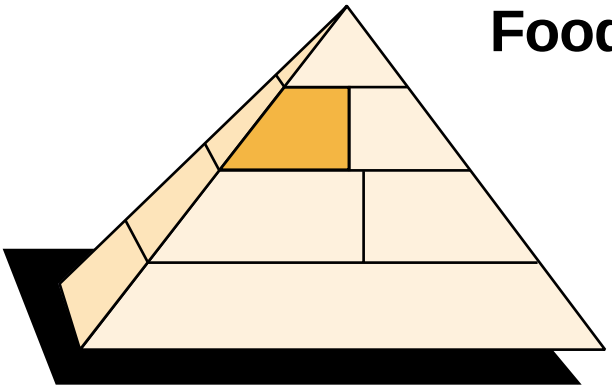
COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY • COLLEGE OF AGRICULTURE



Food and Agriculture: Consumer Trends and Opportunities

Dairy

Betty S. King, Extension Specialist in Rural Economic Development
Janet L. Tietyen, Extension Specialist in Food and Nutrition
Steven S. Vickner, Assistant Professor in Agricultural Economics

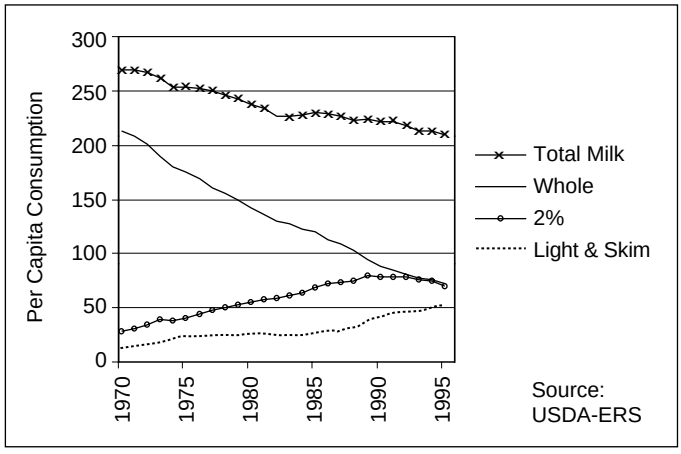
This publication describes the trends in consumption, nutrition, health, lifestyle, and marketing for the dairy sector of the agricultural economy. This publication is part of a series that seeks to integrate the consumer aspects of food and agriculture in an effort to help Kentucky dairy farmers. Each publication is organized around the USDA's Food Guide Pyramid. The series is designed to bridge gaps in understanding about the economics of food consumption, health and lifestyle trends, and food production and to provide a resource for food marketing efforts. The following information should be helpful for farmers who want to better understand consumers and their consumption patterns. Consumers may gain a better understanding of the nutritional implications of their diet.

Per Capita Dairy Consumption Trends

Which dairy products do consumers purchase? Figure 1 shows the trends in domestic per capita consumption for various beverage milk products from 1970 to 1995. These data are based on the disappearance[1] of the dairy supply, rather than actual dairy consumption data. Generally, disappearance data overestimate consumption. However, by keeping track of disappearance trends over time, researchers can determine relative changes in dairy products consumed.

The most striking trend in Figure 1 is the rapid decline in total beverage milk products consumed during the last quarter century. Per capita total beverage milk consumption fell roughly 22 percent from 269.1 pounds in 1970 to 209.7 pounds in 1995. Most of the decline may be attributed to a lower consumption of whole milk, which fell 66 percent from 213.5 to 72.6 pounds during the same time period. The mix of reduced fat (2 percent), light, and skim beverage milk products actually increased 200 percent from 41.4 to 124.3 consolidated pounds. However, the trend toward increased consumption of lower-fat beverage milk products was not enough to offset the persistent downward trend in total milk consumption. Changes in relative prices, income, preferences, advertising, and consumer education programs have largely shaped these trends.

Figure 1. Per Capita Consumption (Pounds), Disappearance Data 1970-1995



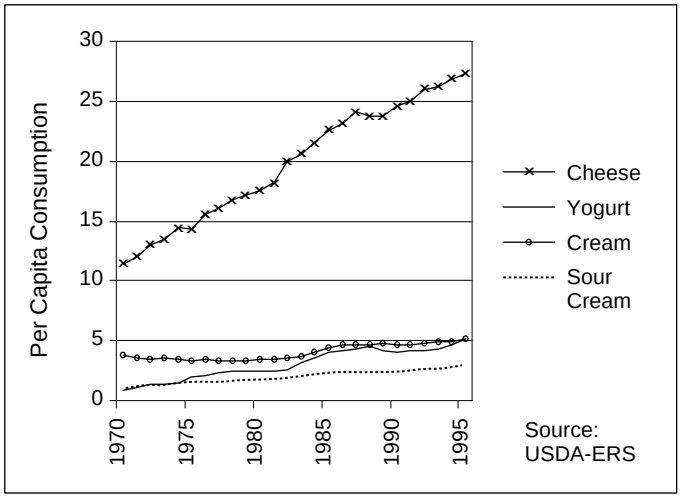
[1] This term, as defined by the USDA-ERS, means beginning food stocks, production, and imports minus exports, shipments to the U.S. territories, and ending stocks. So it is a reasonable proxy for consumption, given that data for consumption is not collected overall.

