

Milk & Butter

INDUSTRIAL CODES

NAICS: 31–1511 Fluid Milk Manufacturing, 31–1512 Creamery Butter Manufacturing

SIC: 2026 Fluid Milk, 2021 Creamery Butter

NAICS-Based Product Codes: 31–15111, 31–15115, 31–15117, 31–1511A, 31–1511D, 31–1511G, 31–1511W, 31–151201, and 31–1520Y

PRODUCT OVERVIEW

Cow's milk is the principal raw material for five major industries in the food products category, including fluid milk, butter, cheese, ice cream, and dry and condensed dairy products. Milk as an industry is usually defined to include immediate products such as buttermilk, sour, and sweet creams, yogurt, and cottage cheese, with all but sweet cream being fermented milk products. The Census Bureau treats butter as a separate industry at five-year intervals in its full Economic Census but combines milk and butter in the intervening years in its *Annual Survey of Manufactures*. For statistical purposes these two industries will be treated as one. Ice cream, cheese production, and the manufacture of dry, condensed, and evaporated products are distinct activities from the milk and butter industries, but are useful to note for comparative purposes. Goat's milk is not covered because data on the commodity are not tracked by the U.S. Census Bureau.

Agricultural Perspectives. All food products originate in agriculture, horticulture, and animal husbandry and in

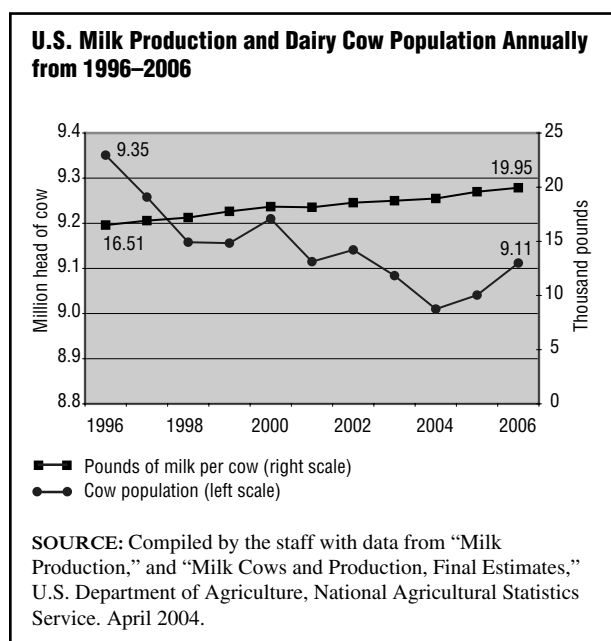
fishing, trapping, and hunting activities. Animal husbandry includes the raising of cows and goats. Goat's milk is produced in very small quantities in the United States and used principally for making goat's cheese. When people say milk they usually mean cow's milk. Milk comes from a dairy cow population of 9.1 million (in 2006). These cows are milked two or three times per day to produce nearly 180 billion pounds of milk per year. This is the equivalent to 21 billion gallons, or 70 gallons per year for every man, woman, and child.

The goat population in 2003 was approximately 1.2 million, roughly half of these animals kept for wool production. The U.S. Department of Agriculture (USDA) keeps track of goats, cows, and cow's milk but does not report on goat-milk production.

A striking aspect of milk production in the United States is a decreasing dairy cow population and an increasing output of milk per cow. The dairy cow herd in 1996 was 9.35 million and had decreased to 9.11 million by 2006. In 1996 the average cow produced 16,505 pounds of milk. Production per cow shot up to 19,951 pounds by 2006. Milk weighs 8.6 pounds to the gallon suggesting that in 1996 each cow produced 5.3 gallons per day, ten years later 6.4 gallons.

The rising productivity of milking cows is principally due to the increasing use of a bovine growth hormone, called bovine somatotropin (BST), that is injected into cows. BST can increase the milk production of selected cows by as much as 30 percent. Translated to a herd, the increase averages approximately 14 percent. Somatotropin occurs naturally in the pituitary glands of mammals, including humans. Until the mid-1990s BST was harvested

FIGURE 144



from the glands of slaughtered animals. In 1993 the U.S. Food and Drug Administration (FDA) approved a recombinant bovine somatotropin (rBST) developed by Monsanto Corporation. The new product, produced by recombinant DNA techniques, came into use in 1994. The product, named POSILAC, is banned for use in cattle outside the United States, but milk obtained from cows injected with rBST has been found to pose no risk for people. Other countries buy the milk but will not permit their own cows to be injected with the hormone.

