CUBA'S SUGAR DILEMMA

BY

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Few countries afford a better study of the problems of monoculture than Cuba. Although not a one-crop country by any means, the dependence of the island on sugar is so great that the industry forms the very backbone of Cuba's economic life. If the sugar crop is good and prices for raw sugar favorable, Cuba is prosperous; when the harvest is poor or prices low, a general depression results. The export statistics during the last few years indicate how closely the purchasing power of Cubans is dependent on sugar. From 1924 to 1928, inclusive, exports of sugar have constituted on the average around 87 per cent of the value of all exports. In such abnormal years as 1920 and 1921 the percentage was even higher; for the last twenty years the proportion has never been less than 75 per cent.[1]

A study of sugar production figures is not necessary. It has been estimated that of the total output some 97 per cent is exported. For all practical purposes, therefore, the export statistics suffice.[2]

Sugar is the one great money crop, giving employment to labor, distributing income throughout the island, and affording the basis for most business. The planters and the mills are, of course, the first to suffer whenever the cultivation of sugar proves unprofitable. The "promedios," or average price computed for settlements between Cuban farmers and the mills, has steadily declined since 1924 and has resulted in very unfavorable conditions among agriculturalists.[3] With what apprehension the Cuban government regards conditions within the industry may be seen from the following quotation:

> "The Cuban government considers the low price of two cents a pound for Cuban raw sugar delivered in New York so serious that all government officials have been required to take cuts in salaries ranging from 10 to 15 per cent."[4]

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[1] U. S. Dept. Commerce. *Commerce Reports*, July 22, 1929, "A Statistical Summary of Cuba."
[2] *The Cuba Review*, March, 1930, p. 23.
[3] U. S. Dept. Commerce. *Commerce Reports*, Feb. 17, 1930, p. 483.
[4] *Chicago Daily Tribune*, Feb. 4, 1930, Financial Page.

Investments in Cuban Sugar

Estimates of the amount of capital in Cuban sugar mills and properties vary from 900 million to well over a billion dollars. In January, 1928, the Cuban Chamber of Commerce stated that the United States investment in the sugar industry was approximately 800,000,000 dollars.[5] With the exception of Canada, American investments in Cuba surpass the amount of United States capital in any foreign country. One-half of this huge fund is devoted to sugar production, and about two-thirds of the Cuban sugar output comes from American-owned mills.[6]

Trends in World Sugar Production

Cuban production of sugar has about trebled since 1913. Moreover, this increase has been accompanied by a rapid increase in the world's production of cane as compared to beet sugar. Twenty years ago, Java, Cuba, the Hawaiian Islands, the Philippines, and other tropical lands, now important exporters of cane sugar, were relatively insignificant. In 1902, a normal year representative of the early years of the twentieth century, cane sugar constituted roughly 40 per cent of the world's sugar supply. In 1918, the year of greatest development, cane sugar accounted for 71 per cent.[7] The war brought a dislocation of the great beet sugar regions. The increased demand and the resultant high prices caused a remarkable growth in the sugar industry of Cuba and other tropical regions naturally favored for low cost production.

Soon after the cessation of hostilities, the rapid recovery of beet sugar was apparent. Prices of Cuban raws, which had reached the unprecedented figure of 23 cents a pound in New York during May, 1920, fell with a crash the next month. Since the boom year, the highest average price was that of 1923 when quotations were 5.24 cents, cost and freight, New York.[8] During the first months of 1930, prices have fluctuated around two cents per pound.

The continued low prices have been the result of world over-production. Cuba, Java, India, and the insular possessions of the United States had accelerated production unduly. The rapid reorganization of European beet sugar producers glutted the market. The encouragement given by European governments to beet culture is not due solely to an exaggerated fear of dependence on other nations for an important food

[5] *The World Almanac*, 1930, p. 643.
[6] *Foreign Affairs* (New York), Jan., 1928, p. 232.
[7] Willett and Gray, *World Sugar Statistics*, March, 1930.
[8] *The Cuba Review*, March, 1930, p. 23.

product. Beet growing insures a good rotation of crops, clean fields, and a general improvement of the soil. No less important are the many uses of the residual by-products of the beet.[9]

