1149.42	133.73
1944	1051.29	122.31
1945	872.14	102.14
1946	749.73	87.81
1947	555.00	65.00
1948	505.99	62.24
1949	464.53	58.30
1950	475.29	62.02
1951	426.73	54.62
1952	511.24	62.12
1953	563.60	72.14
1954	546.59	68.32

Source: Table 32 derived from Tables 28 and 31.

labor in Cuba. This breakdown appears in Table 32.

The output of sugar per dollar spent can, of course, fluctuate with changes in yield per acre and with variations in the sucrose content of the cane. However, this alone does not explain the changes shown in the table. Rather, wartime inflation accounted for the big change from 1937 to 1947 or 1948. Since that time, fluctuations in the price of sugar, and hence in wage rates, have accounted for most of the variations shown in the table.

A comparison of Table 32 with Table 30 indicates that Cuba lost much of her earlier advantage, and that the upward trend of sugar production per dollar spent on agricultural labor in recent years has been greater in the United States than in Cuba. In 1948, for example, the output of sugar, raw value, per dollar spent on agricultural labor in the United States was 54.18 pounds. By 1954 this figure had risen to 61.76 pounds; this increase amounted to 7.58 pounds or 13.9 per cent. In Cuba no clear trend is apparent, but in 1948 she produced 62.24 pounds per dollar spent, and in 1954 the figure was 68.32 pounds for an increase of 6.08 pounds or 9.2 per cent.

Our data have shown that Cuba has a cost superiority in sugar production insofar as agricultural labor is concerned. Moreover, Cuba has enjoyed this superiority in every year of our time series except in 1951 when a large speculative

demand for sugar existed. Therefore, we may ignore this particular aberration. Our data also indicate that Cuba's superiority has tended to decrease over time. If this decrease continues, the gap in productivity between the two areas may eventually be eliminated.

In the next chapter we will attempt to assess the factors associated with the increase in output in the United States and hence the decrease in Cuba's advantage.

CHAPTER VIII

AN ASSESSMENT OF FACTORS ASSOCIATED WITH CHANGES IN PRODUCTIVITY AND COSTS ON UNITED STATES BEET FARMS

We have seen that output per unit of labor in sugar beet production in the United States has been increasing, and that in recent years the increase has been greater than the rise in wage rates. Hence the money cost per ton of beets and sugar has fallen somewhat. Now we shall look into the reasons for this improvement and consider also whether other costs have entered to cancel the gain.

Early Cost Reductions

The reduction of man-hours per ton of beets is not a recent phenomenon. As early as 1915, when tractors first began to replace horses, man-hours per acre and per ton of beets began to fall. However, until very recently the decline was slow and sporadic. During the period from 1915 to 1934 total labor requirements per acre of beets only fell from about 125 to 104 man-hours.[1] This 17 per cent

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[1]Reuben W. Hecht and Keith R. Vice, Labor Used for Field Crops, U. S. Department of Agriculture Statistical Bulletin No. 144, (Washington: Agricultural Research Service, June, 1954), p. 5.

drop in the labor inputs per acre over this period was not impressive. Yield per acre was relatively stable over this 20-year period, ranging from a high of slightly over 11 tons per acre to a low of approximately nine tons, with the 20-year average about 10.3 tons per acre. Output was 10.7 tons per acre in 1915 and 9.8 tons in 1934; this meant that 12.1 man-hours per ton of beets were required in 1915 and 10.6 in 1934 -- a drop of 12 per cent. This slow process continued for a time during the 1930's when experiments were made on further mechanization. However, most of these experiments were unsuccessful, and as the depression deepened and an adequate supply of farm labor was assured, this experimentation received a setback. The 1935-39 five year average was 97 man-hours per acre of beets, and there was little change in the 1940-44 five-year average when 98 man-hours were required.[2] During these years the yield per acre averaged approximately 12.7 tons which meant that 7.7 man-hours or .962 man-days per ton of beets were required on United States beet farms.[3] This figure did not change to any great extent until shortly after World War II.[4]

More Recent Cost Reductions

A strong incentive for reducing labor requirements

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[2] Ibid.

[3] These are eight-hour man-days. This distinction is important for a nine-hour man-day is the rule on United States beet farms.

[4] See supra, p. 135.

did not exist until World War II when the accompanying labor shortage led to greater efforts to increase mechanization and to develop other labor saving devices. However, no real innovations took place until World War II was nearly over.

Innovations which increased the productivity of labor and reduced labor costs may be divided into four main categories: (1) more scientific methods of beet culture such as better insecticides and the greater use of fertilizer to increase the yield; (2) irrigation in certain areas in which water became available for the first time; (3) the introduction of improved seeds; and (4) mechanization, the most important of the four.

Better Beet Culture

Although the effect of such factors as better insecticides and the greater use of fertilizer is difficult to appraise, these improvements have increased the yield per acre. The greater use of fertilizer requires added labor during the growing season but reduces costs per ton of output. For example, harvesting costs, one of the main labor costs in beet growing, decline rapidly as yield rises because both hand and machine harvest workers are able to harvest more tons per day as yield rises.

The yield per acre has been rising very rapidly during the postwar period. In 1945, the last year of the

war, the United States average yield per acre was 12.1 tons, whereas in 1954 it was 16.1 tons. Table 33 summarizes yields per acre on United States beet farms since 1937, the 1950-54 five-year average, and the 1925-54 thirty-year average. The increase in the average yield per acre has coincided with the use of more and better insecticides and fertilizer.

TABLE 33

YIELD PER ACRE ON UNITED STATES BEET FARMS: 1937-1954 (TONS)

Year	Average Yield Per Acre (Harvested)
1937	11.6
1938	12.4
1939	11.8
1940	13.5
1941	13.7
1942	12.2
1943	12.0
1944	12.1
1945	12.1
1946	13.3
1947	14.2
1948	13.5
1949	14.9
1950	14.7
1951	15.1
1952	15.4
1953	16.3
1954	16.1
1950-54[a] Average	15.48
1925-54[a] Average	12.56

[a]Supplied by Farmers and Manufacturers Beet Sugar Association, Saginaw, Michigan, Mimeographed Memorandum (July 22, 1955), p. 2.

Source: United States Department of Agriculture, Sugar Statistics, Bulletin No. 150, (Washington: Government Printing Office, December, 1954), p. 7.

Irrigation

While the yield per acre has increased in all areas, it has risen more in the West Coast states than elsewhere. This may be partially explained by the fact that irrigation has been possible in some West Coast areas only since World War II. Water applied to beets at the proper time increases the tonnage per acre and hence the sugar obtained per acre. In some areas, such as the Eastern beet belt, irrigation is normally not required for there is sufficient moisture in the soil. In Michigan, for example, there is little irrigation, but it becomes more widespread as we move west. In parts of Colorado, Nebraska, and the Imperial Valley of California farmers have irrigated for many year but often have been limited by the supply of water.

In the Columbian basin in Washington, on the other hand, water for irrigation has become available only recently. The result has been the opening of a vast acreage of new farmland, much of which has become beet farms. This opening of new land of great fertility explains not only the increase in acreage planted, but also the record yields per acre in Washington. Table 34 summarizes the yield per acre on Washington beet farms since 1937, and also the 1950-54 and 1925-54 averages.

