

Food and Agriculture: Consumer Trends and Opportunities

Protein Foods

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This publication describes the trends in consumption, nutrition, health, lifestyle, and marketing for the protein foods 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 livestock farmers and agribusinesses. 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 Protein Food Consumption Trends

Which protein food products do consumers purchase? Figure 1 shows the trends in domestic per capita consumption (in pounds) for four major meats in the U.S. consumer diet from 1970 to 1995. These data are based on the disappearance¹ of the meat supply, rather than actual meat consumption. Generally, disappearance data overestimate consumption. However, by keeping track of disappearance trends over time, researchers can determine relative changes.

Although per capita beef consumption has remained roughly three-fifths of the share of red meat consumption during the last quarter century, beef consumption declined on average 15 percent from 114.1 to 97.1 pounds from 1970 to 1995. During the same period, pork consumption fell 13 percent from 72.1 to 63.0 pounds. In contrast, chicken consumption more than doubled from 40.1 pounds in 1970 to 81.9 pounds in 1995. Moreover, in 1995, chicken's share of total poultry consumption exceeded 80 percent. Turkey consumption grew 127 percent from 8.1 to 18.4 pounds. Changes in relative prices, income, preferences, product development, and the marketing mix have largely shaped these trends.

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

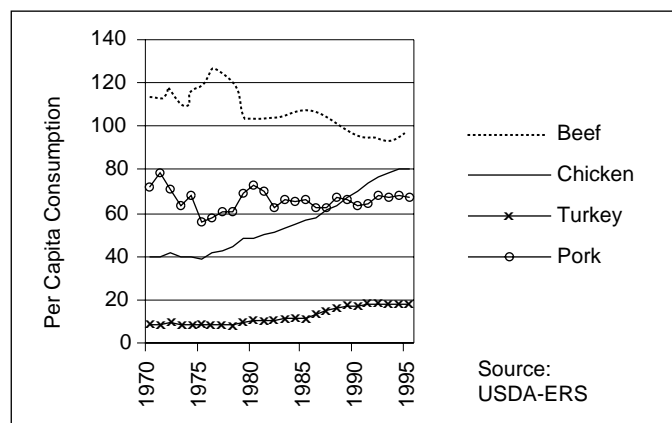


Figure 2 shows per capita egg consumption trends measured in number of eggs. On average, shell egg consumption fell 37 percent from 275.9 to 174.2 eggs, while processed egg consumption increased 88 percent from 33.0 to 62.1 during the last quarter century.

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.

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

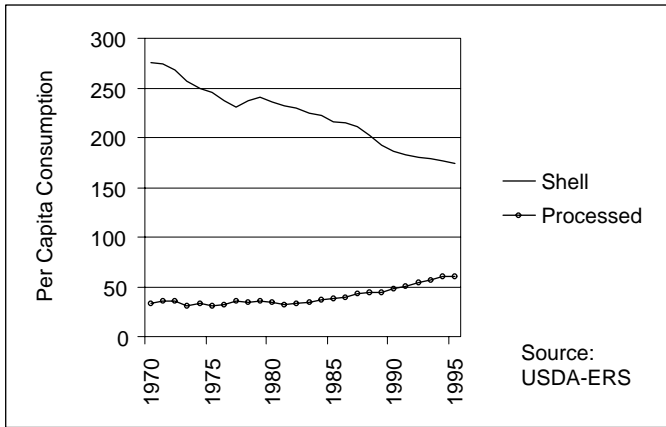
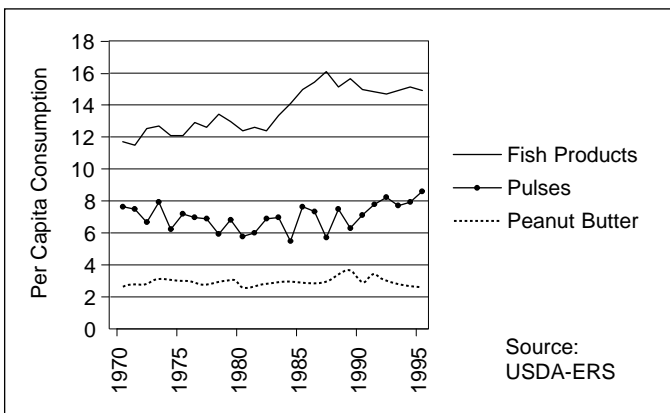