Controversy continues to surround use of this productivity enhancer in the twenty-first century. Dairy farmers also use two other techniques to improve their cows' productivity. They attempt to influence their cows' perception of the length of day by using artificial lighting or increasing the photoperiod. Days made to seem longer can maximally increase milk production by 8 percent. Farmers can also maximally increase milk production by milking cows three times rather than twice a day.

Milk production is a highly decentralized activity practiced on nearly 92,000 farms in 2002. On average a dairy farm has approximately 99 cows. Many individual decisions influence the size of herds from one year to the next. Farmers may increase their herds hoping to increase their income; others may reduce their herds because demand for milk is soft. Individual perceptions vary from place to place. The consequence is a level of unpredictability in milk supply. Farms may create over- or underproduction and cause the price of milk to fluctuate. The price support system administered by the Agricultural Marketing Service of the USDA has its influence too. Under this

program producers are guaranteed a minimum price for different classes of milk products. The availability of subsidies may influence a farmer to keep a larger herd than the market will support. The 1990 Farm Bill authorized the subsidy in its current form. The United States, like most developed nations, actively subsidizes agricultural activities.

Milk and Its Derivatives. Raw cow's milk on a weight basis consists of water (88%), lactose (4.7%), fat (3.4%), protein (3.2%), and minerals (0.7%). These figures are averages in that the actual content of milk varies from cow to cow and from variety to variety. Lactose is milk sugar and may vary between 4.7 and 5.2 percent of the milk. The butter fat in milk may be as high as 6 percent of milk by weight; it is the source of butter and contributes to cheese manufacturing. Most of the protein in milk takes the form of casein (approximately 80%) and whey proteins (20%). The word casein comes from the Latin word *caseus*, meaning cheese, which is also used in cheese making if not used in fluid milk. Whey is a very watery protein left over after the fats, sugars, and casein are removed from milk, but whey will carry traces of those as well as minerals. The mineral component of milk is high in calcium, so milk is valued for building strong bones. Milk is rich in vitamins A, D, E, K, B1, B2, B6, B12, and C.

Milk is the foundation of a cluster of industries. If all products based on milk (fluid milk included) are added together, they create a \$60.6 billion industry in 2002. Of this total fluid milk is 35 percent as measured in shipments, cheese is 33 percent; ice cream 13 percent; dry, condensed, and evaporated products 16 percent; and butter 3 percent. While casein represents less than 3 percent of milk by weight, it creates an industry, cheese, almost as large as fluid milk itself.

Considering fluid milk and butter as a single industry, it breaks down into seven major categories as follows:

1. Packaged fluid milk and cream represents 53.3 percent of the fluid milk industry in dollars. Within this segment are whole milk, reduced fat milk, skim milk, buttermilk, half-and-half, whipping cream, and sour cream.
2. Fluid milk and cream produced in bulk represents 18.4 percent of total. This segment of the product reaches institutional markets.
3. Butter represents 8.7 percent of the industry.
4. Other packaged milk products such as flavored milks, egg-nogs, and flavored sour cream dips represent 6.4 percent of the market.
5. Fresh yogurt represents 6.4 percent of the total.
6. Cottage cheese represents 3.4 percent of the total.

7. Perishable dairy product substitutes are modified dairy products with components of the milk removed. These include coffee lighteners, whipped toppings, dips, and similar products, and represent 3.4 percent of the total.

Butter is churned. Its starting point is the butter fat in milk, present in milk's creamy layer. Fats are lighter than water and in milk, unless it has been homogenized, the cream will rise to the top. A processor can also separate cream from milk using a centrifuge. The butter globules themselves are naturally surrounded by sheaths of emulsifiers known as phospholipids. The lipids keep the fat particles from joining by interposing a thin layer of water between them. When butter churns go to work their action disrupts the structure of the lipids so that butter globules can and do stick together. In ordinary situations milk is usually homogenized. In that process, during which milk is forced under high pressure through tiny nozzles, butter fat particles are broken into very tiny fragments that stay suspended in the milk. For this reason producers first remove the cream portion from milk if they intend to turn it into butter. After milk is homogenized, the butter fat cannot be removed economically.