Moreover, since this irrigation is ground irrigation rather than overhead irrigation, a very small capital investment is required. In order to obtain water, farmers pay the

TABLE 34

YIELD PER ACRE ON WASHINGTON BEET FARMS: 1937-1954 (TONS)

Year	Average Yield Per Acre (Harvested)
1937	14.5
1938	14.0
1939	16.4
1940	16.2
1941	18.4
1942	20.4
1943	21.2
1944	14.7
1945	19.7
1946	21.1
1947	21.2
1948	18.6
1949	21.3
1950	23.4
1951	23.2
1952	21.6
1953	23.2
1954	22.2
1950-54[a] Average	22.76
1925-54[a] Average	16.00

[a]Supplied by Farmers and Manufacturers Beet Sugar Association, Saginaw, Michigan, Mimeographed Memorandum (July 22, 1955), p. 2.

Source: United States Department of Agriculture, Sugar Statistics, Bulletin No. 150, (Washington: Government Printing Office, December, 1954), pp. 33-34.

Bureau of Reclamation the costs associated with the construction of transportation and distribution facilities necessary for getting water to the farm, and also the costs

associated with the operation and maintenance of these facilities.[5] Part of the cost of building dams, however, which is also necessary for providing water may be looked upon as a form of subsidy to these beet farmers.

New Varieties of Beet Seeds

There have been two kinds of improvements in seeds in recent years. First, there has been the general improvement that has increased the sugar content and also the size of the beet. This in turn has increased the output of sugar per acre and per man-day and, as a result, lowered costs. Development of superior seeds of this type has gone on for some time and is continuing. This factor, of course, results in labor receiving the benefit of greater powers of nature without any private cost.[6]

In recent years, however, there has been another seed development that has reduced labor inputs without itself affecting the yield. This has been the development of a lower germ seed. The old beet seed contained five or six germ cells, and when planted each of these seeds germinated five or six plants. In order to obtain a uniform stand of beets that would grow to the proper size the beets

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[5]Letter from Floyd E. Dominy, Chief, Division of Irrigation, Bureau of Reclamation, United States Department of Interior, Washington, D. C., June 12, 1956.

[6]There are public costs of research in developing these superior beet seeds.

had to be thinned; a process that required a great deal of labor even when done partially by machine rather than by hand. In 1941 the California Agricultural Experiment Station found that the seeds could be broken apart until only one to three germs remained. After 1942 farmers began to adopt this new segmented seed, and this action reduced the time and cost of thinning the beet fields. The ultimate goal, of course, is to obtain a single germ seed which, if precision drilled, would theoretically eliminate thinning altogether. Machinery was developed to place the seeds with accuracy the proper distance apart. However, planting was more difficult with the segmented seed because they were no longer uniform in size or shape. Therefore, a process of shearing or cutting the seeds was developed to lower the germs, and since this cutting resulted in greater uniformity in the size and shape of the seeds, it made possible more precision planting. By 1951 practically all the sugar beet acreage in the United States was seeded with segmented or "decorticated" seed.[7] Furthermore, the use of the new seed and the resulting thinner and more uniform beet stands aided further mechanization for such stands are better adapted for mechanical thinning.

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[7]R. D. Barmington and S. W. McBirney, Mechanizing the Production of Sugar Beets, Colorado Agricultural and Mechanical College, Bulletin No. 420-A (Fort Collins: Colorado Agricultural and Mechanical College Extension Service, April, 1952), p. 7.

Very recently botanists have developed a single germ seed which is an improvement on the shearing process. This new seed was used in 1956 for the first time but only to a limited extent. In 1957 considerable acreage was planted in monogerm seed,[8] but it will be several years before this seed is used exclusively.[9] However, as this seed is adopted in the future labor required for thinning will decline and costs will be reduced further.

There is, however, another problem that must be solved before thinning can be completely eliminated even with the single germ seed. For example, if only a single germ cell is planted growers take the risk that some may not germinate and the stand will be too thin. One danger here is in regard to insects which may eat the seed in the ground. This problem, however, has been largely solved by dipping the seed in insecticides before planting. Another factor in this connection is that some seeds will not emerge due to the crusting of the soil and adverse weather conditions. The problem of non-emergence has proved to be a

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[8]Letter from James H. Fischer, Secretary, The Beet Sugar Development Foundation, Fort Collins, Colorado, March 21, 1956.

[9]The best estimates indicate that in about five years this new monogerm seed will be used almost exclusively. Statement by Dr. Dewy Stuart, Geneticist, U. S. Department of Agriculture, Research Station, Beltsville, Maryland, personal interview. The main reason for this rapid adoption is because the growers obtain all of their seed from the refiners. Therefore, only the refiners need be convinced of the superiority of the new seed, and this has already been done. It appears that the main problem yet to be overcome is to grow this new seed in large enough quantities to supply all farmers.

more serious obstacle to overcome, especially in some areas. Here heavier planting must be continued and the resulting stands reduced by thinning. In other areas with a more favorable climate the problem of emerging from the soil is not so serious, and scientific precision planting with the new single germ seed promises to eliminate thinning almost completely. Even in areas where thinning is required it will be held to an absolute minimum and will be of such a nature that it can more easily be done by machine.

Mechanization

The most significant innovation, and the one which has reduced labor inputs and costs per ton of output to the greatest extent, is that of the mechanization of beet cultivation. This received its greatest impetus during World War II when a tremendous labor shortage existed.

Efforts to mechanize the spring work met with some success before serious attempts were made to mechanize harvesting operations. Experiments have been conducted since the nineteen thirties to develop mechanical thinners, blockers, weeders, and harvesters. Only limited success was achieved, however, and that mostly in blocking.[10] None of the early attempts to mechanize the harvesting operation proved successful. Furthermore, there was a

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[10]Blocking is a process that removes some of the beets and makes thinning easier and quicker.

reluctance on the part of many farmers to accept mechanization prior to World War II since cheap labor was abundant. During World War II, the source of labor for beet farmers began to "dry up" as migratory workers accepted higher paying jobs in industry. The gap was partially filled by importing more aliens, but the labor shortage remained severe and proved to be an effective stimulus for mechanization, a high degree of which took place very quickly. Moreover, growers found that the savings that resulted from this mechanization were so great that the trend continued even more rapidly after the war, despite the alleviation of the labor shortage.

The greatest advancements in mechanization since World War II were made in the harvesting phase of the operation. The first year that any significant amount of beets was harvested by machine was in 1943 when a modest three or four per cent of the total United States beet crop was harvested in this manner.[11] The machines used in 1943 were quickly improved and during the next few years mechanization spread very rapidly. By 1951 approximately 75 per cent of the total United States beet acreage was harvested by machine.[12] In 1952 the figure was approximately 85 per cent of the total acreage, and in 1954 over 90 per cent.[13]

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[11] R. D. Barmington and S. W. McBirney, op. cit., p. 30.

[12] Ibid.

