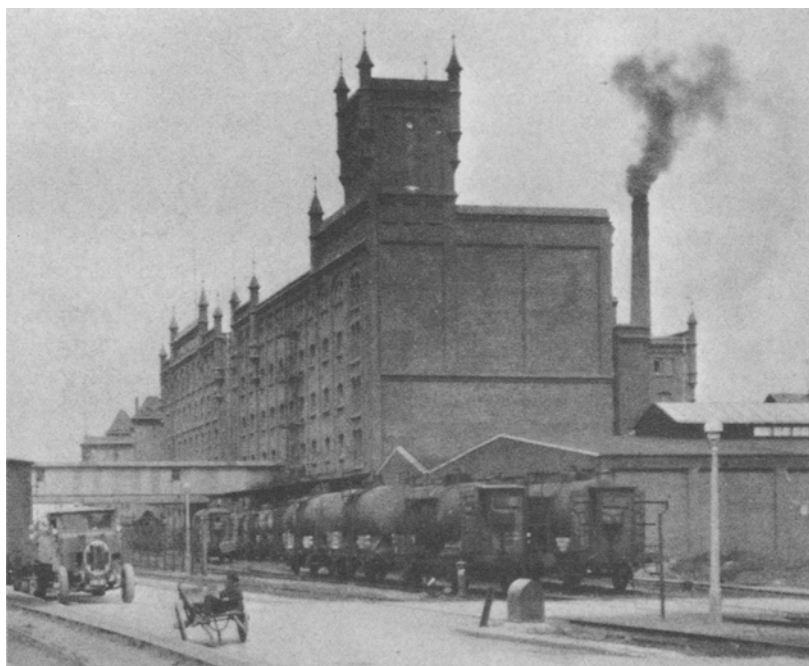


The Oil Mill Industry In Modern Germany

A Current Review of the Vegetable Oil Industry of the Republic, Including Comparison with Prewar Conditions

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*Typical large
German oil mill
and refinery
located at
Bremen, oper-
ating chiefly on
peanut oil*

IT IS generally supposed that oil milling in Germany started some 2,000 years ago, when the Romans invaded the country and taught domestic oil milling. Today, it is in first place among other industries in the value of raw materials imported. In 1929 the value of oil seeds and oil fruits imported was over \$204,852,000, with cotton imports second with a value of \$185,081,400, with wool third with a value of \$143,634,600. Add to this the value of the oils and fats imported and the industry reaches a tremendous scale.

The German oil milling industry, together with factories for the refining of imported oils, comprises a total of 60 concerns, employing

about 14,000 workers. Of these factories, the largest is located in Harburg. This concern, the largest in Europe, together with its branch factories has plants occupying 331,000 square meters. The plant in Harburg has 35 boilers, driving eleven steam engines and three steam turbines with a total of 10,000 horsepower. Equipped with the latest presses and other machinery, these works have a daily capacity of more than 2,000 metric tons of seed, and can handle 350 tons of crude oil a day in the refining plants, while one of the plants, situated at Brake in Oldenburg, which also handles fish and whale oils, can harden 450 tons a day. The plants in Harburg and Brake are situated so that steamers and railroad cars can discharge their cargoes direct into warehouses and silos. The Harburg plants have a total

* Report to Foodstuffs Division, Dept. of Commerce. Published by Special Permission.

storage capacity of 80,000 metric tons of seed, with storage tanks of 25,000 tons capacity.

Other large mills in Germany are located in Hamburg, Bremen, and Stettin, other factories being located in southern Germany along the Rhine; the products of the latter being for home consumption, the former with the mills in Harburg and Brake, supplying the exports. The five main oils—peanut oil, linseed oil, palm kernel oil, coconut oil, and soy bean oil—comprise about 95 percent of the total production of all plants. Of the production costs, an average of between 85 and 90 percent goes for raw materials, while wages fluctuate between 2.5 and 5.5 percent of the total costs.

Pre-war and Postwar Developments

PRIOR to the outbreak of the war Germany had a commanding lead among European nations in the production of oil products. During the war it was impossible to maintain this position, and at its close Germany was faced with the problems of rebuilding an industry which had been almost destroyed.