Cuba's Experience With Crop Restriction

How keenly aware Cuba is of the dangers of over-production can be seen from her efforts during the past few years to remedy the situation. After consideration of many proposals, a law known as the "Tarafa Sugar Measure" was passed in September, 1927, creating a body advisory to the president on all matters relating to the sugar crop. The first action of the commission was to suggest a restriction of the crop, which the president carried out by a decree limiting the sugar production of the next season to 4,500,000 tons and that of the following year to 4,000,000 tons.[10]

Contrary to expectations, depression did not follow the crop restriction of 1927. The opposite seems to have been the result. The average price for Cuban raws in New York rose from 2.56 cents per pound in 1926 to 2.95 cents the following year.[11] The revival of business that ensued, however, was chiefly due to the new activity of the sugar mills. Many of the industrials, feeling that sugar restriction would not be continued in the near future, began to renovate their plants. The large expenditures for machinery and plant equipment created a temporary stimulus to business. When it became known that a more drastic cut would follow in the next season, a depression was precipitated.

In the early part of 1928, President Machado decreed that all restriction on the sugar industry be abolished. The attempt to improve the status of Cuban sugar was admittedly a failure. The reason was the same that caused the frustration of British rubber restriction. Producing only about 20 per cent of the world's sugar supply, Cuba could not influence prices except temporarily, and then only slightly. The other leading cane sugar regions profited by Cuba's decreased output and stimulated production. Thus the world crop of 1928 was actually greater by a million tons than that of 1926.[12]

The European beet sugar regions were fostering their industries by means of tariffs and bounties. The production of India, third as a world producer at present, responded but slightly to world market prices and

[9] *Facts About Sugar*, Sept. 7, 1929, p. 857.
[10] H. L. Lakin, "The Tariff Revision on Sugar," 1929. (A pamphlet.)
[11] U. S. Dept. Commerce. *Commerce Reports*, Feb. 17, 1930, p. 483.
[12] Willett and Gray, *World Sugar Statistics*, Feb. 8, 1930.

conditions. The Indian cost of production is very low and, furthermore, is in the hands of many small producers. Java, the second largest world producer, was able to realize profits despite the low prices. Java has cheap labor and marvelously efficient agricultural methods, and in the past few years she has brought into general use a new cane variety known as the "P. O. J.," which gives a higher yield per acre and therefore reduces costs.[13]

One further question necessitates consideration. Why did not Cuban production decrease of its own accord, without governmental intervention? Normally, when prices do not cover costs of production, less efficient firms are driven out of business and the total supply is diminished. Sugar cane, once it is planted, however, represents a substantial investment, good for many years of production. To quote from an article analysing the Cuban situation:

> "Cuban producers cannot afford to abandon this investment even though the cash return in a given year may fail to cover overhead and other costs. If a Cuban producer finds himself unable to meet his debts his creditors take over his property and continue producing to protect their loan."[14]

Why Cuba Leads in Sugar

Many factors have contributed to make Cuba the world's greatest sugar producing region. P. G. Wright has remarked:

> "Cuba has vast areas of land better adapted, perhaps, than any other region in the world, both with respect to soil and climate, for the production of sugar."[15]

Generally speaking, sugar cane has been found to grow best where there is a distinct wet and dry season, and in soils that are friable, porous, and well drained, but which are well watered during the growing season. Most Cuban soils are so rich that the old roots produce as many as ten annual crops without replanting, although more frequent replanting is usually advantageous. An acre of land produces on the average 15 to 20 tons of cane yearly, of about 16 percent sugar content, though virgin lands yield as high as 35 or even 50 tons.[16]

The average yields are higher in Java and Hawaii, not because of natural conditions, but because of the more scientific methods employed. Cuba is much less efficient than these countries in the practice of fertilization, selection, and improvement of cane varieties. Java has made far greater progress in the cultivation of cane that grows well, is resistant to disease, and has a high sugar content.

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[13] *The Sugar Journal*, Nov., 1929, p. 578.
[14] *Barron's*, Jan. 7, 1929, p. 8.
[15] Sugar In Relation to the Tariff," 1924.
[16] *Bulletin of the Imperial Institute of London*, vol. 19, p. 26.