[13] Statement by Mr. Ward S. Stevenson, Sugar Division, United States Department of Agriculture, personal interview.

In 1955 an even larger percentage of the total acreage was mechanically harvested. Table 35 summarizes the percentage of total sugar beet acreage harvested by machine in recent years. We recall that before 1943 beets were harvested completely by hand.[14]

TABLE 35

SUGAR BEET ACREAGE HARVESTED BY MACHINE: 1944-1954

Year	Percent of Total Acreage Harvested by Machine
1944	5
1946	15
1948	47
1950	56
1952	85
1954	90

Source: United States Department of Agriculture.

Thus in a period of slightly more than a decade beet harvesting has been transformed from a completely hand operation to an almost entirely mechanized procedure. This development, of course, reduced labor input requirements greatly. The Department of Agriculture estimated that in 1952 alone, the labor inputs were reduced by three million

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[14]One small phase of harvesting operations has been mechanized to a large degree since 1940. That is the process of loading the beets onto the truck after hand lifting and topping.

man-hours because of mechanization of the harvest work.[15]

This rapid mechanization of the harvesting work is reflected in the smaller field labor force needed on beet farms in recent years. Data before 1949 are scanty, but in that year United States beet farmers grew 10,468,444 short tons of beets from which 1,613,952 short tons of beet sugar, raw value, were produced. Insofar as sugar production was concerned, 1951 was almost an identical year. In that year 10,496,942 short tons of beets were grown, and 1,541,025 short tons of beet sugar, raw value, were produced. Nevertheless, the field labor force required for the 1951 crop was but 95,000 men as compared to 111,000 in 1949.[16] In 1953 and 1954 the number of field workers declined even further, while at the same time, beet and beet sugar production expanded. In 1954 American farmers produced 13,765,783 short tons of beets from which the refiners extracted 1,999,310 short tons of sugar, raw value. The greater output was produced as the field labor force on beet farms declined to 85,000 workers.[17]

Increased Capital Costs Associated With Mechanization

In order to mechanize heavy capital investments must be made in mechanical harvesters. A large two-row

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[15]U. S. Department of Agriculture, The Agricultural Situation, (Washington: Government Printing Office, August, 1954), p. 10.

[16]U. S. Department of Agriculture, Sugar Report No. 41, (Washington: Sugar Division, September, 1955), pp. 31-32.

[17]Ibid.

harvester costs upwards of $5,500, and the smaller one-row harvester about $2,500. Cost studies, made under the supervision of the Department of Agriculture, indicate that total capital costs for harvesting beets, including an allowance for both the tractor and the harvester, amount to somewhat under $8 per acre.[18]

Capital costs per ton of beets, associated with mechanical harvesting, vary somewhat with yield per acre as the machine moves at the same speed. In addition, capital costs, both per acre and per ton of beets, vary substantially with the size of the farm because of the high capital investment required. The large two-row harvester is not advantageous for a farm smaller than about 50 acres. However, the smaller harvester reduces machine harvesting costs below hand harvesting down to the 20 or 25 acre beet farm.[19] On a 50 acre farm the depreciation on a two-row harvester amounts to about $10 per acre and total harvesting costs (including both labor and capital costs) to approximately $25 per acre. This is less than the cost for hand

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[18]Warren R. Bailey, Economics of Sugar Beet Mechanization in California, U. S. Department of Agriculture Circular No. 907, (Washington: Government Printing Office, August, 1952), pp. 26 and 35. These costs include: maintenance and repairs, fuel, lubricants, taxes, insurance, shelter, depreciation, and interest on investment, for both the tractor and harvester.

[19]Warren R. Bailey, op. cit., pp. 29-30, and Roy M. Gilcreast, Sugar Beet Production in the Red River Valley, North Dakota Agricultural College and U. S. Department of Agriculture Co-operative Bulletin No. 363, (Fargo: North Dakota Agricultural College, December, 1950), p. 3.

harvesting which is about $35 per acre. On a 25 acre farm using a small single row harvester the depreciation per acre amounts to $8.60 and total harvesting costs to about $30 per acre, somewhat lower than the hand harvesting costs shown above.

Since some farmers have fewer than 25 acres and it is not always feasible for them to own harvesters, provisions have been made to rent these machines. Some farm implement dealers rent machines regularly, and also many larger farmers rent their machines when not in use. In addition, a few small farmers, whose acreage does not warrant owning harvesters, have purchased them and do custom harvesting for other small farmers. In this way practically all beet farmers, including the small ones, are able to mechanize their harvesting operations.

The mechanization of the spring work is not as complete as the harvesting work although serious attempts were made even earlier to mechanize this phase of the operations. Some progress was made in this connection as early as the thirties, but generally it achieved only limited success until recently. Mechanization of the harvesting operations has become a powerful spur for further mechanization of the spring work since many harvest workers were forced to seek work elsewhere, and this helped to "dry up" the labor force for the spring work. This stimulus

proved effective and progress has been made in developing mechanical blockers and thinners in recent years. Generally, however, mechanical thinning does not do a complete job, and often a final hand thinning operation is required. Nevertheless, if the beets are first partially thinned by machine, the hand touch-up process is much easier and quicker. This mechanization, together with precision planting of lower germ seeds, has reduced the man-hour inputs required for thinning by about one-half.[20] Since about 20 man-hours per acre are required for hand thinning, the labor requirements are reduced to approximately ten man-hours, and with minimum wages at $65 per hour this amounts to $6.50 per acre or more.[21] The added cost arising from mechanization is about $1.20 per acre for a net cost reduction per acre of $5.30.[22] The cost reduction per ton of beets varies somewhat with the yield, but with an average yield of 16.1 tons per acre (actual United States average in 1954) this reduction amounts to $.33 per ton of beets.

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[20]R. T. Burdick and Harry G. Sitler, The Economics of Sugar Beet Mechanization, Colorado Agricultural and Mechanical College Bulletin No. 411-A, (Fort Collins: Colorado Agricultural and Mechanical College Extension Service, July, 1953), p. 21.

[21]In California and certain other areas minimum wages are $.70 per hour, and in addition, wages are usually slightly above the minimum level.

[22]Warren R. Bailey, op. cit., p. 16. This is a cost study carried out by the University of California, and the California Agricultural Experiment Station in cooperation with the United States Department of Agriculture.

Complete data regarding the extent of mechanical thinning are lacking, but the Department of Agriculture estimated that in 1954 between 30 and 40 per cent of the total acreage received various degrees of mechanical thinning. This ranged from part hand and part machine thinning to complete machine thinning.[23] No estimates are available to indicate when mechanical thinning will be the rule on United States beet farms, but progress is being made toward mechanization.

In regard to mechanical hoeing and weeding even less has been accomplished than in the case of thinning. Experiments are now going on, however, that show signs of some success, although it is too early to determine definitely what the labor savings will be. A more recent development along this line is to eliminate or lessen hoeing and weeding by means of chemical weed control. The latest development of spraying by airplane involves costs of about $6 per acre, but the net cost reduction effected by the elimination of labor amounts to upwards of $4 per acre.[24] This amounts to approximately $.25 per ton of beets with 1954 yields. Insecticide activities

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[23]Letter from A. A. Greenwood, Chief, Wage, Price and Commodity Programs Branch, U. S. Department of Agriculture, June 27, 1956.