Yogurt is milk fermented by the activity of two benign bacteria that stay in the product and enter our bodies as we eat the yogurt. They are *Lactobacillus bulgaricus* and *Streptococcus thermophilus*. These bacteria feed on milk sugars (lactose) and release lactic acid. The acid causes yogurt to curdle and also prevents pathogens from surviving in the yogurt. The benefits of yogurt come from the presence of the fermenting bacteria. They aid digestion and help the body's immune system.

Cottage cheese is curdled milk from which whey liquids have been drained. All cheese production begins by curdling milk, during which casein and whey proteins separate. The curdling can be caused by bacteria or enzymes. A variety of bacteria are cultured to make different kinds of dairy products. Cottage cheese is typically made by culturing milk with *Streptococcus lactis* and *Streptococcus cremoris*. Use of these bacteria results in acid formation, which causes curdling. Buttermilk and sour cream are also fermented using bacterial cultures.

Fluid milk and its immediate products are perishable. Unless consumed soon after a cow is milked, these products must be held in refrigerated spaces whether in storage or during transport. They must also be stored in refrigerators at the point of consumption until drunk, eaten, or incorporated into meals.

MARKET

The value of all shipments of fluid milk and butter in 2005 was \$31.2 billion, up from \$26.5 billion in 2002 and \$23.6 billion in 1997. The industry grew in dollar

terms at an annual rate of 1.4 percent between 1997 and 2002, at a rate of 5.6 percent per year between 2002 and 2005, and at an annual rate of 3.6 percent during the entire 1997–2005 period. Growth fluctuations in this industry are associated with price swings. Price fluctuations are caused by changes in herd size and the productivity of the herds. The sharp growth in the industry between 2002 and 2005 coincided with an upswing of milk prices between those two years.

Milk production is a very modern industry in many ways, not least in using hormones manufactured by intricate biochemistry to enhance the productivity of cows. At the same time, it is a very mature industry. On a per capita basis, consumption of milk products is in decline. Per capita consumption of milk was 261 pounds per person in 1975, 229 pounds in 1992, 216 pounds in 1997, and 204 pounds in 2005. Butter consumption is relatively flat on the whole. It stood at 4.7 pounds per person in 1975, 4.3 pounds in 1992, 4.1 pounds in 2002, but was up again to 4.6 pounds in 2005. Cottage cheese consumption is also declining and for the years 1975, 1992, 1997, and 2005 it was 4.7, 3.1, 2.6, and 2.6 pounds per person in these years respectively. Looking at all dairy products across the board, consumption per capita since 1997 has grown only in two categories, in butter and in cheese. All other categories, including ice cream and dried and evaporated products, have declined. This means that the industry is growing in dollar sales in part because the population is increasing, which accounts for approximately one-third of the growth, and by getting higher prices for its product through enhanced product differentiation and marketing.

Between the years 1997 and 2002, two years for which detailed dollar values for industry sub-components are available from the Economic Census, packaged fluid milk sales (ordinary milk mostly packaged in plastic and paper containers) declined at an annual rate of 0.5 percent. The bulk milk category going to institutional markets had positive growth of 3.4 percent per year because institutions may have been shifting out of packaged goods to lower their costs. The highest growth rates were achieved by perishable dairy product substitutes, 10 percent per year, and by other packaged milk products, 6.8 percent per year. Within this last category flavored milk, such as chocolate milk, increased annually at a rate of 7.4 percent. Butter sales grew at a rate of 4.1 percent per year.

The market is shaped by people's somewhat contradictory perceptions about milk, by inconsistent patterns of behavior, and by the industry's adaptive behavior to tease out the best results given this situation.

Milk is a healthy product but associated principally with children. Children up to the age of 14 have been a declining proportion of the total U.S. population. Using Census Bureau numbers from the Population Projection

Program, children aged 0–14 represented 21.5 percent of the population in 1998, 21.3 percent in 2000, 21.0 percent in 2002, and 20.5 percent of the population in 2005.

Milk is associated with fat and sugar content. At the same time excess weight and obesity are growing problems in the nation. Many people have become diet-conscious and attempt to avoid traditional products they once preferred precisely because they contained difficult-to-get fats and sugars. These people prefer modified products such as dairy substitutes that hold milk proteins but less fat and sugar and this segment is growing.