The following oil bearing products, foreign to Germany, are discussed: Copra, cottonseed, palm kernels, peanuts, sesame, seed, and soy beans, as well as castor, olive, palm, fish, seal and whale and wood or tung. Other oleaginous

products are omitted, as no statistics are available, and also as they are of relatively minor importance. Domestic production of the various oils is arrived at by using an average oil yield for each product, as furnished by a local mill. Quantities are shown in metric tons of 2,204.6 pounds. Prices are quoted c.i.f. Hamburg. Import duties listed are under most-favored-nation clauses.

Copra

COPRA, the dried fruit of the coconut, has ever played an important role in the oil industry in Germany. The quantity of oil produced ranks third in the list of oils under discussion. The Netherland Indies furnish the greater part of copra imported, the rest being fairly equally divided among the other copra-producing countries.

Coconut oil, product of copra, has many uses, the most important being in the manufacture of soap and for use in the margarine industry. With the exception of 1920, when there was a decided decrease, and 1929, when there was a rather large increase, the production has not changed greatly, while the quantity imported has increased to almost 2,000 percent over 1913 and almost 600 percent over 1926. This increase in imports was caused

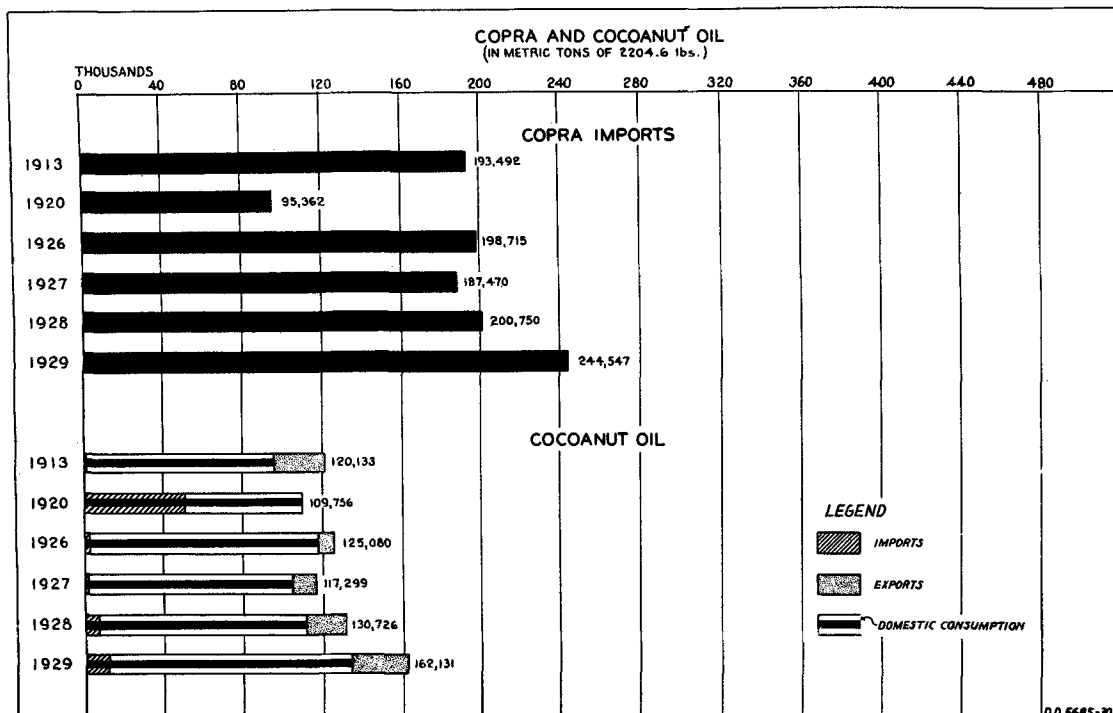


Chart depicting German imports of copra, also imports, exports and domestic consumption of coconut oil, in selected years from 1913 to 1929

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chiefly by the reduction of the duty formerly imposed, the present tariff being 1.25 marks per 100 kilos (\$0.13½ per 100 pounds) for edible oil; inedible, free.