[24]Bailey, op. cit., p. 16.

also are being practiced more and more by airplane dusting, but no figures are available as to savings.

The above analysis has shown that capital cost increases, arising from mechanization, amount to almost $8 per acre for harvesting, about $1.20 per acre for thinning, and approximately $6 per acre for airplane spraying. This gives us a possible total capital cost increase of about $15.20 per acre if mechanization were complete and hand labor practically eliminated. It was also shown above that each step would result in total cost savings. However, no more than 30 to 40 per cent of the thinning is mechanized, and even this amount only partially. Even less has been done concerning mechanization to eliminate or lessen hand hoeing and weeding. Nevertheless, the above evidence suggests that in the future mechanization of the spring work will lower costs further. Mechanization of the harvest work is nearly complete and has resulted in practically all the labor cost reductions shown in Chapter VII.[25] Thus the $8 per acre shown above is a reasonable figure to illustrate the greater capital costs up to the present time. With present yields per acre this capital cost increase amounts to $.50 per ton of beets. The greater capital cost per ton of sugar will, of course, vary with the sucrose content of the beets. In

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[25]See supra, p. 142.

recent years 285 pounds of refined sugar (305 pounds of raw value equivalent) have been obtained per ton of beets, and hence the increased capital cost per ton of raw value sugar amounts to about $3.27.

An examination of the declining costs shown on page 142, indicates that the labor cost reductions from 1948 to 1954, the period during which mechanization took place, amounted to $4.53 per ton of raw value sugar for a net cost reduction of approximately $1.26. However, in the future, as mechanization of the spring work progresses, the net cost per ton of sugar will fall further.

In the following chapter we will examine the conditions in Cuba.

CHAPTER IX

FACTORS AFFECTING LABOR COSTS, AND POSSIBLE FUTURE TRENDS IN CUBA

Some Aspects of the Sugar Industry; Organization and Costs

In this chapter we will analyze some of the problems in sugar production peculiar to Cuba, the factors involved in her labor costs, and whether or not she is able to mechanize to increase output per man-day, and thus reduce labor cost per ton of sugar. Two of Cuba's chief problems in this connection appear to be: (1) how to reduce costs by mechanization without precipitating serious unemployment, and (2) how to overcome her scarcity of capital relative to land and labor.

Type of Farm

There are three different types of sugar cane growers in Cuba. First, there are the small colonos who cut and haul all, or nearly all, of their own cane and hire little or no labor. In 1951, the latest year for which figures are available, there were 27,134 of these small colonos. Although this figure amounted to just

over 68 per cent of all growers, this group produced only 10.15 per cent of the total cane grown in Cuba.[1] Second, there are the larger colonos who do hire labor. Some of these operate large plantations although they usually do not own all the land they cultivate, but rather rent much of it from the sugar mills. In 1951 there were 12,500 of these larger colonos, and they accounted for about 80 per cent of all the cane grown.[2] The third group of growers consists of the mills, and they grow what is called "administration-cane" on their large plantations. These mills normally produce about nine per cent of Cuba's cane.[3] Thus approximately 90 per cent of all the cane ground by the mills in Cuba is purchased from colonos.

The payment made for this cane fluctuates, in part, with the price of sugar and molasses and also somewhat with the sugar content of the cane.[4] However, a floor has been set below which the payment for cane may not go because of low sugar content. Presidential Decree 915 of 1950 fixed a minimum of six arrobas of sugar per 100

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[1]Cuba Economica y Financiera, Anuario Azucarero de Cuba. (Cuban Sugar Year Book), (Havana: Editora Mercantil Cubana, 1951), p. 157

[2]Ibid.

[3]Ibid.

[4]The definitive promedio price of sugar serves as a basis for payment to colonos for their cane.

arrobas of cane as the colonos' share irrespective of the sugar content of the cane.[5] Payment for cane is increased if the sugar content rises above this figure, but the colonos are guaranteed at least six per cent of the weight of their cane times the promedio price of sugar, plus 50 per cent of the proceeds from the sale of molasses. The existence of this floor may, of course, tend to weaken the incentive to grow superior cane and thus lead to greater costs.[6]

An important factor affecting the cost of "administration-cane" is the size of the plantations.[7] Cost studies made by the Cuban Government indicate that total costs per arroba of cane decrease with the size of the plantation and, as would be expected, also with the yield of cane per acre.[8] However, this is yield with a given amount of labor per acre. Sugar cane cultivation in Cuba

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[5]One arroba equals 25 Spanish pounds and 25.35 English pounds.

[6]This floor on the cane does not affect labor costs directly, but has been set because the wages paid by colonos are controlled. Since the quality of the cane is, in part, a function of the labor applied, this floor has an indirect effect on the amount of labor applied, and hence on labor costs per ton of cane and sugar.

[7]The cost of producing cane on larger plantations operated by colonos may also decline with the size of the plantations, but this does not reduce the cost of cane to the mills since the payment for cane is determined by the formula described above.

[8]Resumen Comparativo de los Obtenides en la Investigacion Sobre Ingenios y Colonias, (Cost Study Made by the Asociacion Nacional de Hacendados de Cuba), Pursuant to Presidential Decree No. 46, (January 14, 1952), p. 226.

is extensive rather than intensive as there is an abundant supply of fertile sugar cane land. Labor in Cuba although abundant relative to capital, is scarce relative to land. This accounts for the fact that output per acre is low compared to other similar sugar cane producing regions.[9]

Climate as an Advantage

The climate is an important factor in reducing man-hours and lowering labor costs in the production of cane in Cuba. After the cane has been planted, about 18 months are required before the first crop is ready for harvesting. After the cane has been cut additional crops known as ratoons, that mature in 12 months, sprout from the stock stump. Cane will sprout for an indefinite number of years even if cut annually, but each succeeding growth is smaller and finally it becomes necessary to replant. In Cuba the original planting will produce as many as seven or eight ratoons before it is advantageous to replant. In the United States continental cane regions, however, no more than two or three harvests can be obtained before the cane must be replanted. Therefore, the climatic advantage which requires fewer plantings accounts for the

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[9]In Puerto Rico, for example, the yield per acre was 26.9 tons of cane in 1954, much more than the 18.29 tons per acre obtained in Cuba. See Association of Sugar Producers of Puerto Rico, Annual Report of the President, (1954), p. 3. Output per man-day, however, is much lower in Puerto Rico.

non-harvest labor amounting to a smaller proportion of total labor in Cuba than in many of her competing areas. Cuba also enjoys enough rainfall to render irrigation almost unnecessary. Thus labor costs are lower than they otherwise would be.

The Impact of the Labor Union

Labor is relatively well organized in Cuba, and the sugar union has at times affected wages. The union has a particularly strong impact in the industrial sector of the sugar industry, but it also has influence in the agricultural sector. The Cuban Confederation of Workers[10] is the national organization of all organized Cuban workers, and the National Federation of Sugar Workers with more than 483,000 members is affiliated with the CTC.[11] The sugar workers' union, which includes both farm and mill workers, exerts considerable influence on the government, and in some cases bonuses have been granted because of union pressure.[12] The union has periodically also succeeded in

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[10]Confederacion de Trabajadores Cubanos (CTC).

