

Tracking Demographics and U.S. Fruit and Vegetable Consumption Patterns

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Many factors have affected food consumption patterns over the last twenty-five years. In the following pages we will explore these trends in more detail and consider the impact of current trends on future consumption.

Key consumer trends that affect food consumption include: the demand for foods of high and predictable quality that offer convenience and variety; growing demand for “freshness” and foods with higher flavor profiles and a willingness to experiment both in restaurants and in the home; the changing ethnic composition of the population, which has expanded demand for Asian and Hispanic commodities; the growth in public knowledge about how diet and health are linked and the importance of maintaining physical fitness throughout life; the simultaneous trend toward higher rates of obesity; an exploding research base on the specific phytonutrients/antioxidants associated with individual fruits and vegetables and their potential protective health benefits; a higher public sector profile and policy engagement on U.S. health issues to the benefit of fruits and vegetables, such as through greater availability in schools and new nutritional guidelines (MyPlate); and growing consumer interest in where and how food is produced, which has increased demand for locally grown produce, regional food systems, and organic foods. These trends have influenced the mix and product form of foods consumed in the United States.

Per Capita Consumption Trends

One of the ways to track consumption trends over the long run is through the U.S. Department of Agriculture’s Economic Research Service (ERS) ‘disappearance data’ calculated by summing U.S. production and imports, less exports. While actual consumption is lower than disappearance due to losses in the food chain, this data is an important indicator of how consumption has been changing over time.

According to ERS, annual per capita disappearance/consumption of fruits and vegetables (F&V), in both fresh and processed form, increased 8.4 percent from 1976 to 2009, reaching 675 lbs (see Table 1). This moderate rate of change at the aggregate level masks dramatic rate changes at the disaggregate level. There were marked differences in consumption rates between commodities and across categories (e.g., citrus vs. noncitrus fruit) as well as by product form (e.g., fresh vs. processed potatoes). Greater focus on health and wellness and mounting evidence of the potential health benefits of F&V benefited fresh consumption proportionally more than processed. In 2009, 46 percent of total F&V consumption was in fresh form, up from 40 percent in 1976.

Processed vs. fresh commodities

Some commodities were clear winners, such as the entire berry category, while others were losers. In general, tropical fruits made sizable gains (starting from small bases) while

“traditional” fruits such as pears and peaches have been stagnant or declining in recent years, particularly in canned form. Iceberg lettuce was a major loser while leaf lettuces grew rapidly. These trends indicate that many consumers have tended to substitute certain fruit and vegetable items for others more so than increasing their total consumption. This does not imply that other consumer segments have not both diversified and increased consumption. Demographic factors such as income, household size, age, ethnic origin, and education all exerted major influence on F&V consumption and will be discussed later.

Vegetable consumption, in both fresh and processed form, grew much more rapidly from 1976 to 2009 than fruit consumption. Vegetable per capita consumption increased 13 percent to 384 lbs. while fruit (including melon) consumption increased only 3 percent to 291 lbs. Slower growth in fruit consumption was due to a major reduction in both fresh and processed citrus consumption, down by 36 percent overall.

Processed fruit consumption outweighs fresh, at 164 lbs. per capita in 2009, compared with 128 lbs. for fresh fruit. Although processed fruit consumption still dominates, it declined by 9 percent over the period in question, while fresh fruit consumption grew by 25 percent. Hence, today 44 percent of fruit is consumed in fresh form vs. only 36 percent in 1976. The growth in fresh fruit came entirely from the noncitrus category, which grew by 46 percent to 107 lbs. while fresh citrus declined by 28 percent to 21 lbs. per capita.

Just as for fruit, per capita consumption of processed vegetables (including potatoes) is still larger than that of fresh vegetables, but again, the fresh share has grown. Processed vegetable consumption totaled 201 lbs. per capita in 2009, compared with 183 lbs. for fresh, with the fresh consumption share growing from 43 percent in 1976 to 48 percent in 2009. When fresh potatoes are excluded, fresh vegetable consumption grew by an impressive 54 percent, with consumption up from 96 lbs. per capita in 1976 to 147 in 2009. Excluding potatoes, the fresh vegetable share grew to surpass processed consumption, up from 45 to 54 percent over this time period.

In contrast, for the potato category, the fresh share fell from 39 to 32 percent between 1976 and 2009. While processed potato consumption was only 1 percent higher in 2009 than in 1976 at 77 lbs., fresh potato consumption declined 26 percent to 36 lbs. per capita. In the case of processed potatoes, consumption grew until 2001 when it peaked at 91 lbs., then declined to nearly the 1976 level. This is in part due to slower growth in the fast food industry over the last decade, diversification of fast food menus (including the addition of salads and other offerings besides french fries), as well as higher relative growth in fast/casual and full-service restaurants using less processed potatoes.