Besides having the natural conditions for the cheap production of sugar, it happens that Cuba is located near the United States, the greatest market for sugar in the world. The reciprocity treaty of 1903, which gave Cuba 20 percent differential on the sale of her products to the United States in return for a 20 to 40 percent preference on United States exports to Cuba, acted as a great stimulus to the sugar industry. Large amounts of American capital were immediately invested in mills and sugar lands. The increase in exports of Cuban sugar was remarkable. Since 1902, the year previous to the ratification of the treaty, exports of sugar from Cuba to the United States rose from less than 500,000 tons to over 3,600,000 tons in 1928.[17] The development of the sugar industry would have taken place following the years of reconstruction after the winning of independence, even in the absence of the treaty, but certainly not at the same rate.

Cuba and the U. S. Tariff on Sugar

Cuba regards the United States as the one great market for her raw sugar exports. For the years 1924 to 1928, inclusive, 87 percent of Cuba's entire production was sold in the United States, and for the last twenty years the average has been around 80 percent.[18] The United Kingdom is the only other country relatively significant as a purchaser of Cuban sugar. In post-war years from 15 to 18 percent of the sugar exported has gone to the United Kingdom. France and Canada rank next but are of slight importance in the total trade. South American and Central American markets have long been closed to Cuba, while the instability of demand, as well as Javanese competition, makes sales in the Far East negligible. The large European markets have high tariff barriers, and, furthermore, are in close proximity to the great beet sugar producing regions.[19]

Under these conditions it is natural that Cuba should view with alarm any possible increase in the United States tariff on sugar. Since the close of the nineteenth century, a general tendency for the United States to increase the sugar duty can be observed. At first, duties were purely for revenue, but little by little the protectionist point of view was adopted. Despite two downward revisions, from the Wilson Act of 1894 through the Fordney Act of 1922, there has been an increase in the rate on Cuban raw sugar from 1.68 to 1.76 cents.[20] In the last

[17] U. S. Dept. Commerce. *Commerce Yearbook*, 1929, vol. 2, p. 189.
[18] U. S. Dept. Commerce. *Commerce Reports*, July 22, 1929.
[19] Great Britain Dept. Overseas Trade, "Economic Conditions in Cuba," Nov., 1929, p. 39.
[20] *The Tariff Review*, Nov., 1929, p. 283.

session of Congress, with a final adjustment still pending, the House raised the rate to 2.40 cents; the Senate reduced it to 2 cents. The duty when finally determined will probably mark a compromise between the two limits.*

The higher tariff will undoubtedly further handicap Cuba in her competition with the beet and cane growers of the United States, and the producers of Hawaii, the Philippines, and Porto Rico. At present, continental United States together with its possessions supplies over one-half of the American consumption, while Cuba's share is about 47 percent.[21] What the effects of the new tariff on the protected regions will be is not certain. The United States Tariff Commission reported, on July 31, 1924, that the estimated difference in average cost between the Cuban and the United States production of raw sugar was 1.23 cents per pound; the estimate of the minority was 1.83 cents.[22] If these estimates are even approximately correct, the new rate should be more than sufficient to protect United States producers, unless differences in cost have changed considerably since the time of the report.

The figures quoted are for average costs and are not indicative of the degree of protection necessary for beet and cane sugar producers in different sections of the country. Thus, the protection might be more than sufficient for the Colorado beet producers, because of the freight rates that Cuban refined sugar must pay from New York to the markets of the central and mid-western states, and not enough for the Michigan sugar producers.

The fact that Cuba has been selling her sugar for 2 cents a pound or even less (cost and freight, New York) must not be interpreted to mean that average costs of production are less than this figure. Many Cuban producers have been and are suffering actual losses.[23]

The Year 1929 in Review

The year 1929 was an eventful one for Cuba's leading industry. The beginning of the year marked a period of depression due to the prospects of a large sugar crop. The situation was aggravated by the hearings of the House Ways and Means Committee in the United States where proposals to increase the tariff on sugar were under consideration.

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* The new tariff revision finally became a law in June, 1930. The rate on 96° foreign sugar is 2.5 cents per pound, and on Cuban raws 2 cents per pound.

[21] U. S. Dept. Agriculture. *Yearbook of Agriculture*, 1929, p. 881.