[11]U. S. Congress, House, Amendments to the Sugar Act of 1948, Hearings before the Committee on Agriculture, U. S. House, 84th Cong., 1st Sess. on H.R. 5406, June 22, 23, 24, 25, 27, 29, and July 6, 7, 14, and 15, 1955, (Washington: Government Printing Office, 1955), p. 466.

[12]An additional 4.02 per cent bonus was granted in 1955 to all workers because the union claimed that 350,000 tons of sugar held as a reserve United States quota for 1958 were not calculated at United States prices. See U. S. Department of Agriculture, Foreign Agricultural Service Report No. 145, (Havana: January 2, 1956).

getting fringe benefits that are not measurable such as: sick leave, maternity benefits, super-production pay, and workers' union dues paid by the employer.[13]

From time to time the union has engaged in "featherbedding," and the mills have not been permitted to eliminate work made unnecessary by changes in warehousing and shipping procedures.[14] In some cases "featherbedding" has even been carried over from one generation to another. For example, in many cases even if a worker holding an unnecessary job died, voluntarily resigned, or retired, the sugar companies had to replace him with another worker. The sugar companies, of course, resisted this "featherbedding," and it was believed the Cuban Government corrected some of the worst abuses in 1955. Decree Number 3164, issued by the Ministry of Labor on October 13, 1955, permitted sugar companies to eliminate unnecessary positions when vacant due to death, resignation, etc. This was a short-lived victory for the mills, however,

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[13]Employers must make union contributions for both the industrial and agricultural workers they hire, but colonos are exempt. Therefore, only mills that grow "administration-cane" pay the union dues of agricultural workers. Ministry of Labor Decree No. 5740 (1952). Quoted U. S. Department of Agriculture, Foreign Service Despatch No. 1116, (Havana: January 10, 1952).

[14]Statement by Luis G. Mendoza, Manager of Luis Mendoza y Cia, "El Futuro Esta en Nuestras Manos," (The Future Is in Our Hands). Reprinted in Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Yearbook), (Havana: Editora Mercantil Cubana, 1951), p. 30.

for Decree Number 3164 was rescinded by Decree Number 34 early in 1956.[15] Decree Number 34 is an indication of organized labor's strength at the Presidential Palace in Havana. As in the case of the fringe benefits, "featherbedding" is also more significant in the industrial than in the agricultural sector. Nevertheless, there is some evidence that agricultural workers also successfully apply pressure at times through their union.[16]

This union "featherbedding" is a force that may impede mechanization and in this way prevent costs from falling. Although greater mechanization would probably not otherwise have been very rapid, it is possible that the Cuban Government, by intent or by accident, has discourage mechanization by its labor policy.[17] However, the Cuban Government may have followed these restrictive tactics at times for reasons other than union pressure. For example, Cuba has a large labor supply with few alternative job opportunities, and technological unemployment could become

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[15]U. S. Department of Agriculture, Foreign Agricultural Service Report No. 145, (Havana: January 2, 1956).

[16]Statement by Luis G. Mendoza, Manager of Luis Mendoza y Cia, "El Futuro Esta en Nuestras Manos," (The Future Is in Our Hands). Reprinted in Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book), (Havana: Editora Mercantil Cubana, 1951), p. 30.

[17]See infra, p. 182, for an analysis of the impediments to mechanization in Cuba.

very serious. This may explain the rescinding of Decree Number 3164 noted above. In any event, union pressures have undoubtedly increased labor costs and have not improved Cuba's competitive position in sugar production.

International Factors Influencing Labor Costs

Administrative action determines the labor cost in Cuba as well as the cost of the cane grown by the colonos and sold to the mills. Both of these are tied, in part, to the price of sugar. Therefore, although other factors are important, the price that Cuba receives for sugar largely determines the cost she will assume in producing it. Moreover, since Cuba has tied wages in the sugar industry to sugar prices, she has abrogated much of her control over labor costs. Labor costs per ton of sugar are high in Cuba when sugar prices are high, and low, after a lag, when sugar prices are low. For this reason, American beet growers, whose labor costs are not escalated with the price of sugar, can compete more easily as the price of sugar rises. Moreover, since the United States price of sugar is relatively stable, whereas the world price which affects Cuba does fluctuate, American growers are able to compete more easily as the world free market price rises. Even after the lag in Cuban wage adjustments is over there seems to be an incomplete downward escalator adjustment of wages to declining sugar prices.

Over a period of several years this factor may lessen Cuba's advantage *vis a vis* the United States. This factor may already be at work. Therefore, it is apparent that although Cuban wage rates rest on a variety of domestic factors, they are also influenced by international forces. Moreover, although Cuban wages appear to be above the competitive level, the system of quotas, as we have seen, limit Cuban sugar production to a level below that dictated by labor costs.[18]

Methods of Production and Possible Future Trends

Changes in the productivity of labor on cane plantations also have an impact on the cost of sugar production in Cuba and conceivably could have a greater impact in the future. However, in recent years changes in the productivity of labor in Cuba have not been great. More modern methods of cultivation, including greater mechanization, would help reduce costs but would also present some problems.[19] Although some progress has been made in the direction of mechanization in Cuba, it has not been as great as on United States beet farms, and cane is still cultivated largely by hand labor. Furthermore, much of the increase in the physical productivity of labor

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[18]See *supra*, p. 94.

[19]See *infra*, p. 184.

that has occurred on Cuban cane plantations since World War II can be attributed to better food for the workers in the recent years of greater prosperity, and also to the better health of the laborers because of greater control of diseases which formerly weakened the men in the country, and not so much to mechanization or other innovations.[20]

Mechanization, as we observed in Chapters VII and VIII, greatly reduced costs on United States beet farms, and improved United States growers' competitive position somewhat vis a vis Cuba. Some experts have recommended that since Cuba has fallen behind in the use of machinery, the Cuban Government should encourage mechanization in an attempt to improve her competitive position.[21] Indeed, some mechanization has been going on in recent years in the Cuban cane fields, but it is of minor importance and, for the most part, applies only to one phase of the harvesting operation. That operation consists of hauling the cane after cutting. Recently trucks have begun to replace the three yoke bullcarts although the latter

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[20]Letter from Manuel Rasco, Jr., Administrador General, Instituto Cubano de Estabilizacion del Azucar, Havana, Cuba: January 12, 1956.

[21]International Bank for Reconstruction and Development, Report on Cuba, Findings and Recommendations of the Economic and Technical Mission Organized by the International Bank for Reconstruction and Development in Collaboration with the Government of Cuba. Francis Adams Truslow, Chief of Mission, (Washington: The International Bank for Reconstruction and Development, 1951), p. 201.

are still widely used. This accounts for the increase in the amount of cane hauled per man-day from 400 to 950 arrobas in recent years.