During the past four years exports have steadily increased, caused chiefly by the fact that the largest mill controlled by Dutch interests in Germany has branch margarine factories in other countries and supplies these factories with oil.

The increase in the percentage of exports of coconut oil is about in line with the increase in the percentage of palm kernel oil. As these two oils are similar in physical properties, there is little likelihood of there being much of a change in favor of one or the other.

The quantities consumed locally have not varied much during the last four years, with the exception of 1929. However, there has been a decided increase over 1913, due to the increase in sales for human consumption. In 1929, 76.8 percent of total local sales was for human consumption.

Coconut cake is used as a feed for cattle, but is not as popular as some other cakes. However, quite a large amount is imported, as judged from the statistics for 1929 when 110,27 metric tons were imported as against 4,963 tons exported, with the Philippines and the Netherland Indies supplying the most of the imports and Denmark and the Netherlands taking most of the exports.

Price movements affecting coconut oil for the years 1926 to 1929, inclusive, and the first eight months of 1930, show that while ordinarily there is a difference of about \$1.16 per 100 kilos in favor of coconut oil over palm kernel oil, the past year and so far this year has seen this difference almost disappear and for the first time in the history of the vegetable oil industry, the price of coconut oil dropped below the price of palm kernel oil. The difference in the price of the two oils as of August 31, 1930, was small.

Cottonseed

PRIOR to the war cottonseed played an important part in the vegetable oil industry in Germany. Since that time, it has lost considerable ground, being replaced by other oil-bearing seeds until at present it ranks last in importance in the list of oil-bearing vegetable products imported into Germany. A big factor in the reduction of imports is that the residue, cottonseed cake, is not so popular for cattle food as other cakes.

Egypt furnishes the largest part of the imports into Germany. Imports from the United States are light, owing to the high price in comparison with other countries. There is slight

chance that the amount of cottonseed imported from the United States will increase, nor is there much likelihood that total imports will increase appreciably. Cottonseed as a factor in the vegetable oil industry in Germany has definitely lost ground, which will not be regained, at least for many years to come.

Since there is little demand for cottonseed cake and meal, the domestic production of oil is very low, most of it being imported. But imports are handicapped in that there is a rather heavy duty imposed. For oil in barrels this duty is 2.50 reichsmarks per 100 kilos (\$0.27 per 100 pounds) in other containers 20-21 percent. The domestic production has steadily decreased, the quantity being less than 4 percent of the production in 1913 and 24 percent in 1926. Imports have likewise decreased, the total in 1929 being 38 percent of the total in 1913. During the past four years, imports have remained fairly steady, with the exception of 1927.

Great Britain and Egypt furnish the greater part of the imports, with the Netherlands and the United States participating about equally. Recently, Russia has been supplying part of the imports, surpassing both the Netherlands and the United States, and bids fair to be a serious competitor in the future. While America is the largest producer of cottonseed products, owing to the high prices for the American product, there is little chance that sales in the German market can be increased to any extent. Exports are of little consequence being but 414 metric tons last year. The Netherlands and Denmark were the chief buyers.

