Margarine’s modern history

David Robinson

Second in a two-part series

From its invention by a French chemist in the 1860s up until 1960, the main developments associated with margarine were edible oil and margarine process improvements, while the product remained a lookalike substitute for packet butter. By 1960, the enclosed rotator process was in common usage and tub-packing machines were being installed to accommodate the launch of softer, more spreadable, margarine. [Editor’s note: Margarine’s first 100 years were covered in the March issue of inform.]

Meanwhile butter, in its familiar wrapper format, remained the predominant yellow fat spread in the market until the late 1970s when world-wide sales of margarine overtook butter.

Regulations and prejudice

Almost from the start, the margarine industry was subject to discriminatory regulations brought about by strong political activity from the dairy lobby. Margarine was seen to be produced by ‘big business,’ whereas butter was made predominantly by a large number of small dairy (farm) producers. For example, the intensity of the animosity between the dairy and margarine industries unbelievably led to the dissolution of the Danish parliament in 1885.

These past regulations have played a significant part in the development of the product and its packaging, and include:

- Colorless margarine (color capsules)
- Colored margarine—pink, brown or blue
- Cube packs only
- Separate selling areas for butter and margarine
- Red print band on pack
- Sesame and starch tracers
- Lead seal closure

Apart from adverse taxes and production quotas, governments were obsessed with preventing margarine from looking like, or being mixed with, butter. Although blue colored margarine was never sold; white margarine and a cube pack with the warning red band on the wrapper were.

In the United States capsules of colorant were sold with colorless margarine to allow housewives to ‘mix their own.’ In fact, even in the 1980s in Wisconsin, a dairy state, color capsules were still sold.

In Canada, each province has their own rules governing margarine. Yellow margarine is banned in the province of Québec, home of the nation’s largest dairy industry. That ban is being challenged in the courts by Unilever Canada. The Supreme Court of Canada heard arguments March 17 and ruled against Unilever. The ban remains.

The very regulations that supposedly made butter so secure also restricted it to such a narrow definition that the dairy industry was locked into a single product, whereas the flexibility of the margarine regulations with regard to ingredients and processes—provided milk fat was not used—enabled margarine to thrive.

Milk fat was used in melange spreads (a mixture of milk and other edible fats and oils) in Sweden in the 1970s. However, it was not until the introduction of the European Union (EU) Yellow Fats Spreads regulation in 1994 (Council Regulation [EC] No 2991/94) that the use of mixtures of milk and other edible oils and fats, at varying levels, became generally legally acceptable. The dairy industry at last had the legal flexibility to exploit the advantages of butter, this time as a raw material, often using brand names perceived by the consumer to be ‘butter.’

Product development

The first major product development with margarine was the addition of vitamins (A and D) in 1927. Apart from quality and cost saving improvements little changed on the product front until the introduction of soft wrapper (stick) margarine in cartons, followed in 1960 by soft margarine in tubs (Fig. 1).
Liquid margarine was later introduced, primarily in the United States. The mid 1960s saw the introduction of heart health margarine, with high polyunsaturated fatty acids content, as well as low calorie, halvarine or half fat products with an empty (no protein) water phase. Although milk and vegetable fat mixtures have been used over the years, usually with butter levels below 10%, it was not until the 1970s that an 80% fat melange, Bregott, with 75% butter and 25% vegetable oil in the fat phase, was marketed in Sweden. Also in Sweden a similarly constituted fat phase was used for a half fat product, Lätt au Lagom.

In the late 1970s the low and high protein halvarines were introduced in the United Kingdom, as was the use of preservatives. By the 1980s the fat levels in most traditional brands were starting to fall and the ubiquitous reduced fat (60% or lower) spread enters our vocabulary. The 20%, very low fat, and ‘almost’ zero fat spreads were introduced in the late 1980s–early 1990s.

In 1998 the first significant cholesterol-lowering yellow fat, Benecol, was introduced by Raisio in Finland, with the magic ‘goody’ sterol/stanol added. This was followed by Unilever’s Take Control in the United States and Proactiv in Europe, in 2000, after gaining EU novel food acceptance. After 10 years of market decline in volume we start to see a market increase in terms of value, as these products sell at four-times the price of equivalent products, due to the high price of plant sterols. By 2000, organic spreads were starting to appear on the supermarket shelves in the UK and Sweden.

**Oil and fat ingredients**

Looking behind the products at the raw materials used shows some interesting historical trends (Fig. 2). Of course, the first oil to be used in a yellow fat spread was milk fat, for butter. With the invention of margarine, the soft fraction of beef tallow (oleine) was used. Tallow was also softened by adding olive oil, but this was quickly abandoned because of its high price in favor of peanut (groundnut) and cottonseed oils. It has taken over a century for olive oil spreads to reappear under a Mediterranean lifestyle platform. In 1998 the first significant cholesterol-lowering yellow fat, Benecol, was introduced by Raisio in Finland, with the magic ‘goody’ sterol/stanol added. This was followed by Unilever’s Take Control in the United States and Proactiv in Europe, in 2000, after gaining EU novel food acceptance. After 10 years of market decline in volume we start to see a market increase in terms of value, as these products sell at four-times the price of equivalent products, due to the high price of plant sterols. By 2000, organic spreads were starting to appear on the supermarket shelves in the UK and Sweden.

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**Fig. 2 Major Oil Types in Yellow Fats**

![Chart showing major oil types in yellow fats]

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today, such as rapeseed, sunflower, corn (maize) and soybean, have been in use since early in the 20th century.

The use of whale oil needed to wait for hydrogenation to be developed in 1902 to reduce oxidation, but it was not until the second quarter of the 20th century that sizeable quantities were used in margarine. By the 1960s public concern and catch restrictions stopped its use.

Hardened fish oil was used from the 1950s and in some countries was the major oil ingredient until 1993 when worrying trans fats studies made by Walter Willett of the Harvard School of Public Health in Boston, Massachusetts, and later the sustainable fishing issue, cut their use dramatically.

Genetically modified oils came under significant public scrutiny in the 1990s, which limited the use of soybean and corn oil, particularly in Europe.

Changes have also taken place in the aqueous phase of low fat products. Figure 4 shows the development from the protein empty aqueous phase of the first halvarines in the 1960s, followed by the high protein levels of dairy-based low fat spreads, such as Lätt au Lagom, in the 1970s. But, with the price of milk protein equating to that of milk fat it was not long before the entry of medium level protein-containing spreads. Protein levels continued to decline as thicker systems changed from gelatine, to alginate, then to starch during the 1980s and 90s.

Advertising

It would be an omission to leave out the massive effect that advertising has had on the growth of margarine.

One of the side effects of the discriminatory regulations was to encourage the use of heavyweight merchandising and advertising to overcome prejudices in the market place. Initially this was confined to shop facings and print media. With the introduction of TV to advertise the benefits of margarine, the development and market for new products were heavily influenced by the success of a campaign. A written article cannot do justice to some of the excellent ads that have been produced over the years; suffice it to say, these have done much to change the perception of margarine from a cheap substitute for butter to a healthy alternative.

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