As more and more trucks replace bullcarts the man-hours required to haul the cane will be reduced further. One large Cuban plantation that uses a number of trucks reported that a two-man crew will haul an average of about 2,400 arrobas of cane per day.[22] However, it should be noted that hauling the cane accounts for only a small percentage (approximately six per cent) of the total work involved. Therefore, even complete mechanization of this operation would not eliminate much labor or reduce costs greatly.

There has been no progress in mechanizing the cane-cutting operation. The cutting is still done almost completely by hand, and it amounts to approximately 34 per cent of the total labor required to supply the cane to the mill for grinding. In recent years the productivity of the cutters has risen, but from 170 to 190 arrobas only, and, as noted above, this rise is traceable to better health. Mechanization of the cutting operation would no doubt greatly reduce the labor requirements of producing cane.

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[22]Letter from Mr. R. P. Dortch, Vice President, Compania Agricola, Santa Cruz, S. A. Cuba, January 21, 1956.

No significant progress has been made in mechanizing the non-harvesting operations of cultivating sugar cane. Here is another opportunity for Cuba to emulate other areas and reduce labor requirements greatly.

On the other hand, in order to mechanize cane cultivation in Cuba great capital accumulation would be needed, and this would be almost impossible for the small or even the larger independent colonos. Mechanization of operations on cane farms requires road construction, the building of cane washers at the mills to remove dirt and rocks that mechanical harvesters pick up, and the purchase of costly harvesting machinery and trucks. Accurate figures regarding expenditures needed to mechanize in Cuba are lacking, but mechanical harvesters, one of the principal investments, alone would amount to a minimum of approximately $20,000 for a simple cutter-rake machine. Prices range upward from this figure going as high as $75,000 for the largest machines. Capital investments required per acre of cane in Cuba would undoubtedly be approximately equal to the requirements in other areas. In Hawaii, for example, where operations are completely mechanized, over $70,000,000 have been invested in capital equipment since World War II in order to eliminate hand operations. This amounts to about $318.18 per acre and about $7.42 per ton of cane. In Cuba even greater expenditures would be necessary as more acreage is under cultivation.

In the continental cane regions of Louisiana where cane cultivation is also highly mechanized, the capital investment required is also slightly over $300 per acre and approximately $14 per ton of cane.[23] Assuming identical costs per acre to mechanize in Cuba, over $750,000,000 of capital investments would be necessary, and Cuba cannot accumulate that amount of capital very quickly.

The small colonos are quite poor and have been granted favorable sugar legislation by the Cuban Government. Even if it were possible to mechanize the small colonos who have farms of 20 acres or less with the same expenditure per acre as in Hawaii or in Louisiana, the $300 per acre needed would be approximately three times the yearly receipts per acre that the colono receives for his cane.

The larger colonos and the plantations that grow "administration-cane" could no doubt accumulate the necessary capital more easily. In addition, since about 40 per cent of the grinding capacity in Cuba is owned or operated by companies whose stockholders are predominantly United States citizens and residents, the large colonos

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[23]Joe R. Campbell, Costs and Returns on Large Sugar Cane Farms, 1954 Crop Year, D.A.E. Circular No. 188, (Baton Rouge: Louisiana State University, and Agricultural and Mechanical College Agricultural Experiment Station, June, 1956), pp. 19 and 21.

and the plantations could also probably attract American capital if mechanization were worthwhile and capital unavailable in Cuba. Yet even the acreage supplying cane to these mills is not mechanized to any great extent, primarily because capital is scarce in Cuba relative to labor. Even with wages controlled by the Cuban Government at a level that appears to be above the competitive level, the production function and the relative price of capital and labor are such that it appears to cost less to grow cane predominantly by hand. No strong incentive exists for widespread mechanization, although there is some evidence that government wage controls have exerted slight economic pressure in this direction. For example, some Cuban leaders have expressed concern over the present labor conditions in Cuba and the semi-frozen wage rates. They believe that Cuba will have to mechanize and cut costs in order to compete in the production of sugar.[24]

On the other hand, there is also evidence of opposition to mechanization on the part of the strongly organized unions, and because of this, government opposition exists as well.[25] This brings us directly to the problem of displaced labor in Cuba, a difficulty that does not

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[24]Statement by Mr. Julio Lobo Olavarria, President, Galban Lobo Trading Company, "Hay Que Reestructurar Nuestra Politica Azucarera," (We Must Reshape Our Sugar Policies), Reprinted in Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book), (Havana: Editora Mercantil Cubana, 1955), p. 42.

[25]See supra, p. 175.

exist to any large extent in the United States, and which the experts from the International Bank did not emphasize. If Cuba were to mechanize the agricultural sector of the sugar industry (assuming for a moment that this lowered costs and thus were economically sound), the resulting substitution of capital for labor would create widespread technological unemployment. In the United States such displaced labor could gradually be absorbed by other industries, but in Cuba this is not the case. Cuba is practically a one-product economy, and pending the longer term development of other industries technological unemployment in her sugar industry could be absorbed only by expansion in that industry.[26] And the Cuban sugar industry is not expanding at present. The yearly output of Cuban sugar is fixed by the CSSI, and it is determined by the quota allocated to Cuba by the United States and by international agreements between Cuba and importing countries. This concern for the economic and sociological problem of displaced labor no doubt accounts for a large part of the opposition to mechanization. For the above reasons, it is unlikely that mechanization on Cuban cane plantations will be spectacular in the future, even though it might cut costs in sugar production and improve Cuba's

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[26]Steps have been taken recently by Cuba to diversify her economy but with only limited success. Sugar and its by-products still account for about one-third of the Cuban national income.

competitive position somewhat. That is not to say mechanization will not come, but that if it does it will be a gradual process as the economy diversifies, and will not occur overnight as was the case on United States beet farms.

It may, of course, be true that these obstacles to mechanization in Cuba are, in part, the result of artificial restrictions imposed there and elsewhere upon the sugar producing sector of the economy. For example, most countries subsidize their sugar industry to various degrees, and in this and other ways they reduce their sugar imports. Some even restrict the consumption of sugar by means of very high excise taxes. In a completely competitive world sugar market the Cuban sugar industry would undoubtedly expand and drive some of the other countries out of sugar production. Perhaps Cuba would then be able to mechanize without creating technological unemployment. If the small colonos were unable to mechanize because of their inability to obtain capital, the large plantations that can more easily obtain capital would no doubt mechanize, expand, and produce more than the present nine per cent of the cane in Cuba if not prevented by controls. That is to say, artificial restraints in Cuba and elsewhere may be preventing necessary adjustments in Cuba and other areas.

Several other factors affecting the cost of producing sugar, and which have reduced Cuba's relative competitive position, will now be examined. Cuba has not kept up with the latest agricultural developments such as improved types of insecticides and fertilizers, and better varieties of cane.[27] Cuba has fallen behind tremendously in the adoption of improved cane. As late as 1951 over 67 per cent of all cane grown in Cuba was a form of P.O.J. cane,[28] and 61.68 per cent of all cane was P.O.J. 2878 cane.[29] P.O.J. cane was the best variety obtainable in the nineteen twenties and was widely used during that time. Since then, however, superior varieties have been developed, and although kept secret for a time during the nineteen thirties and forties, some of the new species are available at the present time. Not only has Cuba lagged in the adoption of superior cane, she has also relied on other areas for the development of any new species. Indeed, this may be one of the major reasons why she has fallen behind. Developments along these lines would also increase output per worker and thus displace

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[27]International Bank for Reconstruction and Development, op. cit., p. 25.

