SIC 2024: ICE CREAM AND FROZEN DESSERTS

SIC 2024 encompasses establishments primarily engaged in manufacturing ice cream and other frozen desserts: frozen yogurt, ice milk, ices and sherbets, frozen custard, mellorine, frozen tofu, and pops (frozen desserts on sticks).

SNAPSHOT

An important segment of the American dairy industry, frozen desserts accounted for over $9 billion of sales in 1991, just over 15% of the dairy total of $62.8 billion and taking third place after fluid milk and cheese.

Measured by consumption, frozen desserts led the entire dairy industry segment in 1992, with much of the increase attributable to the introduction of new products containing less milkfat to address consumers' concerns about healthier diets. Consumption of frozen yogurt, a lowfat alternative to ice cream, rose by 17%, and ice cream's 7.3% gain was mostly in reduced fat products.

ORGANIZATION & STRUCTURE

Ice cream begins with the milk produced by America's dairy farmers, many of whom belonged to the large dairy cooperatives which marketed their milk to processors or, in some cases, operated their own processing facilities for the manufacture of ice cream and other dairy products. In 1991 America's 10 million dairy cows produced 148,526 million pounds of milk; approximately 8.6% of it, or 12.8 million pounds, was used to make frozen dairy products.

Makers of ice cream and other frozen desserts ranged in size from small operations with sales under $1 million a year to subsidiaries or divisions of giant, diversified companies with annual sales in the billions of dollars and for which frozen desserts were only a portion of their total product lines. In 1991, there were 675 plants making ice cream, 307 making ice milk, and 176 making water ice; there was no number available for sherbet. It seems safe to say that some of these plants made more than one type of frozen dessert product.

In the highly regionalized and extremely competitive dairy industry, many top producers' brand names were known only to the geographic areas they served. Distribution to sales outlets of the frozen product was vital to success, and competition for distributors was keen. Small producers trying to break into a market could be "frozen out" by leading producers who demanded nothing less than absolute loyalty from their regional distributors.

Licensing agreements sometimes made partners of competitors. For example, in the San Francisco Bay Area, Dreyer's/Edy's Grand Ice Cream was a co-packer and distributor for Vermont-based Ben & Jerry's, and according to a filing with the Securities & Exchange Commission, 42% of Ben & Jerry's ice cream was being made by a Dreyer's plant in Fort Wayne, Indiana, using Vermont milk. Steve's Homemade produced Yoplait frozen yogurts under an agreement with Yoplait's parent company, General Mills.

BACKGROUND AND DEVELOPMENT

Whether ice cream originated in China or Rome is a matter of debate, but there was little debate towards the end of the 20th century that ice cream and its frozen dessert relatives had regained their position as one of Americans' favorite treats.

Ice cream as we know it--smooth and creamy--came about in the United States early in the 20th century as a result of two technological advances. Homogenization reduced the fat particle size in milk, and a continuous freezing process enabled a consistent ice crystal structure. Advances after these were mostly refinements in formulation, and stabilizer and process systems.

The luxury, or superpremium, ice creams that were regaining popularity in the 1990s were pioneered by Reuben Mattus in the early 1960s. Using all top quality, natural ingredients, and no artificial stabilizers or other additives, Mattus created Häagen-Dazs, a highly successful product that set the pattern for rich, clean-tasting ice creams.

Ice cream is a frozen, pasteurized mixture of milk, cream, nonfat milk solids, sugars and stabilizers. Its contents and manufacture are regulated by the government and must meet Standards of Identity. To be called ice cream, it must contain a minimum of 10% butterfat, which is dispersed throughout the mix to impart smooth mouthfeel. Fresh sweet cream is the best source of butterfat; unsalted butter, which is about 82.5% fat, can replace 50-75% of sweet cream fat. Other fat sources that can be used include anhydrous butter oil, concentrated sweet cream, and dried cream. French ice cream, or frozen custard, also contains more than 1.4% egg yolk solid.

Consumer concerns about the negative health effects of fat in the diet led to the popularity of lower-fat products such as ice milk, which contained 2-7% butterfat. "Ice milk" as a product name was headed for extinction with passage of the Nutrition Labeling and Education Act.