Food Consumption Trends

According to ERS figures, in 2010 U.S. consumers spent 9.4 percent of their disposable personal income on food (in both at home and away from home channels), the lowest share in the world. The United States has always had the highest share of food dollars spent away from home. However, after decades of away from home food spending growing more rapidly than spending in retail channels, since 2008 the share of food dollars spent away from home has stabilized at 47.9 percent. Aided by the economic downturn and the launching of many convenient and high

quality home meal replacement products, retailers are no longer losing ground to foodservice channels in the competition for food dollars.

According to the Food Institute's 2011 Demographics of Consumer Food Spending report, in 2009 there were 120,847,000 households in the United States with an average of \$6,372 spent annually on food. Food expenditures, including fresh produce, vary greatly by demographic group.

Fresh Produce Consumption Positively Correlated with Income and Education

Analyzing fresh produce expenditures by demographic group reveals some striking patterns. For example, households whose members have not attended college spent on average \$369 for fresh produce compared with \$521 for households with members with bachelor's degrees, and \$651 for those with postgraduate degrees.

The national average of annual household expenditures on fresh produce was \$429 in 2009 while consumers in households earning \$100,000 or more spent \$712. Households earning over \$70,000 per year represented 32 percent of U.S. households in 2009 yet accounted for an impressive 49 percent of total food spending (see Figure 1). In contrast, households earning under \$15,000 represented 15 percent of the total number of households yet accounted for only 8 percent of food spending. The economic power of higher income households has driven growth in chains such as Whole Foods, Trader Joe's, Costco, and has likely contributed to a greater emphasis on quality in fresh produce departments among conventional retail chains.

While today there are more households with the ability to pay for high-quality and value-added products, the "great recession" temporarily negatively impacted consumer expenditures on fresh produce and the willingness to pay for convenience. For example, in 2008, supermarket sales of fresh-cut fruit declined by 14 percent in both quantity and dollars; dollar sales of packaged salads were flat and declined by 4 percent in quantity; and fresh-cut vegetable sales decreased by 1 percent in dollars and 4 percent in quantity (from The Perishables Group FreshFacts®, powered by Nielsen). By 2010 fresh-cut produce growth rates were again positive in both quantity and dollar sales. A high-value category that continued to grow throughout the recession was organic produce; while less committed consumers purchased fewer organics, a very loyal core segment ensured a robust growth rate, albeit at a lower rate than before the economic slowdown.

Declining Household Size Benefits F&V But Age Impact Unclear

U.S. household size has been declining for decades; in 2009 the average household size was 2.5 people. The largest group is two-person households at 33 percent followed by single-person households, representing 29 percent of households. In 2009, fresh produce expenditures for single-person households was \$227 per year while per capita expenditures for four-person households (14 percent of households) was 60 percent of this level. If household units continue to decline in size, fresh produce consumption should be further stimulated, given the generally greater discretionary income of smaller households to spend on high-value and fresh-cut produce, as well as their lesser ability to exploit economies of scale in purchasing.

Households headed by consumers 55 years and older represented 38 percent of the total and accounted for 37 percent of fresh fruit and vegetable expenditures (see Figure 2). On the other

hand, households headed by consumers 34 to 55 years old represented 39 percent of the total while contributing a disproportionate 44 percent of fresh produce spending. Conversely, households headed by people under age 35 amounted to 24 percent of the total but proportionately contributed only 18 percent of fresh fruit and vegetable spending.

The future of fresh produce consumption partly depends on whether consumers in the 34 to 55 age bracket continue to consume at above-average rates as they age. The lower consumption rates of younger consumers emphasize the importance of educating people about the benefits of fresh produce consumption, starting from youth. Such programs are currently underway by the Produce for Better Health Foundation, many school districts, and there are more supportive policies at the federal level, including higher federal contributions for F&V in school feeding programs, a joint public-private program to support salad bars in schools, the First Lady's Let's Move initiative, and the new MyPlate nutritional guidelines, among others.

Ethnicity

The changing ethnic makeup of the U.S. population is definitely favorable to fresh produce consumption, since Hispanic and Asian Americans consume fruits and vegetables at higher rates than African Americans and whites. In 2009, white/other households on average consumed \$439 of fresh produce per year compared with \$695 for Asian Americans, \$496 for Hispanic Americans and \$287 for African Americans.

Over the last twenty years Hispanic and Asian Americans have consistently increased their share of the U.S. population, with approximately 50 million Hispanics representing 16 percent of the 310.2 million U.S. residents in 2010, compared with 7 percent in 1980 according to U.S. Census Bureau figures. In contrast, the share of African Americans was flat at 12 to 13 percent over the same period; Asians grew from 1 to 5 percent of the population.

Geographic Influences

The highest average annual household expenditures on fresh produce are in the West at \$511 vs. the national average of \$429, in part given the higher concentration of Hispanic and Asian Americans there. The South still lags the nation in produce expenditures (\$365), with the Northeast ranked second in importance, followed by the Midwest. The long-term movement of the population to the West and Southwest is likely to continue to benefit fresh produce consumption as regional migration exposes consumers to different eating patterns.

