

# Food and Agriculture: Consumer Trends and Opportunities

## *Fruits*

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This publication describes the trends in consumption, nutrition, health, lifestyle, and marketing for the fruit 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 fruit 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 Fruit Consumption Trends

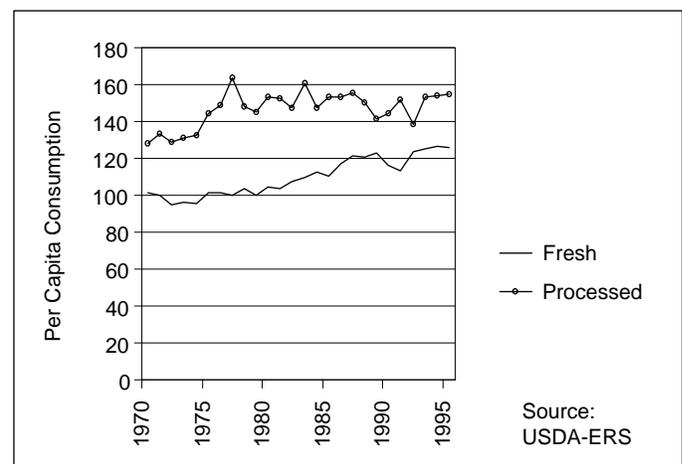
Which fruit products do consumers purchase? Figure 1 shows the trends in domestic per capita consumption (in pounds) for both fresh and processed fruit from 1970 to 1995. These data are based on the disappearance<sup>1</sup> of the fruit supply, rather than actual fruit consumption. Generally, disappearance data overestimate consumption. However, by keeping track of disappearance trends over time, researchers can determine relative changes in fruit products consumed.

Of the 280.9 pounds of fruit consumed per capita domestically in 1995, 55 percent was processed and 45 percent was fresh. This mix has remained fairly constant since 1970 as the consumption of both processed and fresh fruit has increased. Processed fruit consumption, while reaching its peak of 163.7 pounds in 1977, increased on average 21 percent from 127.8 to 154.8 pounds between 1970 and 1995. Fresh fruit consumption during the same period increased 25 percent, ending 1995 at 126.1 pounds.

The mix of fresh fruit consumption has changed markedly through time. Although it was roughly one-third of the fresh fruit consumed in 1970, citrus fruit consumption had fallen to only 19 percent of the mix in 1995. Figure 2 shows that citrus fruit consumption

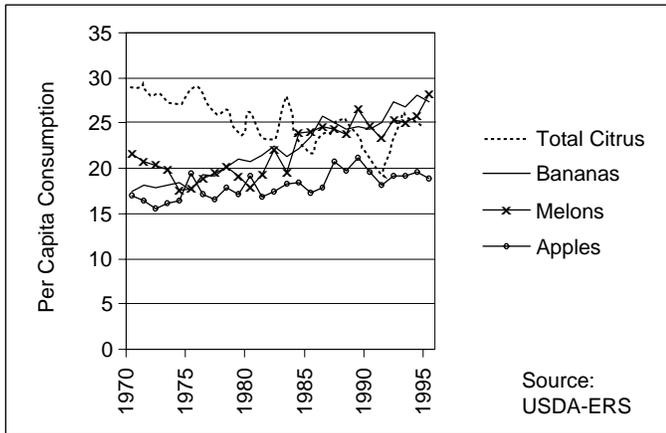
fell 16 percent from 28.9 to 24.4 pounds per capita during the analysis period, reaching its minimum at 19.1 pounds in 1991.

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



<sup>1</sup> 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.

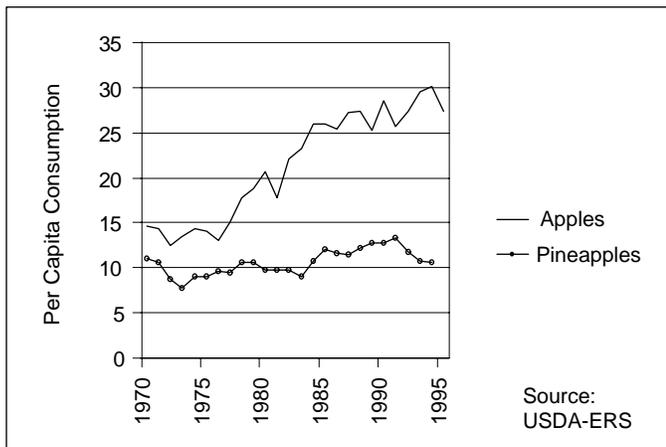
**Figure 2. Per Capita Fresh Fruit Consumption (Pounds), Disappearance Data: 1970-1995**



Since 1970, fresh banana and melon consumption increased 57 percent and 31 percent, respectively. While the 25-year consumption trends have mirrored each other, in 1995 Americans ate 28.2 pounds of fresh melons, slightly more (0.8 pounds) than bananas. Fresh apple consumption fluctuated during the last 25 years, ending 1995 slightly above its 1970 level at 18.9 pounds.

Total consumption of processed non-citrus fruit has remained fairly constant at roughly two-fifths of all processed fruit consumed domestically, but its mix has changed. Figure 3 illustrates a rapid increase in the per capita consumption of processed apples, up 88 percent from 1970 to 27.4 pounds in 1995. The consumption of fruits identified in this publication reached its peak of 30.1 pounds in 1994. Processed pineapple consumption on average remained around

**Figure 3. Per Capita Processed Fruit Consumption (Pounds), Disappearance Data: 1970-1995**



11.0 pounds since 1970. Changes in relative prices, income, preferences, and the marketing mix have largely shaped these trends.