Figure 3 shows the consumption of three separate protein foods from 1970 to 1995. Fish products, including fresh, frozen, and canned fish and shellfish, increased on average 26 percent from 11.7 to 14.7 pounds per capita. Fish product consumption, however, reached its peak at 16.1 pounds in 1987. Consumption of pulses, which include dry edible beans, field peas, and lentils, increased 13 percent on average from 7.6 to 8.6 pounds per capita during the period. Peanut butter remained a convenient staple protein food product, averaging three pounds per capita during the last 25 years for all age groups.

Figure 3. Per Capita Protein and Meat Consumption Trends



Other Forces Driving Protein and Meat Consumption Trends

Health, taste, and convenience are the factors driving the changes in the consumption of protein foods. Although beef continues to dominate the protein food market share, its consumption has declined during the

last 25 years along with that of pork. The consumption of chicken, turkey, fish, and beans, however, has increased, reflecting health-conscious decision making.

Convenience packaging is making consuming meats easier. Pre-packaged, pre-seasoned cooked meats, such as beef roasts and frozen dinners including meat mixtures such as chili con carne, are appealing to busy consumers. Many of these convenience meals are packaged in small portions for single or dual households. These products are ready-to-eat with minimal cooking or ready to add to fast, one-dish meals such as salads, stir-fry dishes, or casseroles. Many of these new convenience choices are offered in a variety of ethnic flavors. Increased consumption of beans or lentils is partially driven by ethnic and vegetarian diet influences. These trends are reflecting consumers' demand for fast, nutritious food and for smaller serving sizes in a variety of flavors.

Although a greater number of Americans now eat more food away from home and consume more processed foods, there are opposing trends that a number of marketers focus on. Market research studies identified consumer attitude changes toward environmental issues regarding food production and safety. Consumers seek more information from food labeling to guide decision making about their food choices. For example, Laura's Lean Beef, a Kentucky-owned business, targets consumers concerned about fat in their diet. Some beef producers offer organic or hormone-free meat in response to consumer concern about food safety.

Examples of Meat Marketing

Consumers also have a number of market venues for purchasing protein foods and meats. The number of health food, gourmet, and ethnic food stores is rising as well as markets that sell directly to consumers. Popular Kentucky heritage foods such as country hams and barbecue products are available through a variety of market venues. Consumers can benefit from the selection of fresh, locally grown meat products at retail and direct market outlets. A small group of Kentuckians across the state are working toward making beef and other meat products available for sale directly to consumers, for example, at farmers' markets. A study is under way at the University of Kentucky on how farmers and meat processors across the state can market and sell their meat products locally. Internet sites and mail-order catalogs are available to consumers to purchase meat products.

Many farmers are identifying ways to increase the sale of their animal and meat products and to promote the attributes of health and freshness of their farm products. Several new direct marketing mechanisms have been developed or expanded such as livestock auction markets, buying clubs, community farmers' markets, wholesale distribution centers, and marketing cooperatives. The Kentucky Department of Agriculture offers an organic certification program for farmers wishing to promote their meat and meat products as organically produced. The production of other protein foods such as freshwater shrimp and catfish is becoming more common.

The Kentucky Food Products Directory lists a number of meat and protein food products grown by Kentucky and non-Kentucky farmers. These examples highlight the diversity of marketplace opportunities for both the consumer and the farmer. The Mingus Brothers of Versailles, Kentucky, sell beef jerky often found at retail counters in gas stations and grocery stores across the state. Bubba Sue's Shrimp is Kentucky-grown freshwater shrimp, raised in central Kentucky by Susan Harkins, who markets her shrimp primarily to local restaurants in Lexington. Many farmers, such as Quillen Farms Bluegrass Raised Beef, raise beef, lamb, pork, and other meat animals, which they sell directly to consumers by the quarter or by halves as custom-processed meat products to go into home freezers.