Concluding Thoughts

Unfolding demographic and food trends are likely to continue to shift consumption toward more fresh and less processed fruits and vegetables, as well as toward higher convenience and differentiated products, including with specific food traits, as consumers become more involved with their food choices and experiences. F&V consumption growth will be more robust if income growth rebounds and higher education rates increase. It is imperative to encourage higher F&V consumption as part of a healthy lifestyle among all age groups, but especially among younger consumers. Good habits reinforced early in life are likely to carry forward as people age.

Table 1. US per capita annual fruit and vegetable consumption/utilization (pounds), 1976-2009

Item	1976	2009	Fresh v. Processed Share 1976	Fresh v. Processed Share 2009	Growth 76-09
Fruit					
Citrus					
Fresh	28.5	20.7	22%	25%	-27.6%
Processed	102.4	63.4	78%	75%	-38.1%
Subtotal	131.0	84.1	100%	100%	-35.8%
Non-Citrus, including melons					
Fresh	73.4	106.8	48%	52%	45.6%
Processed	78.1	100.3	52%	48%	28.5%
Subtotal	151.4	207.1	100%	100%	36.8%
All Fruits					
Fresh	101.9	127.5	36%	44%	25.1%
Processed	180.5	163.7	64%	56%	-9.3%
Fruit Total	282.4	291.2	100%	100%	3.1%
Vegetables					
Vegetables, excluding potatoes, dry beans and lentils					
Fresh	95.9	146.5	45%	54%	52.7%
Processed	119.3	124.5	55%	46%	4.4%
Subtotal	215.2	271.0	100%	100%	25.9%
Potatoes					
Fresh	49.4	36.4	39%	32%	-26.2%
Processed	75.8	76.7	61%	68%	1.2%
Subtotal	125.2	113.1	100%	100%	-9.6%
All Vegetables					
Fresh	145.3	182.9	43%	48%	25.9%
Processed	195.1	201.2	57%	52%	3.1%
Vegetable Total	340.4	384.1	100%	100%	12.8%
Fruits and Vegetables					
Fresh	247.2	310.3	40%	46%	25.5%
Processed	375.6	365.0	60%	54%	-2.8%
Grand Total	622.8	675.3	100%	100%	8.4%
Sources: Compiled by Roberta Cook from Economic Research Service, USDA, Fruit and Tree Nuts Situation and Outlook Yearbook, and Vegetables and Melons Yearbook, various years.					

Figure 1. 2009 Distribution of U.S. Households by Income Level, Share of Total Food Expenditures/Income Level & Ave. Fresh Produce Expenditures/Income Level

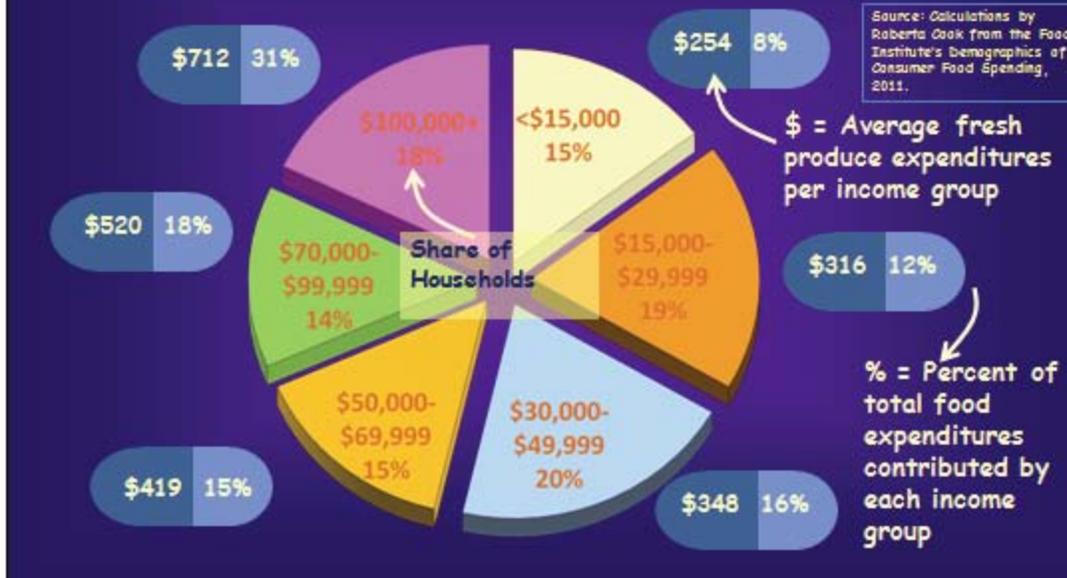


Figure 2. Distribution of U.S. Households by Age Group and Fresh Produce Expenditures, 2009