[22] Editorial Research Report, "The Tariff on Sugar," Wash., D. C., April 17, 1929, p. 16.

[23] Since the freight rate on raw sugar from Cuba to N. Y., where the bulk of the Cuban crop is sold, is around 14 cents per 100 pounds, the actual price received at the Cuban port when the quotation is 2 cents, C & F, New York, is 1.86 cents.

The record crop of 5,160,000 tons, together with the unfavorable propaganda in the United States, finally forced the Cuban government to action.

A syndicate was formed in New York for the purpose of pooling up to one million tons of the 1929 crop to be sold outside of the United States; 850,000 tons were subscribed for, and substantial sales were made to Europe.

Delegates from Cuba were sent to the international conference of sugar producers at Brussels in July, where a plan was discussed of pooling the exportable surpluses in an effort to regulate the world sugar market. Representatives of Java were not present but were later invited to subscribe to the agreement, which they declined to do. Javanese producers pointed out that Cuba's output was excessive and more than proportional. Furthermore, it was stated that since Java's cost of production was lower than that of Cuba there could be little incentive for Javenese planters to restrict their crop.[24]

Colonel Tarafa, chairman of the National Sugar Defense Commission, returned from his mission to Washington in July and reported to President Machado that a central selling agency for Cuba's sugar was necessary for economic defense.[25] After some discussion, the Cuban president signed a decree creating the Co-operative Export Agency on July 26, 1929. The directorate of this "Single Seller" agency numbered eighteen and was composed of both Cubans and Americans, President Machado being *ex-officio* chairman with voting power. The chief purpose of the organization was to control the sale of all sugar on the island and to stabilize marketing.

Although during the first few months after its formation the Single Seller had secured an average price of 1.93 cents per pound on its United States sales and a price of 1.76 cents on sales to other countries, dissatisfaction with the agency was manifest at the beginning of 1930. The co-operative was then in the difficult position of disposing of all surplus stocks before marketing the current crop.

Probably the greatest weakness of this agency was its inability to advance funds to the farmers and producers. In some instances the money necessary for storage purposes was not forthcoming.[26] Consequently, the Single Seller became the subject of much dispute, and a meeting of stockholders was called. The motion in favor of its continuance was carried by a small majority. In a second meeting called by the president, a substantial majority voted for dissolution.[27] The period

[24] *International Review of Agriculture* (Rome), Jan., 1930, p. 15.
[25] *The Cuba Review*, Feb., 1930, p. 17.
[26] *Facts About Sugar*, March 29, 1930, p. 300.
[27] *The Annalist*, April 18, 1930, p. 853.

of activity on the part of the Co-operative Export Agency was one of such short duration that it is difficult to evaluate its achievements. There is considerable justification for the belief that prices would have been even lower had there been no centralized marketing.

Proposals to Remedy the Sugar Situation

Many proposals have been advanced for the rehabilitation of Cuba's chief industry. The Economic Committee of the League of Nations has determined to leave the problem for the solution of the various nations concerned.[28] The league did suggest, however, that high tariff barriers against sugar be reduced. In view of the present protectionist policy of most of the important sugar consuming regions, it seems improbable that revisions of the sugar duties will be downward.

From an engineering point of view, the opinion has been advanced that the most feasible solution is that of reducing the cost of sugar mill operations. According to one estimate, the cost of producing the last 10 per cent of sugar from the cane is as high as the extraction of the first 85 per cent when computed in terms of horse-power. A lower extraction would mean less cane to fire the boilers, and this could be sold for the manufacture of pulp. It is claimed that good fibre-board for building purposes sells at least as high as the 10 per cent of sugar which would be lost by the reduced extraction.[29]

The Cuban government has been experimenting with disease-resisting and high-yield varieties, methods of cultivation, utilization of by-products, and other angles of attack on the problem. Recent experiments with irrigation have shown that despite the generally sufficient rainfall on the island, irrigation can greatly increase yields by providing moisture more evenly during the growing season.[30]

These apparently laudable experiments meet with one difficulty. Means to increase the yield per acre have almost invariably resulted in greater total production, the very condition the government desired to alleviate. Thus, at first thought, it might seem that the policy of improving yields is inconsistent with crop limitation, but this is not necessarily the case. The ideal condition sought is that of limiting the crop by reducing the number of producers, while at the same time increasing their individual efficiency.