Parents are told in many different ways that children should drink milk, but children are sometimes reluctant to do so. Flavored milk is one way to increase children's milk consumption, and categories like chocolate milk are growing.

Cheese consumption, in contrast to milk, is favored by changing life styles in which snacking is common and pressures on available time induce the consumption of convenience foods like cheese-burgers and pizza. Diet-awareness has its compensating behavior—indulgence. Healthy eating has its companion—gourmet cooking. American cheese, or processed cheese, is growing in consumption at less than half the rate of fancier varieties, underlining a public tendency to opt for richer foods at least on occasion. This tendency also supports a barely growing but nonetheless growing butter consumption per capita.

The dairy industry, like other segments of the food industry, seeks high-margin food products formulated to exploit consumer fashions and behaviors. The industry targets products to the health-conscious by offering industrially modified versions of the naturally occurring commodity—offering products with less fat, less sugar, more vitamins, and smaller portions.

KEY PRODUCERS/MANUFACTURERS

The dominant producers or, perhaps more aptly put, the dominant aggregators of fluid milk are farmers' cooperatives. The key producers are dairy farmers who sell their products to the cooperatives. The cooperatives may then in turn distribute the product directly to retailers or indirectly to retailers through dairy product wholesalers. Cooperatives also have joint ventures, partnerships, and similar relationships with food processing companies and sell directly to companies that specialize in making products like yogurt, cheese, ice cream, and dried or evaporated dairy products. Approximately 70 percent of all milk sold passes through the hands of the cooperatives. The top ten account for nearly 57 percent of the volume. Cooperatives are profit-making bodies, but are not organized to benefit stockholders. Rather, they exist to benefit their members, the dairy farmers. They are a principal means by which

relatively powerless small farmers are able to exert collective bargaining pressure on the market.

Dairy Farmers of America (DFA). This cooperative had sales of \$8.9 billion and sold 60 billion pounds of milk in 2005. It has a membership across the United States; of nearly 20,000 dairy farm families which produce DFA's milk. The co-op also produces branded products (the Borden brand among them) and distributes through companies with which it has joint ventures. DFA has taken the lead to ban milk produced from cows injected with growth hormones, an initiative in which it has been joined by Dairylea Cooperative as well, possibly signaling a shift in industry practices. DFA is based in Kansas City, Missouri.

California Dairies Inc. This cooperative was formed in 1999 from a merger of three cooperatives: California Milk Producers, Danish Creamery, and San Joaquin Valley Dairymen. Based in Artesia, California, this cooperative had 626 members in 2007 and produces more than 16 billion pounds of milk per year. California Dairies had sales of \$2.5 billion encompassing the United States and 40 other countries.

Land O'Lakes. This cooperative, based in St. Paul, Minnesota, had sales of \$7.6 billion in 2006 but only a portion of that represented revenues from milk. The company produced 12 billion pounds of milk from 1,200 members. The company also produces its own branded product lines and has established a strategic alliance with Dean Foods, the leading corporate milk supplier, under which Dean can use the Land O'Lakes brand on certain of its flavored milk and bottled milk products.

Northwest Dairy Association (NDA). With 760 member dairy farmers in 2007, this cooperative produces 7.5 billion pounds of milk per year. Their products are marketed through the Seattle, Washington based Darigold, Inc. Darigold consistently has sales of close to \$1.5 billion per year. Priding itself on its quality dairy products, Bill Scheenstra of Scheenstra Dairy, one of the members of the NDA, is quoted as saying: "If you treat the cows right, they will treat you right."

Dairylea Cooperative Inc. Founded in 1907 as the Dairymen's League, it then represented 700 dairy farmers. Its heyday, at least in terms of membership, was in 1917, a year after a strike netted dairy farmers the first price hike for milk. That year membership grew to 42,000. In 1969 the cooperative took on its current name: Dairylea Cooperative Inc. In 2001 it became a member of the Dairy Farmers of America, a cooperative formed by the four

largest cooperatives in the United States. Dairylea is based in East Syracuse, New York. It reported sales of approximately \$1 billion in 2005. The cooperative had more than 2,400 member farms in 2007 and produces 5.5 billion pounds of milk per year.