As the market and production segments continue to consolidate, many farmers will likely form partnerships or expand their operation to compete in the wholesale and retail markets. Others will look for opportunities in the local direct sales. 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 operation.

Protein Nutrition and Health

Protein from both animal and vegetable sources is an important part of the U.S. diet. The percentage of calories from protein has consistently been around 11 percent during the past 27 years. Meat, poultry, and fish contribute the most protein to the U.S. diet (39 percent), followed by grains (24 percent), and dairy foods (19 percent). Consumers trying to eat lower-calorie diets to meet nutrient needs without excess calories have found a need to reduce protein and meat serving sizes. Because protein foods are some of our favorite Kentucky foods, health-conscious consumers have been receptive to products like Laura's Lean

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Beef. By eating moderate amounts of highly flavorful protein foods, Kentuckians can meet nutrient needs without consuming excess calories.

Animal foods that contain protein may also be significant sources of saturated fat and cholesterol. Yet the fat content is an integral part of the flavor and texture of some meats. By selecting flavorful, high-quality beef, pork, and poultry products, consumers can create meals that do not sacrifice taste for nutrition. Kentucky food consumers are learning to use meat as an ingredient in mixed dishes, such as pasta and pizza. Traditional foods like soups, stews, and casseroles also allow consumers to use protein foods as ingredients. These one-dish meals are more quickly prepared and allow consumers to follow recommendations from the USDA Food Guide Pyramid for healthy eating.

U.S. food consumers are also choosing leaner meats, fish, and poultry. Meat producers in some segments of the meat industry have been responsive to consumer demand. Since the 1980s, the average cuts of beef and pork have about 30 percent less fat. Producers are breeding leaner herds, feeding less fattening diets, and taking younger (leaner) animals to market. The amount of fat in the American diet contributed by meats has declined approximately 10 percent over the past 25 years.

Eggs are generally purchased by consumers in the shell or as an ingredient in a prepared food. Consumption of egg products has nearly doubled since 1983, reaching 68 eggs per person by 1998. In addition to consumer demand for convenience, this increase may be in part due to changing consumer attitudes in response to new research showing eggs to contain less cholesterol than previously measured. In fact, consumption of saturated fats rather than cholesterol is more likely to raise blood cholesterol levels and the risk of heart disease. The American Heart Association, in light of these new findings, has raised its recommendation for a healthy diet to four eggs per week. Eggs are an economical source of high-quality protein and an important ingredient in baked goods.

Vegetable sources of protein, such as soy or other beans, offer some unique potential health benefits. Vegetable proteins have been reported to lower blood cholesterol levels, help decrease blood pressure, reduce risk of certain cancers, and even ease the symptoms of menopause. In terms of the resources required to produce animal versus vegetable protein, vegetable sources of protein have been long recognized as an economical way to meet protein requirements. Vegetable sources of protein may also be significant sources of dietary fiber and folate. These nutrients help reduce risk of heart disease and cancer. Beans have been a traditional Kentucky food since the first settlers arrived in the late 1700s. Today's consumers appreciate the convenience of canned beans and are finding new uses for beans in salads and ethnic foods.

Some nutrition research suggests that lean sources of protein consumed at breakfast and lunch may help people remain alert and productive. The fat content of some protein foods would delay the rate at which food leaves the stomach, perhaps delaying the next onset of hunger. But researchers speculate that proteins, like carbohydrates, may have a direct effect on mood and mental acuity. Protein-containing foods, such as meats, fish, poultry, eggs, or beans, are noted for their satisfying qualities and are thus popular among Kentucky food consumers.

The protein needs of most Kentucky adults can be easily met with three servings of dairy foods and smaller amounts of beans, eggs, fish, meats, and nuts. Since these foods tend to be more expensive than other foods, it is particularly important that consumers spend dollars wisely when shopping for protein by looking for low-fat, high-nutrient, flavorful options.

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

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 food stores and restaurants use and sell Kentucky farm products. Read food labels for health and nutrition information.

As a Community Leader

Establish a local farmers' market. Work with your local Cooperative Extension Service office or chamber of commerce to promote local agricultural educational and 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.

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