Flavorings may be added before or after pasteurization, and may be pure flavor extracts, pure extracts with some synthetic or artificial components, or artificial flavors. As a general rule, premium ice creams would use pure extracts. Fruits, nuts and candies, syrups add flavor impact. In the 1990s, mix-in flavors like Chocolate Chip Cookie Mix, Carrot Cake Passion, Cappuccino Commotion, achieved great popularity.

Other standard ice cream ingredients are sugars and sweeteners, milk proteins, stabilizers and emulsifiers. Sweetening agents could be natural (corn sweeteners, sucrose processed from cane and beet sugars, fructose) or artificial (aspartame). The milk proteins used are whey proteins and casein. Milk and milk products themselves have some natural stabilizing and emulsifying properties, so that additional stabilizers and emulsifiers may not be needed. Stabilizers help to prevent deterioration in texture from the inevitable temperature fluctuations during normal distribution that cause ice crystals to melt and then reform into larger crystals. Emulsifiers enhance the whipping qualities of the ice cream mix, giving a smoother texture and body.

Ice cream novelties, such as ice pops, fudgesicles, ice cream sandwiches, were originally aimed at children, but starting in the 1980s, adults were also targeted as potential consumers of ice cream specialties. Premium quality Dove bars and Häagen-Dazs frozen yogurt bars on a stick were examples.

Sherbets were defined by the Federal Code of Regulations to contain 1-2% butterfat and 2-5% total milk-derived solids. Ices contain no milk-derived ingredients or egg ingredients other than egg white; they can be made with non-pasteurized mixes because of their typically high acidity formulation.

Frozen yogurts are made using the bacteria cultures Streptococcus thermophilus and/or Lactobacillus bulgaricus. As most refrigerated yogurts were lowfat and had a healthy image with consumers, no less was expected when frozen yogurt debuted as a lowfat dairy dessert. Consumers expected it to be made with the same cultures they perceived to have health benefits in the refrigerated product. The Code of Federal Regulations, however, which required specific starting cultures and acidity levels for refrigerated yogurt, set no such product characteristic requirements for frozen yogurt. The National Yogurt Association (NYA) endorsed a 1991 International Ice Cream Association petition to the government for a requirement that frozen yogurt be made with characterizing yogurt cultures following specific manufacturing procedures.

Mellorine products, although similar to ice cream, contained a combination of vegetable and animal fat in place of butterfat. Federal Standards of identity required mellorine products to contain not less than 6% fat and not less than 3.5% protein.

NUTRITION AND LABELING ACT (NLEA)

By defining terms that had been murky, the Food and Drug Association's (FDA) Nutrition and Labeling Act, with its May 1994 compliance deadline, enabled many frozen food processors to call their products "lowfat ice cream." The act also separated the link between calories and fat, so that desserts getting more than half their calories from fat could be labeled "light" so long as there was a 50% fat reduction. The"light" label was also permitted on products getting less than half their calories from fat so long as the product had either a 50% fat reduction or a one-third reduction in calories.

A significant change in the new labeling would do away with the term "ice milk." Lower-fat ice creams, which previously had to be called "ice milk," could now be labeled as "reduced fat," "light," lowfat," "nonfat," or fat-free," depending on the product's fat content.

Although the definitions of the terms were clear enough, the actual fat content percentages were not. The amounts were tied to an indefinite term, "reference food." Thus, a "reduced fat" claim meant a 25% reduction in total fat from "the reference food." "Light" would mean a 50% reduction from "the reference food," and "lowfat was defined as not more than 3 grams of total fat in a half-cup serving. "Nonfat" and "fat free" were defined as less than 0.5 grams total fat per reference amount, which was 1/2 cup for ice cream, ice milk, frozen yogurt, novelties and bars, and 85 grams for flavored ices, pops, juice bars and cups.

To determine the "reference food," processors might first have to find the marketplace average fat or calorie content by looking at the leading brands in the area where the product was to be sold. For example, a processor would have to compare its "light" Fudge Ripple with leading brands of Fudge Ripple to calculate how much of a reduction in fat or calories would satisfy the 50% less requirement. If on average the leading brands contained 16 grams of fat, then 8 grams of fat could be labeled "light."