[28]P.O.J. (Proefstation Oost Java) cane was developed in Java by the Dutch in the nineteen twenties.

[29]Cuba Economica y Financiera, Anuario Azucarero de Cuba, (Cuba Sugar Year Book), (Havana: Editora Mercantil Cubana, 1951), p. 155.

labor, but such changes are likely to come more slowly than mechanization sometimes does, and would be less disturbing.

It may also be that Cuba is not as innovation-minded as other areas, and is reluctant to adopt new techniques. For example, in Hawaii the leaves are first burned off the cane before harvesting, and since this expedites the work, it reduces man-hours required. It is true, however, that in Cuba where harvesting is done by hand the savings would be less. While Hawaii is undoubtedly the most progressive-minded sugar producing area in the world, it seems clear that conditions and perhaps the mental attitude in Cuba are less conducive to the fostering of advancements than elsewhere.

It is clear that Cuba has lost part of her former advantage, although quite obviously she is able to do something to increase output per man-day and regain all or part of her loss. On the other hand, the extent to which she may be able to do this, and the speed at which she may proceed, is limited by certain obstacles, especially the likelihood of displacing labor and creating technological unemployment. However, these obstacles would surely be more easily overcome if controls did not prevent adjustments in Cuba and elsewhere.

CHAPTER X

CONCLUSIONS

Most of the domestic sugar producers have been unable to compete with Cuba and a few other foreign areas except during periods of unusually high sugar prices. Therefore, one of the frankly acknowledged goals of the United States sugar policy in recent years has been to protect the domestic sugar industry, especially the agricultural sector of it. Although earlier in our history the United States sugar policy was designed to raise revenue, since 1890 the policy has been protective. The first tariff on sugar was imposed in 1789 as a revenue-raising measure, and over the next one hundred years, during which the United States Treasury was primarily financed through customs collections, sugar duties made up about one-fifth of these collections.[1]

The McKinley Act of 1890 was the first piece of legislation passed by Congress to aid the domestic sugar industry. The McKinley bounty of two cents per pound on domestically produced sugar from 1890 to 1894 proved to

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[1]U. S. Department of Agriculture, Sugar Report No. 11, (Washington: Sugar Division, June, 1951), p. 8.

be the father of the United States sugar beet industry, and from 1894 to 1934 tariffs were used to protect sugar beet growers.

An additional problem, that of protecting the domestic industry from falling sugar prices at a time when foreign sugar marketings in the United States were actually declining, arose in the early nineteen-thirties. From 1894 to 1930 tariffs succeeded in keeping sugar prices higher and thus in protecting the domestic sugar industry, but with the world wide depression in the nineteen-thirties, and a larger domestic sugar industry, this protection broke down.

For some time prior to the enactment of the Jones-Costigan Act in 1934, the price of sugar both in the world and the United States market had been seriously depressed. The slump appeared in the world sugar market, however, several years before it affected the United States price. As early as 1925 the world price was depressed, but high United States prices from 1925 to 1930 protected by high tariffs stimulated domestic production, and not until 1930 did domestic prices begin to fall. The result was that in 1930 protective tariff rates were raised once more in an attempt to keep out more foreign sugar and revive falling sugar prices, and in this way provide greater protection to the domestic producers. Although the higher tariff reduced imports of

foreign sugar, it did not protect United States producers from falling prices, for the domestic industry expanded further and offset the reduction of imports. The New York price of sugar reached a low of 2.93 cents per pound, raw value, in 1932, and the price of sugar beets a low of $5.13 per ton in 1933. By 1933 it had become apparent that any possible price advantage resulting from additional tariff walls would be offset by increased production in the domestic areas. In April of 1933 the Tariff Commission reached the conclusion that protective tariffs, regardless of their height, could not at that time deal effectively with the sugar problem and protect the domestic sugar industry from falling prices. Before 1930 when the domestic sugar industry was smaller, tariffs had proven effective, but high protective tariffs at a time when the domestic sugar industry was expanding in the midst of a depression only accelerated the expansion and did nothing to raise the price. The Tariff Commission recommended that the sugar problem be met by limiting the supply of sugar by a system of quotas. The Commission's recommendation was followed, and since 1934 quotas have been utilized to influence sugar prices and to protect the domestic industry from foreign competition.

Congress has sought to stabilize the domestic price of sugar by insulating it from the violent price fluctuations that have characterized the world free market

and also to guarantee the domestic industry a share in the market. An overall United States marketing quota is used to achieve this price stability at a level above the world price, and this overall quota is allocated among the various sugar producing areas. These area allotments, together with subsidy payments to domestic producers, provide the desired protection.

The overall quota is set to meet the needs of the American people at a "reasonable" price, and it is increased yearly with the growth in population. No serious controversy over the allocation of this overall quota developed until about 1954. The mainland cane regions did not begin filling their quotas until 1952, and although Puerto Rico has desired to expand slightly since 1953, Hawaii, the other main domestic cane supplying area, has not expressed a desire to expand since World War II.[2] The beet sugar industry, the major domestic sugar producer, did not begin filling its quota until 1954.

The overall quota was originally allocated to protect a domestic industry of approximately the size to which it had grown by 1933, and for a number of years after 1933 the industry remained within this size. However, after World War II certain innovations in the production

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[2]In Hawaii land was permanently taken out of sugar production during World War II, and at present it is believed that production in Hawaii has been stabilized.

of sugar beets resulted in drastically reduced costs and expanded output. After the beet sugar quota was filled, and as costs continued to decline, pressure developed to increase the domestic quota at the expense of Cuba, the largest source of American sugar supplies.

This study has examined these declining costs over the past 17 years, has assessed the factors responsible for these cost reductions, and has examined Cuba's position vis a vis the domestic beet industry both before and after these cost changes took place in order to show whether or not the change in the United States sugar policy in 1956 was warranted. The study has also analyzed the possibility of Cuba taking advantage of the same innovations and reducing her costs as well.

The study indicates that Cuba's relatively more abundant labor supply has contributed to her advantage over the domestic beet area in sugar production. This advantage has been lessened since World War II, primarily because of innovations that have made mechanization of beet harvesting possible. This mechanization of the harvest work is now nearly complete, but additional mechanization of the spring work and the development of monogerm seeds promise to reduce costs further in United States beet fields and thus may reduce further Cuba's advantage. However, it is unlikely that Cuba's advantage will ever be eliminated completely because in order for

this to occur it would be necessary for mechanization of the spring work to reduce costs much more spectacularly than did mechanization of the harvesting operations; little likelihood exists that this will happen.

The study also indicates that if Cuba is to regain her former advantage she too must mechanize, and the main obstacle preventing rapid mechanization is the danger of creating technological unemployment that could not be re-absorbed at this time. An additional problem hampering mechanization in Cuba is the difficulty and the unfeasibility of capital accumulation. Either diversification of the Cuban economy or expansion of her sugar industry would aid in overcoming these two obstacles. Diversification has been attempted but has not proved very successful, and expansion of the Cuban sugar industry is prevented by controls in both the United States and the world market.