Although beverage milk consumption may be declining, other value-added dairy products have countered this trend.

The most recent generic milk commodity advertising campaign featuring celebrities wearing a milk mustache has come under scrutiny by the USDA (Leonhardt, 1998). Administered by the International Dairy Foods Association (IDFA), the 2-cent per gallon check-off fee has generated $385 million in advertising dollars in the last four years. Despite the campaign, per capita consumption continues to fall. The IDFA contends that consumption would have decreased at a faster rate without the advertising.

Although beverage milk consumption may be declining, other value-added dairy products have countered this trend. Figure 2 shows the trends in domestic per capita consumption (in pounds) for cheese, yogurt, cream, and sour cream products. Cheese consumption more than doubled from 11.4 pounds per capita in 1970 to 27.3 pounds in 1995. More than four-fifths of the cheese consumed was American (cheddar) and Italian (mozzarella, ricotta, provolone) varieties. Yogurt consumption exceeded five pounds by 1995, an increase of 538 percent. Consumption of cream and sour cream products had gains of 34 percent and 164 percent, respectively, in the last 25 years.

Figure 2. Per Capita Consumption (Pounds), Disappearance Data: 1970-1995



Other Forces Driving Dairy Consumption

Changing demographics are influencing consumption trends. Younger people drink more milk than older people, for example. The trends of food consumption away from home and the increased use of processed foods are reflected in dairy food purchases. Although the percentage of Americans eating breakfast has remained steady, the use of cereal with fluid milk as a breakfast food is declining because fewer people now eat breakfast at home. At the same time, there is an exploding soft drink and juice drink industry with major breakthroughs in easy-to-use packaging. Sports drinks, juice, bottled water, and more options in the beverage market are creating greater competition and are offering more choices for consumers. Households with fewer members are creating demand for single-serving sizes to meet the needs of one- and two-member households. The introduction of skim and skim-flavored (vanilla, strawberry, and chocolate) milk bottled in single-serving, convenience-sized containers is one way value-added dairy products are being re-packaged to fit the active, convenience-driven, cost- and taste-conscious consumer. Snacking between meals has increased, and specialty foods such as cheese, ice cream, and yogurt are popular. Ethnic food markets are creating opportunities for specialty, highly flavored cheeses and cheeses for Mexican and Italian-style cuisines. Low-fat, nutrient-dense dairy foods are available for consumers concerned about nutrition and health factors (Borrud, Enns, and Mickle, 1996).

Examples of Value-Added Dairy Marketing

In Kentucky, 1.8 billion pounds of fluid milk are produced annually. This milk is sold primarily through milk processors and cooperatives by dairy farmers who are increasingly looking for ways to add value to their product. The following examples illustrate emerging alternative marketing mechanisms and unique purchasing opportunities for consumers. While direct marketing can be a way for farmers to keep a larger share of the profit from their products, it may also limit the growth potential in their business. Consumers can purchase Kentucky-produced or specialty dairy products through a variety of direct market outlets including farmers' markets, on-farm markets, agri-tourism events, mail order, Internet home pages, specialty shops, and supermarkets.

The Ken Mattingly family, who operate a dairy farm in Barren County, Kentucky, began production of a mild, rich-tasting Gouda cheese in 1998. They limit their herd size to accommodate the demands of making their added-valued product. The Mattinglys milk a 70-cow herd and make around 70 to 80 one-pound rounds of cheese a week. They market their cheese primarily through their on-farm retail outlet, a local state park shop, and several local groceries (Brown, 1998).

Bergey's Dairy, a family-held cooperative located near a sprawling urban area in Chesapeake, Virginia, has diversified its dairy operation during the last 20 years to include bottled milk and ice-cream processing. This dairy operation has a small farm-owned retail store on site and makes door-to-door home deliveries of milk products. The company has recently started wholesaling its products to small retail supermarket chains. The family has always had direct contact with their customers throughout its 30-year operation (Richards and Wechsler, 1996).

Other dairy farmers across the United States are forming small producer cooperatives such as the Pioneer Valley Milk Marketing cooperative in western Massachusetts, which consists of seven dairy farms. The cooperative sells under the label "Our Family Farms" to market fluid milk products in the region as a way to increase income.