CURRENT CONDITIONS/OUTLOOK

With sales of $3.2 billion in 199I, ice cream was making a comeback as America's favorite dessert. Adding in sales for other frozen desserts (ice milk, frozen yogurt nonfat/lowfat products, novelties, sherbets and sorbets tofu-based products, mellorine and miscellaneous products brought the total to $9.5 billion for the year. Overall, production was up 4% in 1991 from 1990, with full-fat ice creams still leading the market at 61%. Frozen yogurt made the largest gain, 25%.

CHART: 1991 PRODUCTION OF FROZEN DESSERTS AND % CHANGE FROM 1990
(Dairy Field: Frozen Desserts Go Back to Basics . . . ")

Americans spent $5 billion on frozen desserts to eat at home, and another $4.5 billion was spent on away from home purchases. Whether indulging in full-fat superpremium brands or following the trend to healthier eating of lowfat foods, Americans of all ages headed for the frozen dairy cases of supermarkets, warehouse clubs; chose frozen desserts in restaurants and fast-food outlets, or popped into sidewalk scoop shops for indulgence on the go. Per capita consumption rose 10% in 1991 and the outlook for future growth was encouraging..

TABLE: 1991 PRODUCT AND OUTLET BREAKOUT
(Dairy Field: "Frozen Desserts Go Back to Basics . . . ")LOWFAT

While fat content continued to be of concern to many consumers, their buying patterns did not always reflect it. One survey found that nearly two-thirds of respondents regularly chose lowfat dairy foods. The number increased as people grew older, and couples were more apt than single people to opt for lowfat regularly.

The number of reduced-fat ice creams declined from 311 in 1990, 54% of all reduced-fat product introductions, to only 94, or 23%, in 1992.

At Ben & Jerry's Homemade, which built its success on full-fat, superpremium ice cream, efforts to develop a satisfactory lowfat ice cream to meet the competition yielded a 7% fat product. "This was lowfat according to Ben & Jerry's interpretation," said Peter Lind, the company's primal ice cream therapist (other companies called this research and development). The company did, however, develop a true lowfat frozen yogurt. The technical challenge even for this was great, given B&J's requirement that the ingredients had to be easy to pronounce and not include "chemical sounding" words.

INDUSTRY LEADERS

Häagen-Dazs Co., whose parent company, Pillsbury, was in turn owned by the United Kingdom giant Grand Metropolitan PLC, set a course in the 1990s aimed to leave the competition trailing. The company offered something for everyone in the frozen dessert segment: premium ice creams, frozen yogurt novelties on a stick, 98% fatfree frozen yogurts, and a new superpremium line of mix-in flavored frozen yogurts and ice creams that Häagen-Dazs dubbed Exträas. The new products were designed to meet increasingly stiff competition in the marketplace and to regain market share from Ben & Jerry's. Sales volume jumped 10% after the introduction of Exträas, and the company's market share jumped from 5.9% to 8.3% in just 12 weeks. Kate Boyle, marketing director of frozen novelties said in Dairy Foods magazine, said that frozen yogurt stick bars were "somewhat of an afterthought." The afterthought had rewarding results. Overall, market sales of frozen yogurt novelties tripled after their introduction early in 1992, and Häagen-Dazs claimed 52% of that market niche.

Häagen-Dazs had taken its cue for mix-in flavored superpremium frozen yogurts from the success of progressive Vermont ice cream maker, Ben & Jerry's Homemade, Inc. Ben & Jerry's embraced social action and originally flavored ice creams as a twin-pronged corporate commitment. It paid off in 1992 with $6.7 million in profits, a 78% rise, and a 36% sales increase to nearly $132 million. In 1993, it followed the very successful vanilla-based Chocolate Chip Cookie Dough with Peanut Butter Cookie dough and had ice cream lovers begging for more. Ben & Jerry's planned to increase its production capacity to 18 million gallons in 1993, up 63%, through co-packing agreements.

