

## THE CASE OF WHALE OIL VS. TALLOW

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### *Substantial Proportion of Oils and Fats Enters Soap Kettle*

Through a canvass of consumption in seven major and a group of miscellaneous industries for 1929 the Bureau of the Census determined total consumption of slightly less than 4¼ billion pounds exclusive of butter. Therefore, if we deduct the quantity of butter estimated to have been churned in the world that year—6,392,000,000 pounds—we find that the United States provided consumptive outlets for approximately 19 per cent of the available supplies of oils and fats entering international trade. A little more than three-eighths of this latter quantity, or to be exact, 38½ per cent was diverted to the soap kettle; hence, the soap industry of this country was the consumer of 7¼ per cent of the commercial output of the world in animal (except butter), vegetable and fish oils in 1929.

The following table depicts the relative status of the principal fatty materials entering into the manufacture of soap in the United States. Numerous other oils and fats make up the remaining 7 per cent of the supplies.

	(In 1,000 pounds)	Per cent of Total
Total consumption .....	1,618,953	
Tallow (inedible) .....	451,835	27.9
Coconut and palm kernel oils....	438,446	27
Palm oil .....	178,851	11
Cottonseed oil .....	167,033	10.3
Greases (animal) .....	154,288	9.5
Whale oil .....	71,022	4.4
Fish oils .....	59,612	3.7
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	1,521,087	93.8

A very small amount of edible tallow may have been included with the inedible in the above tabulation. Palm kernel oil included with the coconut oil comprised but 10 per cent of the total weights for these oils. The cottonseed oil

### **Tariff Commission Announces Hearing on Gelatin**

The Tariff Commission on the 8th day of January, 1932, announces that the public hearing heretofore set in the investigation of gelatin, glue, glue size, and fish glue, not specially provided for, and casein glue, for May 28, 1931, and postponed, at the request of parties interested, to a date to be announced, is now set to be held on February 15, 1932.

Public notice of this hearing has been given January, 1932

is "foots" from refining operations. The greases are white and yellow hog and brown greases as only trifling quantities of other types enter into soap products. The fish oils comprise menhaden, herring and sardine of domestic origin with some sardine and pilchard oil imported.

Once more referring to the Census Bureau's report on "Factory Consumption of Oils and Fats" for 1929 we learn by the process of a little arithmetic that the requirements of our soap industry in that year were served by the diversion to such consumption of the major oils and in the percentages below:

	Per cent.
Tallow, inedible .....	88
Greases (animal) .....	68
Palm oil .....	90
Coconut and palm kernel oils .....	60
Cottonseed oil (foots) .....	12
Fish oils .....	51
Whale oil .....	100

### *Animal Fats Lead Other Fatty Materials in Soap Manufacture*

Between the years 1924 and 1930 inedible tallow production in the United States increased 15 per cent and reached its highest volume in 1930. Greases on the other hand, suffered a decline of about 8 per cent so that while of these animal fats, 1930, for instance, white, yellow and brown greases represented but 30 per cent of the total animal fats (in 1924, 35 per cent), the net result was that in 1930, these greases and inedible tallows supplied but 32 per cent (in 1929 exactly the same percentage) of the fat needs of American soapers as compared with 43½ per cent in 1924 and 42 per cent in 1920. The total quantity of oils and fats (vegetable, animal and fish) available for soap consumption increased more than 44 per cent during this six year period but animal fats recorded but 7 per cent gain. Tallow exports

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by posting a copy thereof for thirty days prior to said 15th day of February, 1932, at the office of the Commission in the city of Washington, D. C., and at the office of the Commission at the Port of New York, and by publication prior to said date in "Treasury Decisions," published by the Treasury Department, and in "Commerce Reports," published by the Department of Commerce.

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were a factor favoring increased availability as they shrank from 33 million pounds in 1924 to slightly in excess of 5½ million pounds in 1930. (Such exports though were in all probability edible tallow since for the past several years inedible tallow exports have been placed in a miscellaneous classification and not separately identified.) Greases likewise bolstered the net availability of supplies through a drop of 16 million pounds in this span of years. Imports of tallow have dropped sharply in the last few years from about 2½ million pounds in 1924 and an average for the years 1926 to 1929 inclusive of between ten million pounds and 14½ million pounds to a negligible amount in 1930. Thus smaller imports have tended to offset reduced exports of tallow.

Whale oil imports all of which have been destined for the soap kettle have remained practically constant in the relationship they have borne to total available supplies of oils and fats. Whale oil has comprised 5 per cent of the entire quantity of fats employed in soap each year since 1924 except in 1930 when 4½ per cent was so consumed.

Let us consider the status of vegetable oils. Palm oil has aided in supplementing tallow in making good the deficiency in soap fats. Consumption of this oil in 1930 was 2½ times in excess of 1924 thus reflecting an advance in its percentage from 9 per cent to 16 per cent of total available soap oils and fats. Although the

use of coconut and palm kernel oils in soaps had increased 70 per cent in 1930 over 1924 and was more than double the quantity for 1920, approximately 4 per cent less oil from these sources entered into soaps in 1930 as compared with 1924. The percentage dropped from 30 per cent in 1920 to 26 per cent in 1924 and then advanced to 31 per cent in 1929 falling 1 per cent in 1930. (See following table.)

Cottonseed oil maintained a stationary percentage of 14 per cent for 1928 to 1930 inclusive which was 2 per cent less than either 1927 or 1926 but 1 per cent greater than 1920. Quantities of cottonseed oil available for consumption have suffered but slight variation since 1926. Fish oils have constituted 3 per cent or 4 per cent each year of the total oils available except in 1928 when 5 per cent was reported.

The data below illustrate the foregoing remarks and the details of the figures discussed.

(Continued in February Issue)

### Vegetable Oil Industry in the State of Jalisco, Mexico

THE value of the oil production of the State is estimated at 4,000,000 pesos annually, though last year a small decrease was noted, due to the failure to secure supplies. This was on account of the condition within the State itself.

This production comes from two factories located in Guadalajara, and one in Ciudad Guzman. Their combined productions are estimated at 5,500,000 kilos of oil, with 4,000,000 kilos of this being coconut oil. The crops of "coquito de aceite" have been considerably increased,

### LARD HYDROGENATION AND THE BOMER TEST (Continued from page 13)

less completely hydrogenated lard could be detected by this method.

Another series of analyses was then made on samples taken during the progressive hydrogenation of a prime steam lard in laboratory equipment.

#### EXPERIMENT No. 5

	Iodine value	Bomer No.
(a) Original lard.....	64.9	72.8
(b) Sample 1.....	63.2	72.5
(c) Sample 2.....	52.3	69.6
(d) Sample 3.....	47.9	69.3

This experiment indicated that the Bomer

number decreased as hydrogenation progressed, and that the Bomer number went below 71.0 at a reduction of iodine value of between 2 and 12 points. The exact point where this occurs probably depends upon the type of reduction that occurs during hydrogenation.

From the information obtained from these experiments it appears that results by the Bomer method lower than 71.0 cannot be taken as a sure indication of the presence of beef fat in lard or hog grease, since lard stearine made by hydrogenating lard lowers the Bomer number below that point.