Dairy Nutrition and Health

Consumers are currently averaging about 1 ½ servings a day from dairy foods, only about half the amount recommended by the Food Guide Pyramid (USDA, 1997). The downward trend in fluid milk beverages may reflect consumer demand for a variety of lower fat products, including cheese, yogurt, and frozen desserts. In order to meet new guidelines for calcium intake as part of a healthy diet, American consumers, on average, would need to double their intake of low-fat dairy foods.

Dairy foods are the major source of calcium in the U.S. diet, supplying approximately three-quarters of daily calcium, with remarkably little variation over the period from 1970 to 1994 (Putnam and Allshouse, 1997). Today's consumer gets calcium from a greater variety of dairy products than ever before, including products such as yogurt, specialty cheeses, pizza, and Mexican foods. Yet consumers remain remarkably consistent in the percent of calories, calcium, and fat they get from dairy foods. In both 1970 and 1994, dairy products accounted for about 10 percent of daily calories, 75 percent of dietary calcium, and 12 percent of total fat intake.

Although dairy products contribute only 10 percent of daily calories to the U.S. diet, they supply a significant portion of good nutrition. In addition to 75 percent of calcium, dairy foods supplied 20 percent of protein, 31 percent of riboflavin, 19 percent of potassium, 17 percent of Vitamin A, and 21 percent of Vitamin B_{12} in 1994. During the 24-year period, the level of calcium in the U.S. food supply has risen 70 mg from 890 mg/day in 1970 to 960 mg/day in 1994. Lower-fat choices in some dairy foods allow consumers to get more calcium in a serving. Despite the trend for lower-fat milk beverages, fat from other dairy products (e.g., cheese and ice cream) has increased, maintaining a 12 percent level in the U.S. food supply. As food consumers look for ways to make fewer calories deliver more nutrition, the demand for dairy foods will likely rise.

New evidence suggests calcium can also help prevent bone deterioration, control high blood pressure, and reduce cancer risk.

Calcium is emerging as an important part of good nutrition for the 21st century. Research suggests that calcium is a true multi-purpose nutrient. It is the most abundant mineral in the body, with bone deposits serving as storage for the body's supply of calcium. Bone calcium is replenished through dietary calcium, primarily from dairy foods. Calcium has long been recognized for its role in healthy bones and teeth. New evidence suggests calcium can also help prevent bone deterioration, control high blood pressure, and reduce cancer risk.

The health benefits of dairy foods will become increasingly important to baby boomers as they strive to maintain health during later years. Several public health education campaigns seek to educate young consumers about the importance of calcium and milk consumption to health in later years. Health educators will promote newfound and traditional health benefits of calcium and dairy foods. Food and nutrition specialists will educate consumers about new ways to use dairy products to add flavor and good nutrition to their diet.

What You Can Do

The food choices we make within our food and agricultural system impact our local, state, and national economy, the environment, and the well-being of our communities, as well as our own personal health. Here are some practical things you can do:

As a Consumer

Learn more about your community food system and the origins of your food purchases. Determine if your neighborhood restaurants and grocery stores use and sell Kentucky dairy products. Read food labels for health and nutrition.

As a Community Leader

Work with your local Cooperative Extension Service office or chamber of commerce to promote local agricultural educational and agricultural economic development activities.

As a Farmer

Learn about your customers' needs and wants. Educate consumers about farming and the farm products you market. Join community organizations that foster interest and support in farming. Learn more about the costs and benefits of value-added agricultural opportunities.

Additional Extension publications are available in the *Food and Agriculture: Consumer Trends and Opportunities* series. Ask your county Extension office for these publications.

References

Borrud, L., C. Enns, and S. Mickle. "What We Eat in America: USDA Surveys Food Consumption Changes." *FoodReview*. USDA Economic Research Service, Washington, D.C., September-December 1996.

Brown, B. "Dairyman Hopes to Add Value by Making Cheese." *The Farmer's Pride.* June 3, 1998.

Leonhardt, D. "Got Milked?" *Business Week*. November 9, 1998.

Putnam, J. and J. Allshouse. *Food Consumption, Prices, and Expenditures 1970-95*. USDA Economic Research Service, Washington, D.C., Statistical Bulletin No. 939, August 1997.

Richards, K. and D. Wechsler. "Bergey's Dairy." *Making It on the Farm: Increasing Sustainability through Value-Added Processing and Marketing.* Ekins, Ark.: Southern Sustainable Agriculture Working Group Publications, 1996.

USDA, Agricultural Research Service. *Pyramid Servings Data: Results from USDA's 1995 and 1996 Continuing Survey of Food Intake by Individuals.* Washington, D.C., 1997.

No special endorsement of the companies named in this publication is implied.