## Other Forces Driving Fruit Consumption

More than half of all American consumers eat some type of fruit or drink fruit juice nearly every day. Children age 5 and younger and older adults age 70 and older eat the most fruit. Consumer taste preferences and innovations in convenience packaging are influencing the consumption and marketing mix of fruits. Bananas, melons, citrus fruits, and apples continue to be popular choices. Non-citrus juices and juice drinks, which are apple or grape juice-based, contributed in large part to the increased consumption of fruit, up by 20 percent during the last 25 years.

Although a greater number of Americans are eating away from home and consuming more processed foods, there are opposing trends as well. For example, the number of small specialty food stores and farmers markets is increasing along with the size of supermarkets. Market research studies identified consumer attitude changes toward environmental issues regarding food safety and production. Consumers are seeking more information from food labeling to guide decisions about their food choices.

While many fruits, such as bananas, are imported to the United States, consumers have many opportunities to frequent local markets for seasonal fruits. On-farm roadside markets, pick-your-own operations, and farmers' markets offer fresh, seasonal fruits and berries. Supermarket stores and specialty health, gourmet, and ethnic food stores also offer both common and exotic fruits. Consumers can benefit from the variety of fresh fruits and berries at both retail and direct market outlets.

## Examples of Fruit Marketing

Kentucky farmers produced more than 13.6 million pounds of commercial apples and 600,000 pounds of commercial peaches in 1996, totaling more than \$4.5 million in value. Wholesale and direct markets such as pick-your-own operations or on-farm roadside markets are the most common market forms of fruit sales in Kentucky. In addition to fresh fruit sales, a number of value-added fruit products such as jams and jellies are listed in the Kentucky Food Products directory. Pick-your-own operations have been declining in recent years due largely to consumers' time

*Fruits contribute important nutrients to the U.S. diet, including vitamins A and C, folate, potassium, and dietary fiber.*

constraints. A certified roadside market program was developed by the Kentucky Farm Bureau and is promoted through the Kentucky agriculture and tourism promotion programs. Many roadside and on-farm markets are diversifying their activities to include agri-entertainment activities such as corn mazes, hay rides, and mini-festivals for children and adults to attract potential buyers to their operations. Thirty-seven certified roadside markets are listed in the Kentucky Farm Bureau promotional brochure.

One example of how farmers are marketing fruits through roadside markets is Garrett's Orchard and Country Market, located in Versailles, Kentucky. It features apples, peaches, blueberries, raspberries, strawberries, and other fruits and other farm produce. In its country market, the company sells Kentucky value-added products such as gift baskets of molasses, bakery products, and Kentucky ham. It also provides school tours, educational seminars, afternoon teas, a petting zoo, and picnic areas. Several mini-festivals are conducted each year, including a corn, apple, and pumpkin festival.

## **Fruit Nutrition and Health**

U.S. food consumers are currently eating only half the amount of fruit recommended in the USDA Food Guide Pyramid. The minimum number of servings recommended is two per day, but in 1995, nearly half of Americans consumed less than one fruit serving per day. The trend toward more meals eaten away from home is consistent with low fruit consumption, as many restaurants may not offer fruit. Perhaps one of the most convenient ways for food consumers to increase the amount of fruit in their diets is to simply carry fresh fruit with them to work or school. Some consumers are evidently following this advice. From 1982 to 1997, fresh fruit consumption increased 24 percent in the United States.

Fruits contribute important nutrients to the diet, including vitamins A and C, folate, potassium, and dietary fiber. The potential health benefits of fruit and vegetable consumption are featured in the "5-A-Day

for Better Health" campaign, which recommends that consumers eat five servings from these foods to lower disease risk and promote optimal health. In 1970, vegetables were the leading source of vitamin C in the U.S. diet, contributing 50 percent of the supply, while fruits contributed 39 percent. By 1994, fruits supplied a greater proportion of vitamin C, contributing 44 percent of the national supply. Fruits contribute 12 percent of the folate, a nutrient now recognized for its role in reducing the risk of heart disease and cancer, and they contribute 12 percent of potassium, a mineral with beneficial effects on blood pressure. Fruits contributed 3.4 percent of calories to the U.S. food supply in 1994, up from 2.9 percent in 1970.

Current USDA research at the Human Nutrition Research Center on Aging at Tufts University promises to reveal more good nutrition news about fruit in the U.S. diet (USDA-ARS, 1999). Fruits such as prunes, raisins, blueberries, blackberries, strawberries, and raspberries are proving to have potent antioxidant capacity. Foods such as fruits and vegetables with antioxidants may help decrease risk of heart disease, stroke, and cancer.

People who eat fruits tend to have healthier diets. In the period from 1994 to 1996, women who ate no fruit on one day consumed only 82 percent of the recommended amount of vitamin C. Women who included fruit in their diet consumed 205 percent of the vitamin C recommended. Researchers have also observed that women who eat fruit tend to have a lower fat intake than those who do not eat fruit (31 percent versus 34 percent of calories from fat).

Fresh fruits such as apples, bananas, oranges, and peaches are appealing to today's food consumer because they can be eaten just about anywhere or anytime.

### **Nearly half of total fruit servings in the U.S. diet came from five foods in 1994:**

- orange juice (18 percent)
- bananas (9.8 percent)
- fresh apples (7.9 percent)
- watermelon (6.5 percent)
- apple juice (5.8 percent).

There are more than 60 fruit products included in the U.S. food supply data, suggesting that many consumers would benefit from more variety in daily fruit choices.

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## 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 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 restaurant and grocery stores use and sell Kentucky produce. Visit a roadside on-farm market to learn more about fresh produce.

### **As a Community Leader**

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.

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

## References

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