The manufacture of molasses is being sponsored by the Cuban government. The exports of this commodity to the United States in 1929 amounted to 226,000,000 gallons, the largest quantity ever shipped

[28] League of Nations. "Sugar: Report of the Economic Committee," April 15, 1929.

[29] *Barron's*, Feb. 17, 1930, p. 27.

[30] *The Cuba Review*, Feb., 1930, p. 27.

abroad. The alcohol bill under consideration by the Cuban Senate would require that approximately 50 per cent of motor fuels be composed of industrial alcohol. Should the bill become a law, a decided impetus would be given to the production of industrial alcohol from blackstrap molasses.[31]

The Cuban planters have frequently urged the development of refineries on the island, arguing that Cuba could refine her sugar more cheaply than the United States. It is pointed out that many storage, handling, and shipping charges could be eliminated. The large investment necessary to erect modern refineries has been a great deterrent. The years following the depression of 1920 and 1921 have witnessed a steady increase in Cuban refining. In 1929, approximately 265,000 tons of sugar were refined in Cuba, of which 50,000 tons were consumed locally and the remainder exported.[32]

Considerable discussion centers about the question of how the foreign consumption of Cuban sugar may be increased. Statements have been made to the effect that any amount of sugar at present conceivable could be sold if offered at sufficiently low prices. Recent investigations, however, seem to substantiate the long-accepted economic principle that the demand for staple commodities is relatively inelastic; that is, with a decrease in price there is a relatively small increase in the quantity demanded. Cuba's inability in the past to sell surplus stocks at very reduced prices supports this conclusion. The studies of several economists show that the demand for sugar in the United States and other countries with a high standard of living is rather inflexible.[33]

Plans for increasing demand in regions where the present per capita consumption of sugar is very low also present difficulties. The demand in countries of the Far East is very unstable. Besides, there is always the competition of Java to consider. The European countries of low per capita consumption have high tariff barriers. Even China gives some evidence of adopting a protectionist policy.[34]

Cuba is negotiating treaties and tariff reciprocities with various countries. Revision of the reciprocity treaty between Cuba and the United States has been widely discussed. The Cuban Department of State made one proposal for a gradually increasing preference on Cuban sugar until all duties be removed in return for placing certain American exports on the free list. The flood of protests that came from the United States beet sugar interests terminated further discussion.[35]

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[31] U. S. Dept. Commerce. *Commerce Reports*, Feb. 17, 1930, p. 483.
[32] U. S. Dept. Commerce. *Commerce Reports*, Feb. 17, 1930, p. 483.
[33] *Journal of Farm Economics*, Jan., 1930, p. 87.
[34] *Chinese Economic Journal*, Jan., 1930, p. 31.
[35] *The Tariff Review*, April, 1929, p. 119.

General Conclusions

Cuba's unsatisfactory economic condition is not unique, but rather a more acute case of a general world depression in the sugar industry. The manifestations of this crisis and the degree of its intensity, it is true, are different in the various countries. In those regions where the industry is protected by high duties or by other measures and in those which are favored by exceptionally propitious natural and economic conditions, ruinous effects upon the industry and its associated agriculture may be avoided, but to some extent the consequences of the crisis are felt in every country where sugar is produced.

The slight hope of an important international agreement to control production and stabilize prices has caused Cuba to seek the solution to its unfortunate economic status at home. Experience has shown the instability and danger of depending on one crop for national revenue. Much can be done to improve conditions within the sugar industry, yet that can be only one of many steps in a program of national economic reorganization. Diversification of agriculture, the development of manufactures, the construction of highways, new financial programs and taxation policies—these are all phases of the greater problem of national stabilization.

Papers in Medicine and Public Health

Extract from the Report of the Section Chairman

In addition to the papers submitted for publication, the program of this section included a paper on "Undulant Fever," by Thomas G. Hull, State Department of Public Health, Springfield.

The attendance at the section meeting was about 40.

By vote of the members in attendance, John C. Frazier, of Bloomington, was elected chairman for the coming year.

Walter G. Bain, *Chairman.*