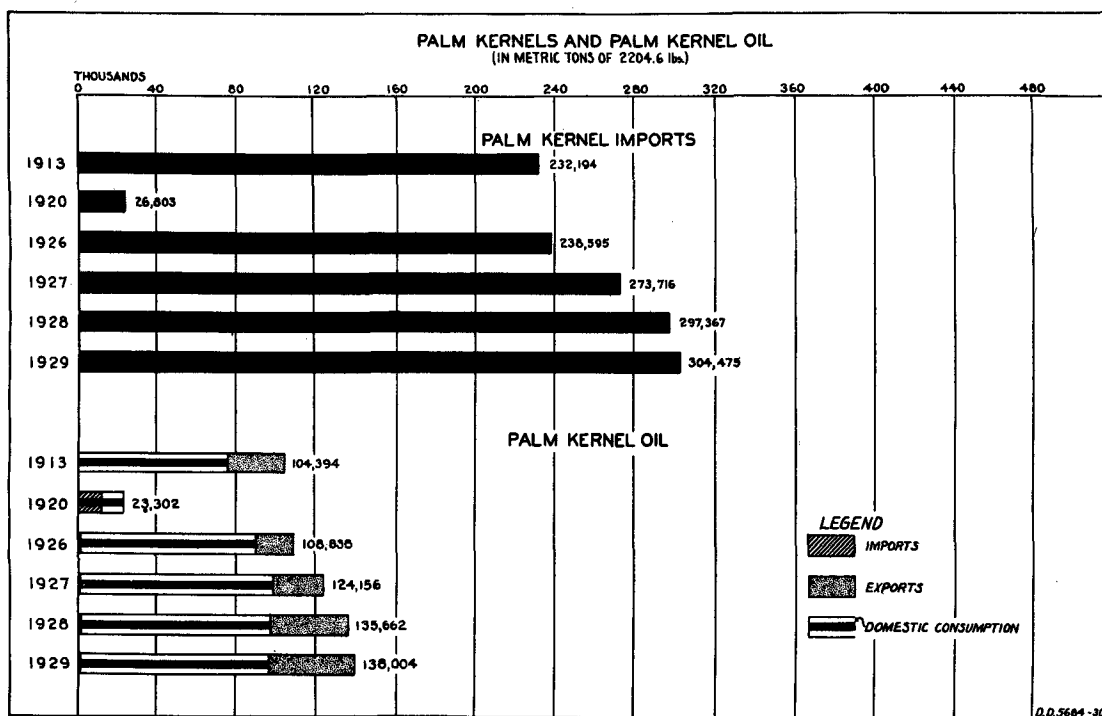
Palm Kernels

IN THE pre-war period, Germany led in the quantity of palm kernels imported. During the war the crushing industry was transferred to Great Britain, where in order to retain the industry a system of preferential export duties on palm kernels was instituted. However, this was repealed in 1922, which accounts in a large measure for the re-establishment of the industry in Germany. By 1928 Germany had surpassed pre-war figures, while imports into Great Britain had suffered a substantial decrease.

The following table shows the imports of palm kernels into Great Britain, France, and Germany for the years 1913, 1920, and 1928.

IMPORTS OF PALM KERNEL BY GREAT BRITAIN, FRANCE, AND GERMANY for the years 1913, 1920 and 1928

	(metric tons)		
	1913	1920	1928
Great Britain	36,012	286,526	159,052
France	2,939	46,092	12,750
Germany	232,194	26,803	297,367



Graphic representation of German trade in palm kernels and palm kernel oil in typical years between 1913 and 1929

Imports of palm kernel oil are of very little importance at present, as production is able to take care of consumption and at the same time provide for exports. The duty on this oil is 1.25 marks per 100 kilos (\$0.13½ per 100 pounds) for edible grade; inedible oil is free. In contrast to the decrease in imports, exports have steadily increased. The quantity exported in 1929 was approximately 50 percent greater than in 1913. Inasmuch as local consumption remains fairly equal from year to year, the increase in production will undoubtedly be exported.

In line with the decreased imports of palm kernels into Great Britain, exports of oil from Germany to that country have increased. This is additional evidence of the transference of the industry from England to Germany. Whereas, the United States in the years immediately followed the war purchased from England, in recent years it has turned to the German market, purchasing nearly four times as much in 1929 as in 1926.

During the past four years, with the exception of 1927, when there was a decrease in the consumption of coconut oil, the home consump-

tion remained fairly steady. In line with the continued reduction in the price of coconut oil, the price of palm kernel oil has continued to fall. During the first five months of 1930, prices fluctuated markedly. Since June they have dropped sharply and record low levels have been established. Present market reports indicate little likelihood of much improvement in the near future.

(To be continued)

The cultivation of a new variety of late sesame seed in place of peanuts has resulted in a small decrease in the area sown to peanuts in Burma during the current crop year (1930-1931). Official estimate for this year is given as 551,340 acres as compared with 567,620 acres given as the third estimate of last year. The final estimate last year was 556,296 acres. This season's crop is reported to be in better condition than that of last year which in turn was above the average of the previous two years. Production of 195,000 tons of nuts in shells is predicted. The final estimate for the previous crop was 190,000 tons.