On the social action front, the company waived its usual $30,000 franchise free for a scoop shop in New York City's Harlem; 75% of the profits went to HARKhomes, an organization for homeless men, and the shop employs the homeless as well. Through the Children's Defense Fund, B&J fought to give children's issues higher priority in the national agenda.

Dreyer's Grand Ice Cream of Oakland, California, with 1992 sales of $407 million, continued to expand its markets and its product line. Its acquisition of a New York dairy's premium ice cream brand and distribution brought it into the New York tristate market (which includes New Jersey and Connecticut); it also became the exclusive New York supermarket distributor for Dolly Madison ice creams and struck distribution agreements with Steve's Homemade Ice Cream, Inc. New products for the 1990s included low fat ice cream, sugar-free cream, fat-free ice cream, Grand Delights frozen novelties, and a line of ice cream pies and mid-priced ice cream for food service. The company kept pace with new product technologies in the early 1990s, too, being one of only two companies to master the art of making an ice cream stick bar with added-in chunks. (Ben & Jerry's was the other.)

Gold Bond-Good Humor Ice Cream, a division of T. J. Lipton Co., specialized in high-sale frozen novelties. The company made up for the loss of licensing rights to Walt Disney characters by acquiring the rights to Peanuts cartoon characters; they began by launching a Snoopy ice cream bar. Gold Bond's plans included a full line of novelties, e.g., a water ice Dinosaur Bar with a bubble gum ball in the center. The company's 1992 sales jumped from $200 to $225 million.

Texas-based Blue Bell Creameries Inc., was a top-selling brand wherever it was sold and in 1992 was planning to expand its distribution into the Kansas/Missouri market and northern Florida. Blue Bell also looked to warehouse club stores for growth, claiming considerable success with a family pack gallon of homemade vanilla. The company's 1992 sales increased by 9.6% over 1991 to $203 million.

Dannon, a subsidiary of BSN Groupe, a French company that in 1991 laid claim to being the world's largest dairy processor, introduced its first frozen yogurts in 1992. A leader in the U.S. refrigerated yogurt category, Dannon sent both sugar-free, nonfat and premium, full-fat frozen yogurts to America's retail dairy cases. Frank Palantoni, Dannon's vice president for marketing, said in Dairy Field magazine, "In 1991, growth of frozen desserts was driven by frozen yogurt. [It was] up 26%." He added that, consistent with NYA guidelines, the Dannon frozen products would be "full of live active cultures . . . a true yogurt product."

WORK FORCE

Employment in the ice cream/frozen dessert industry declined slightly, from 20,700 in 1990 to a forecast of 20,100 in 1993. The lost jobs were apparently in management; the figure for production workers was expected to remain stable at 12,900. Production workers earned an average $11.10 an hour in 1991, up 4.1% over the previous year. Although management salaries for the industry were undocumented, Food Engineering magazine's annual salary survey reported average 1992 increases of 4.7%.

AMERICA AND THE WORLD

The U.S. was the world's second largest ice cream exporter, sending 21,800 tons out of the country in 1991. This was a 76% increase over the previous year and three-and-a-half times the tonnage exported just four years earlier, in 1988. Some of this share was taken from the European Community (EC); EC exports fell from 51% to 41% of the world total, and the U.S. share jumped from 13% to 27%. The value increase in that same period was over 700%, from $6,501,000 to $46,260,000, indicating the volume increase was higher in premium or superpremium products.

In terms of value, Japan led with imports of $13 million, followed by Mexico, then France and the United Kingdom (UK). The UK, France, and other European Community nations, however, were unlikely to continue importing premium ice cream at the same rate when the new Häagen-Dazs plant in France started production in 1992.

Worldwide production and consumption data for frozen dairy desserts were not very reliable, but based on available figures, the National Dairy Board estimated that the U.S. was by far the largest producer, with Japan next but far behind. The U.S. also led in per capita consumption, with Finland, New Zealand, and Australia close runner-ups.

TABLE: NDB FROZEN DAIRY DESSERT PRODUCTION FOR SELECTED COUNTRIES
TABLE: NDB ICE CREAM EXPORTS TO SELECTED COUNTRIES, 1988-1991

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