

The Margarine Industry of Europe

By E. L. THOMAS

*Specialist in Meats, Fats and Oils, in Collaboration with Field Representatives of the Bureau of Foreign and Domestic Commerce**

RECENT mergers, acquisitions by the European margarine trust, and intensive merchandising campaigns throughout Europe to increase the popularity of margarine and expand the consumer markets for the product, have accentuated interest in this industry abroad.

This article, therefore, as it embraces all of the leading margarine producing countries of Europe, is offered to fill a want and supply a service of information of particular interest to manufacturers of margarine and producers of other fats for food purposes in the United States.

PART II

Denmark

THE high per capita consumption of margarine in Denmark—the highest, in fact, of the whole world has an extremely simple explanation. The butter produced in Denmark is of such a uniformly high quality that Danish producers are able to command a premium market abroad for practically the entire output of the dairies. The natural consequence has been the development of a margarine industry to supply a substitute fat for the butter exported. The accompanying table shows the degree to which margarine has supplanted butter. Denmark supplies essentially its entire requirements in margarine and neither exports nor imports to any extent.

Last year there were 130 margarine factories with 1,300 workers in the country. This is a marked increase in recent years since there were but 50 manufacturing establishments in 1918. However, the extension of the control of the Margarine Union which has already taken over a number of

Danish plants is expected to result in a centralization of production and the consequent closing of some of the factory units now in operation. As a matter of fact even at the present 10 factories account for 85% of the total production of margarine.

Animal fats represented but 17% of the raw materials entering into the manufacture of margarine in 1927 but this is, however, a substantial increase from 7½% in 1921 and may be attributed almost entirely to the increasing consumption of hydrogenated whale and fish oils. In 1921 official records show no fats of this description being utilized in the margarine industry whereas 10.6% of the 17% total previously quoted were hardened whale and fish oils in 1927. Just as is the case elsewhere in Europe, Danish manufacturers have discovered that the improvement in the technique of hydrogenation made such fats available for edible purposes.

Of the vegetable oils entering into margarine coconut oil has always been the predominating favorite, this oil alone accounting for 60% of all raw material requirements in 1921. Since that year, though, it has yielded somewhat to an increasing use of other vegetable oils. There has been a decided fluctuation in the consumption of cottonseed oil no doubt to large extent due to price movements.

Netherlands

THE headquarters of the Margarine Union is in the Netherlands where the margarine industry is largely under its domination. One might expect therefore a reduction in plant operations. This does not seem to have been the case, however, for there were only three fewer plants in operation in 1926 than 1922, and only sixteen factories in all of the Netherlands in the latter year. The number of employees has increased in this four year period from 4,186 persons to 4,988. Netherlanders eat very nearly as much margarine as butter but the production is much

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in excess of requirements at home so considerably more is exported than is retained for domestic consumption. About 70% of this export surplus is sent to England and the balance shipped all over the world. The penetration of other countries by the Margarine Union suggests the possibility of a decline in exports because of a concentration of manufacturing activities in those countries that may now be importing.

Producers in the Netherlands report a definite and well-established preference for vegetable fat produce. This is borne out by the trend in supplies of raw materials. Whereas in 1923, 40% of all raw materials required by the industry was animal fat, this percentage shrank to 20% in 1927. The more popular of the vegetable oils are peanut, soya bean and coconut with an increasing quantity of linseed in later years. The decline in the use of animal fats is the more marked when it is stated that hardened whale and pilchard oils, both classed as animal fats, have found an expanding outlet in margarine manufacture. The increasing employment of vegetable oil has brought about lower prices on margarine which in turn has tended to further popularize its consumption. However there would appear to be a likelihood of a general advance in wholesale prices in the early future applicable only to standard brands. This is not expected to affect retail prices for a time at any rate.

Norway

THE industry of margarine churning supports forty Norwegian factories at the present time. Its growth appears to have been arrested at least temporarily for while production was greater in 1927 than preceding years, factory output in each year was somewhat less than during 1925, the high mark in production to date.

Although Norway imports more margarine than is exported (see Table VI), the imports are intended largely for re-export so Norway may be regarded as self-contained in respect to supplying her needs in this food commodity. The consumption of margarine in Norway is second only to Denmark from a per capita standpoint but it is to be doubted whether more margarine can be consumed in Norway except as the population increases for the maximum annual per capita consumption of butter and margarine combined is placed at 46.3 pounds while present individual consumption is $13\frac{1}{4}$ to $15\frac{1}{4}$ pounds of butter and 33

to $35\frac{1}{4}$ pounds of margarine annually. The official per capita consumption of the latter article was reported as 34.3 pounds in 1927.