The low United States tariff, although paid by foreign cane growers, is not a subsidy to the domestic beet grower because the overall quota protects the United States price of sugar. On the other hand, the farm program payments for beets are larger than the excise taxes on beet sugar alone. Therefore, the program payments, minus that portion of the excise tax shifted to beet growers, are a direct subsidy and are paid by foreign cane

growers.[3] Since 1948 this subsidy has amounted to over $6 per ton of raw value sugar. Moreover, the excise taxes and tariffs that Cuba pays amount to $20 per ton of sugar exported to the United States, but since Cuba does not export all of her sugar to the United States, these taxes and tariffs have averaged about $9.52 per ton on all the sugar she has produced since 1948. Since Cuba's tax and tariff payments are greater than the subsidies domestic growers receive, the United States sugar policy provides the Treasury with a modest net income each year. Table 36 illustrates the total subsidy, the subsidy per ton of beets and per ton of beet sugar received by American growers, and also the excise tax and tariff per ton on the total Cuban sugar production since 1948.

The actual direct subsidy received by the domestic beet farmers, together with the excise taxes and tariffs borne by Cuba, must be kept in mind when interpreting the cost differential shown on page 148, to obtain a better indication of the changing competitive position between Cuba and the United States beet regions. With such a large subsidy for United States growers it is safe to say that even complete mechanization will not make the domestic beet industry competitive with Cuba.

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[3]See supra, p. 110.

TABLE 36

ACTUAL DIRECT SUBSIDIES RECEIVED BY UNITED STATES BEET GROWERS, AND EXCISE TAX AND TARIFF PAYMENTS MADE BY CUBA PER TON OF SUGAR PRODUCTION FROM 1948 TO 1954

Year	Total Beet Subsidy	Subsidy Per Ton of Beets	Subsidy Per Ton of Beet Sugar	Excise Tax and Tariff Payments Per Ton of Total Sugar Production in Cuba
1948	$10,086,938	$1.11	$7.69	$ 8.77
1949	10,501,945	1.00	6.53	10.77
1950	13,594,012	1.01	6.74	10.65
1951	10,489,661	1.00	6.80	9.28
1952	9,545,741	.94	6.28	7.49
1953	11,244,245	.90	6.00	9.84
1954	13,244,656	.96	6.63	9.82

Source: U. S. Department of Agriculture. This assumes that the entire excise tax on beet sugar is shifted back to the grower, and since this may not be the case, our figures tend to understate the actual subsidy.

If the United States removed all controls on sugar, such as tariffs, excise taxes, program payments, and the system of quotas, the United States price would fall and the world price rise until they were identical. This would eliminate most mainland cane and domestic beet growers and

result in the United States becoming more dependent upon foreign and offshore domestic cane areas for sugar. The consumer would benefit, at least in the short run, from lower prices. Cuban producers would gain a windfall from the excise tax and tariff reductions, but would lose their quota premium which in most years is greater. Therefore, Cuba would suffer a net loss in the American market unless greater volume offset the lower price. In addition, offshore domestic areas would be less well off because of the lower price and the loss of their subsidy.

Such an open United States market would tend to stimulate sugar production greatly in foreign cane areas as they attempted to gain a larger share of the United States market. Greater output would in turn tend to lower the price, and if the price fell sufficiently it might result in monopolistic agreements. Historically, the international sugar market has been plagued with cartels and restrictive programs which collapsed from time to time and caused violent price fluctuations. Before United States quotas were adopted these price fluctuations had a tremendous effect on the United States price.

At the present time,[4] the International Sugar Agreement would no doubt attempt to control the amount of sugar marketed in the United States, even if the overall

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[4]1957

quota were removed by Congress. However, the Agreement is not without its recalcitrant members and whether the ISA, without the aid of the United States, could achieve price stability in either the world or the United States market is problematical. It is possible that since the United States is the main sugar importing nation, an overall United States quota must be maintained by the United States to make the ISA workable. If an overall quota were maintained, it must be allocated to the various areas to maintain orderly marketings. The United States must take the lead in allocating this overall quota, but presumably it could do this either through the ISA or independently as it now does. A completely free sugar market in the United States, or in the world generally, has never existed in this century, and probably never will be attempted because undoubtedly prices would fall from time to time to the point where private monopolistic arrangements would be encouraged. Therefore, the problem becomes one of allotting the overall United States quota to alternative areas.

If the present system of quotas were maintained, but all other controls and subsidies removed, the price of sugar would not fall although many domestic producers would be eliminated. In such a situation Cuba would benefit greatly from the tax relief windfall and from

increased sales in the United States because she gets the deficits from domestic areas. However, the overall quota could be increased also, and hence the price reduced to offset all or part of any windfall that Cuba received from the excise tax and tariff reduction. Thus the consumer would benefit from lower prices, and Cuba from increased sales while receiving the same price per ton of sugar.

In light of the above analysis it is apparent that the 1956 sugar legislation was unwise. This law gave the domestic beet area a share of the United States market growth, and thus it provided for the growth of the domestic industry at the expense of the Cuban industry although domestic costs are still higher. This change in the quota will lessen growth in Cuba, where growth is warranted, and in this way make it more difficult for her to overcome her unemployment problem.

Furthermore, some evidence exists that the 1956 law was indeed very liberal in its treatment of the domestic beet industry. Even with reduced costs, the 1956 domestic beet quota was filled only because of "constructive deliveries."[5]

After examining the evidence shown above we may conclude that domestic beet growers still require subsidies

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[5]"Constructive Deliveries" is an industry term for binding sales agreements that are made in one year, and are charged to the quota in that year even though delivery is not made until the following year.

in order to fill their quota, even though costs have fallen significantly since World War II. Indeed, it is the subsidies, together with the cost reductions, that resulted in domestic growers filling their quota in recent years.

An additional conclusion is apparent. If the United States wishes to maintain a domestic sugar industry of a given size, quotas are a better method than tariffs for doing this. Furthermore, unless the quota allocated to the domestic beet industry is smaller than it now is, subsidies are also required. However, a smaller subsidy payment than before innovations took place is now needed in order to maintain a domestic industry of any given size because costs have declined substantially as a result of these innovations. As mechanization becomes more complete and costs decline further, a still smaller subsidy will maintain an industry of any given size. Conversely, with a relatively constant subsidy, pressure may develop from time to time for a larger domestic quota as costs continue to decline. On the other hand, if the percentage share of the United States growth in demand granted the domestic beet area in 1956 is sufficiently large, costs may not fall enough to bring about pressure to increase the beet area's quota once more. This seems to be the case, and thus the domestic beet industry will continue to expand within its percentage quota.

There is no doubt that the domestic beet industry is over-expanded. After 1953 when the fixed quota was filled, over-expansion was beginning to lessen as costs continued to fall, and if the quota had not been changed by the 1956 piece of legislation, this over-expansion would have continued to decline.

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