Deans Foods. The leading for-profit corporation in milk is Dean Foods. The company's reported revenues in 2005 were \$10.5 billion. It is the largest company selling branded milk and other dairy products in the United States. Dean's brands include Land O'Lakes although the company does not have exclusive rights to the brand. Along with DFA and Dairylea, Dean is also a leader in supplying milk from cows not injected with growth hormone. The company's position is that it is responding to consumer demand. Dean is also a leader in creating and selling flavored milk products.

Using market share estimates provided by *Refrigerated & Frozen Foods* magazine, Kraft Foods Inc. holds the third-ranked position (behind DFA), but the company's principal participation in the industry is through the sale of cheese, which is considered separately from the milk industry. The Kroger Company is ranked fifth (behind Land O'Lakes). Kroger entered the business in 1928 and has developed fifteen dairies from which it draws milk and milk products. The company also operates three ice cream factories and two cheese production plants. The sixth major participant is H.P. Hood LLC. The company was founded in 1846 by Harvey Perley Hood in Charlestown, Massachusetts. The current company also includes elements acquired in 2004, specifically Crown Foods of New York and Kemp LLC, a Minneapolis-based ice cream maker.

This listing of commercial leaders in market share order includes two major dairy cooperatives because compilers of market share reports typically do not distinguish between milk and milk products viewed as commodities and the same products viewed as branded products. Both DFA and Land O'Lakes have well-known brands of their own or sell through partners who brand the product. To a lesser extent this is also true of other cooperatives.

MATERIALS & SUPPLY CHAIN LOGISTICS

The dominant input to the fluid milk and butter industry is the milk itself. Milk production, however, is unevenly distributed across the nation. Twenty-three states account for 89 percent of all milk production, and three states—California, Wisconsin, and New York—produce 40 percent of all milk production in the United States. The industry thus requires substantial movement of product from points of its generation in a subset of states, and from the rural areas of these states to urban areas. Most

milk is consumed where the people are—in cities. Two other factors play a role: milk must be kept artificially cooled throughout its processing and distribution steps. At the same time, all milk must undergo at least one heat process, pasteurization.

Pasteurization is named after Louis Pasteur (1822–1895), a French scientist. The process consists of heating the milk to a temperature below its boiling point and holding it at that temperature for a period of time in order to destroy bacteria harmful to humans. The slowest version of this process takes place at 145 degrees Fahrenheit, with the milk held at that temperature for 30 minutes. When held at a temperature of 161 degrees, the process only takes 15 seconds. Somewhat higher temperatures are used when the milk is sweetened, thus when ice cream batter is pasteurized. Pasteurization is most efficiently applied to large quantities of milk because the process requires substantial equipment for heating water and exposing milk to the heat, usually transferred by metal plates. Before or after pasteurization the milk must be held at a temperature of 39.2 degrees Fahrenheit (4 degrees Celsius).

Wherever milk is held, processed, or moved, refrigerated environments must be provided, not least in the home where milk and its secondary products are consumed. Home refrigerators typically hold products at a temperature between 36 and 38 degrees Fahrenheit.

Another important factor in the distribution of milk, cream, yogurt, cottage cheese, and butter is proper packaging. Containers are typically treated cardboard and plastic, which are widely available. In large operations containers are manufactured on-site from plastic resins or folded from paperboard delivered in bulk. A small amount of milk is also still distributed in glass bottles.

DISTRIBUTION CHANNEL

From the viewpoint of distribution, fluid milk is unusual in that it is a product reaching the ultimate consumer in essentially the same form in which it occurs on the farm itself. Most other agricultural products undergo a great deal more processing. For this reason milk may have a four- or even a five-tier distribution system in which the product is sold by the farmer to a dairy cooperative, from the cooperative to a milk processing company, from the processor to the retailer directly or through a wholesale merchant, and finally from the store to the ultimate consumer. The physical distribution of the milk, in contrast to transfers of its ownership, may be less complicated in that, by prearrangement, the farmer may deliver the product directly to a processor, but the processor pays the cooperative and the cooperative pays the farmer. Different structures of distribution are common. The Kroger Company, itself the operator of dairies, buys from the farmer, processes milk and milk products, and then sells directly

to the consumer. Direct delivery of milk from a dairy by the milkman in a truck still survives as a form of distribution but is much less common now than in the middle of the twentieth century.