Some very striking shifts in the ingredient requirements of the industry took place during the years between 1916 and 1927. The greatest change occurred in the case of animal fats, i.e., oleostock, oleo oil and neutral lard. From 31% in 1916 the percentage of this type of fats dropped to but $10\frac{1}{2}\%$ in 1927. In part this was made up for by the increasing use of hydrogenated whale and herring oils. In 1916 no fats of this description were employed whereas in 1927 the consumption was 9% of the total of all raw materials. Two grades have been found desirable by the Norwegians. One has a melting point of 42° and the other 52° . More and more are vegetable oils gaining favor. Their more extensive utilization is attested by the fact that vegetable oils represented 39% of all ingredients in 1916 and 56.6% in 1927. Aside from the element of price which favors the vegetable oil group of fats, such oils have high moisture absorption qualities which makes them preferable to animal fats. Milk including cream and butter declined from 22% in 1916 to 19% in 1927 despite a 25% increase in margarine production volume during this period of eleven years. This is evidence that other fats have replaced milk to the extent of about $8\frac{1}{2}\%$ in margarine formulae. Churners in Norway at the present are using nearly twice as much cocoanut and other similar so-called hard vegetable oils as they use of cottonseed and soybean oils.

The statement has already been made that vegetable oils average to cost the manufacturer less than animal fats. In Norway the higher priced animal fats have placed such margarines on a retail price level approaching butter which has been another factor influencing the sale of the article. The lower-priced vegetable fat product has not been hampered by such competition and therefore appeals to popular demand.

Belgium

FOURTEEN plants are in operation at the present time, some of them being subsidiaries of large producers. Very few manufacturers are independent of the Margarine Union which as in many other European countries has acquired most of the larger producers. Production statistics are not available but consumption in 1914 was nearly $26\frac{1}{2}$ million pounds. In 1920 it had almost doubled but showed no further gain until 1925 when it was reported to have been $59\frac{1}{2}$ million pounds.

From 1925 consumption reflects a steady growth, last year reaching 89 million pounds. Inasmuch as per capita consumption in 1913 was 3.32 pounds and in 1924, 7.42 pounds with a total consumption of slightly under 52 million pounds it may be assumed with due allowance for growth in population the past five years that per capita consumption last year was around 11½ pounds—substantial progress in the development of the industry.

Much of this increased consumption may be attributed, no doubt to what amounts to a complete substitution of animal fats by vegetable oils as the principal constituent raw materials employed by the Belgian industry. This has brought about a general lowering of the price of the commodity and is asserted to have resulted in a superior article being offered the public. The vegetable oils most commonly utilized are cocoanut, peanut, soya bean and sesame.

Belgium has a foreign trade in margarine the balance of which has been on the import side since 1923. Previous to that year the an-

nual trade was of larger proportions and aggregated 14 million pounds in 1920 (about one-third imports and two-thirds exports). In 1922 it was less the total being 1,744,925 pounds and about 40% imports to 60% exports. Since the pendulum of trade swung the other way in 1923, Belgium's excess of imports over exports was 256,000 pounds in that year and 855,000 the following year, mainly from the Netherlands. From 1925 to date Belgium's foreign trade in margarine has been insignificant and chiefly confined to Netherlands for imports, France furnishing the principal market for the exports.

Spain

THE industry is not extensive in Spain due principally to the widespread use of olive oil in this country. Very little margarine manufactured in Spain is other than an animal fat product chiefly for the reason just stated. Production and consumption statistics are not available but it can be said that consumption is relatively unimportant.

TABLE V
NETHERLANDS
(Thousands of pounds omitted)

Year	Production	Exports	Domestic Consumption	Per capita consumption Pounds
1913.....	194,937	151,646	—	—
1921.....	218,859	152,691	95,316	12.79
1924.....	288,312	208,057	113,810	15.43
1925.....	291,078	200,453	119,666	16.31
1926.....	295,263	206,472	122,316	16.31
1927.....	339,830	203,806	136,024	17.86
1928.....	(1)	195,755	—	—

NOTE: The totals of the exports and domestic consumption in each year exceed production. It may be assumed that certain quantities intended for domestic consumption were for some reason diverted into export trade.

1. Estimate but closely approximate.

TABLE VI
NORWAY

	Production	Imports & re-exports	Exports	Estimated Consumption	Pounds Per capita Consumption
1913.....	60,226	79	1,319	59,113	24.03
1920.....	72,001	2,193	150	74,194	28.22
1924.....	94,430	3,022	303	97,347	35.49
1925.....	97,554	1,500	319	98,940	35.71
1926.....	94,376	705	354	94,924	34.17
1927.....	95,429	593	315	95,907	34.30

TABLE VII
SWEDEN
(Thousands of pounds omitted)

	Production	Imports	Exports	Net Consumption	Pounds Per capita Consumption
1913.....	51,784	810	35	52,558	9.92
1922.....	38,849	1,451	422	39,878	—
1923.....	51,397	2,797	48	54,146	—
1924.....	65,476	3,993	10	69,450	12.27
1925.....	84,739	3,873	417	88,195	—
1926.....	90,711	3,019	470	93,260	—
1927.....	93,854	3,778	206	97,426	—
1928.....	111,540	(2)	72	111,468 ⁷	—

2. Not available.
7. Imports not included.

To be continued.