Distribution channels for products derived from milk are more conventional two- or three-tier channels in that the food producer views milk as a raw material for manufacturing such products as butter, yogurt, cottage cheese, sour cream, and sells these directly to supermarkets and grocery stores. For purposes of distribution, the producer is the first link in the chain rather than the second or third, as with fluid milk.

KEY USERS

Virtually everyone is a consumer of fluid milk and of products made from it, exceptions being individuals who are lactose-intolerant. Milk is widely viewed as good for children. The largest consumers of milk are households with children, but many people continue to use milk as adults as well either as a drink or with breakfast cereal.

ADJACENT MARKETS

Fluid milk substitutes based on soybeans, almonds, oats, and rice are available for strict vegetarians, the lactose intolerant, and those curious to try something new and very different. Coconut milk is a very rich alternative as well. Grain or nut-based milk products are made up of the grain or nut finely ground and suspended in water. The products behave like milk, can be used in cooking and with cereals, and have a milky taste. Oat milk, for instance, is mildly sweet like low-fat milk. In comparison with fluid milk the markets for such products are tiny.

In comparison the market for margarine, a butter substitute, is substantial. In 2002 margarine had shipments of \$1.3 billion, butter just under \$2 billion. Margarine dates back to the nineteenth century and was originally made of beef fat. Today's margarine is blended from vegetable oils with most products are based on soybean oil but others on canola, corn, cottonseed, olive, palm, peanut, safflower, and sunflower oils. Modern products are often labeled as spreads, not margarine. Margarines may also be blends of margarine and butter, the butter added for taste. Margarine found its market originally by costing less than butter. In the 1970s studies by the Food and Drug Administration publicized nutritional benefits of margarine. Margarine has no cholesterol and its saturated fat content is also lower than found in butter. These findings gave consumers another motive for buying margarine.

Vegetable fats and proteins are also used to formulate many other dairy substitutes, including creams and dips. The selling feature of these products is the elimination of lactose and butter fat. Intense product development has

also resulted in taste and texture very close to, and sometimes indistinguishable from, real dairy products.

RESEARCH & DEVELOPMENT

Milk contains more than 100 unique and complex chemical substances, and has been studied very closely but is by no means understood comprehensively in every detail. A good deal of research effort in- and outside the industry is dedicated to discovering exactly how specific milk proteins behave in human metabolism.

As the twenty-first century begins, whey is receiving a good deal of focus in research. Whey is rich in nutrients and minerals. In cheese and butter manufacturing it is also a residual product the better use of which promises processors economic returns. Among efforts in whey-related R&D are studies aimed at discovering and documenting nutritional merits of its components, with the aim of publicizing these benefits to the market and identifying proteins that may have pharmaceutical uses, with the aim at creating new markets for whey.

Butterfat chemistry is under study in the hopes that modifications of butter may eliminate cholesterol build up in arteries. Considerable research is also aimed at flavor in milk, more precisely at the causes of flavor perception, which particular combinations of proteins and minerals in milk are responsible for triggering flavor sensations. Pinpointing chemical clusters precisely promises potential new milk-based products for use in dairy substitutes.

Most R&D expenditures appear to be directed at new product development, not only in perfecting branded items but also in packaging products for longer shelf-life. Food safety continues to be of great interest to the industry with studies underway to identify weak links in the distribution system, particularly in transportation and in storage. R&D aimed at discovering the optimal mix of feeds for cows is an on-going concern in the context of increasing milk output per cow—particularly in an environment where consumer resistance to rBST is developing.

CURRENT TRENDS

Despite pasteurization and homogenization, and despite skimming off cream to reduce milk's butterfat in 2 percent or in skim milk, the bottle or carton that reaches the home is still essentially the same product that is issued from the udder of the cow. Yogurts may be produced by different combinations of bacteria, but one yogurt tastes pretty much like every other. The same is true of other milk products like creams, cottage cheese, and butter. Meanwhile per capita milk and milk-products consumption is declining. One response of the corporate milk sector, not echoed quite so strongly by the more dominant big dairy cooperatives, is to create specially formulated and branded

milk products and other dairy specialties. These efforts are attempts at transforming at least a portion of fluid milk sales from commodity to consumer product status—the product purchased because it has a unique flavor or composition that had to be manufactured rather than milked out of the cow.

As reported by David Phillips in *Dairy Foods*, an example of such a trend is MooTopia, produced by H.E. Butt Grocery Company of Houston, a specially formulated milk the process for which has been patented. Other such products are Le Carb Dairy Drinks, produced by SouthWest Foods, and Simply Smart and Carb Countdown by H.P. Hood. These are proprietary forms of milk. Most major milk companies are actively promoting more conventional flavored and blended milk products, dips, and puddings attempting to create a new market likely to produce growth and higher margins.

Another trend that first emerged midway through the twentieth century still continues strong. It is the production of dairy products aimed at the health-conscious. In the latter part of the first decade of the twenty-first century new aspects of this trend are policies to avoid milk from herds treated with rBST and from cloned cows, once these appear. The rise in popularity of foods labeled organic is part of the movement to use fewer chemicals in the production of food, be those hormones used on livestock or industrially produced fertilizers used on crops.

The desire for healthier dairy products is also producing what might appear to be a trend very much the opposite of the move towards more organic farming. Dairy products that are considered healthier are, of course, modified in some way. Less desirable fats and sugars are removed and in some cases they are replaced with alternatives, such as vegetable-based products. This trend is moving in the direction of intensified manipulation of components in order to produce as healthy a dairy product as possible. It is not clear at all which direction will prove to be more successful, the move toward more organic products or the move toward more specially refined dairy products. While new products are on offer, the industry as a whole continues energetically to promote the benefits of milk as a basic food product, especially for children.

TARGET MARKETS & SEGMENTATION

“Got Milk?” This is the slogan behind one of the most successful ad campaigns of the 1990s. The campaign was launched in 1993 by the California Milk Processor Board by way of increasing milk consumption. The original commercial depicts a history buff in his home, surrounded by early American memorabilia. He stuffs a peanut butter sandwich into his mouth right before the radio he is listening to announces the \$10,000 prize win-

ning question, “Who shot Alexander Hamilton?” The protagonist, of course, knows the answer is Aaron Burr but is unable to speak with all the peanut butter in his mouth. He reaches for a milk container only to find it empty and in frustration he tries to answer but is only able to say “Aaaawon Buuuuh.” The commercial ends with the now famous words “Got Milk?” appearing on the screen and was so successful that it was expanded immediately in many forms. Some of the most popular and long lasting are the series of billboards and print media ads depicting various famous people sporting milk mustaches and the simple two-word slogan, “Got Milk?”

The campaign’s success enabled the California Milk Processor Board to license the tag line for use nationally by dairy boards around the country. The original ad campaign’s goal was to promote milk and slow the decline in California’s milk consumption, a decline that had been occurring yearly for a decade. The “Got Milk?” ad campaign was costly but the California Milk Processor Board judged it to be a success. The first commercial aired in 1993 and California’s milk consumption increased in 1994 reversing the downward trend seen in the 1980s. Milk consumption in California in 1993 totaled 740 million gallons and in 1994 consumption was up to 755 million gallons.

The audience targeted by the “Got Milk?” campaign was milk drinkers. According to the Advertising Education Foundation, the goal was to increase the amount of milk that people who already drank milk consumed and, to the extent possible, make drinking milk cool. This was a change in strategy from that used in earlier milk promotions where children and their consumption of milk were the focus.

Segmenting the market and designing dairy products to appeal to each segment was the pattern of dairy promotion as we entered the twenty-first century. Organic milks, creams, yogurts, and cottage cheeses were sold to those who worry about the rise in chemically manipulated foods. Reduced-fat and other lite products were aimed at those watching their diets. New, innovative, highly flavored milk-based beverages and snacks were targeted at the impulse-buying youth market. These markets overlap at the edges. The newest categories had not yet achieved mass market status and whether they would or not was still debated by anxious industry watchers eyeing statistics of declining per capita milk consumption.

RELATED ASSOCIATIONS & ORGANIZATIONS

American Butter Institute, <http://www.butterinstitute.org>
 American Dairy Association & Dairy Council, Inc.,
<http://www.adadc.com>

American Dairy Goat Association, <http://adga.org/compare.htm>

American Dairy Products Institute, <http://www.adpi.org>

International Dairy Foods Association (IDFA), <http://www.idfa.org/about/index.cfm>

National Milk Producers Federation, <http://www.nmpf.org>

National Yogurt Association, <http://www.aboutyogurt.com/lacYogurt/facts.asp>

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