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U.S. Food Commodity Availability by Food Source, 1994-2008

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What Is the Issue?

The U.S. Department of Agriculture (USDA) maintains two sources of data on U.S. food consumption: (1) the *Loss-Adjusted Food Availability (LAFA) data*, compiled by USDA's Economic Research Service (ERS) and covering over 200 food and beverage commodities; and (2) *dietary intake surveys* conducted by USDA's Agricultural Research Service (ARS) in collaboration with the U.S. Department of Health and Human Services's National Center for Health Statistics (NCHS). When used together, they help quantify the Nation's eating habits and quantify nutritional deficiencies. LAFA data, as an approximation of food consumption, show year-to-year changes in commodity consumption, whereas dietary intake surveys collect data on food consumption (e.g., apple pie) but not commodity consumption (e.g., apples used in various foods).

Neither resource, though, reveals exactly who eats what food commodities, the amounts eaten, and where the food commodity is acquired. These additional pieces of information are critical to government and businesses for addressing such issues as the Nation's failure to meet Federal dietary guidelines and the effectiveness of commodity promotion. By determining the amounts of fruit and vegetables consumed by different demographic subgroups and via different food sources, stakeholders can identify which populations are particularly deficient in consuming fruit and vegetables and the source of dietary deficiency. The data on the food source of commodity consumption could have implications for the effectiveness of marketing and educational efforts. If a commodity is consumed mainly at home (e.g., milk), then it makes sense to target educational and other efforts for that commodity more at grocery shoppers than at restaurant-goers. Likewise, if a commodity is evenly consumed at home and away from home (e.g., chicken), then targeting promotional efforts at foodservice establishments and grocery stores might be equally effective.

What Did the Study Find?

Using data from four national food intake surveys conducted between 1994 and 2008, ERS researchers disaggregated 63 LAFA commodities (fruit, vegetables, dairy, meats, eggs, grains, fat and oils, caloric sweeteners, and nuts) by food source—food at home (FAH) and food away from home (FAFH)—for the Nation as a whole and for 15 demographic subgroups. Food source is defined mainly by where a food was acquired and less on where it was eaten. Foods obtained at grocery stores are classified as FAH even though they can be eaten away from home, such as at an office or in a school cafeteria. Foods prepared away from home are classified as FAFH even though they can be picked up as take-out or delivered to the consumers' home.

ERS is a primary source of economic research and analysis from the U.S. Department of Agriculture, providing timely information on economic and policy issues related to agriculture, food, the environment, and rural America.

More than half of all food commodities were obtained for at-home consumption. Consistent with ERS food expenditure and nutrient intake data indicating that the at-home market accounted for 58 percent of total food expenditures and 68 percent of total caloric intakes, over half of all food commodities were consumed at home. On average, between 1994 and 2008, over 80 percent of total fruit, dairy, and nuts were obtained for at-home use, whereas 61 percent of all meats and fish were obtained for at-home use. Over time, the at-home shares of some commodities (e.g., berries, fluid milk, caloric sweeteners, and nuts) rose while others (e.g., chicken and wheat flour) declined.

The at-home share of berry consumption rose with per capita availability. Flavor, healthfulness, convenience, and year-round availability have contributed to increasing consumer demand for berries, with per capita availability growing from 4.5 pounds per person per year during 1994-98 to 6.6 pounds during 2007-08. The at-home share of berries rose from 82.8 percent during 1994-98 to 88.6-90.6 percent during 2003-08.

Slightly over half of lettuce and potatoes were obtained for at-home use. Sixty-two percent (169 pounds per capita per year) of total vegetables were obtained for at-home use during 1994-2008. Among vegetables, the at-home share was smallest for lettuce and potatoes, averaging 52 and 53 percent (7.8 and 29.8 pounds), respectively, during 1994-2008. Sweet corn and green peas had the highest at-home market shares, both averaging 80 percent (5.8 and 1.4 pounds, respectively) during 1994-2008.

The at-home share for cheese was much smaller than for other dairy products. On average, 82 percent of total dairy was obtained for at-home use during 1994-2008, with per capita consumption averaging 175 pounds at home and 39 pounds away from home. For yogurt, the at-home market captured 91 percent of consumption (5.8 pounds at home versus 0.6 pound away from home per capita per year). The at-home market also dominated fluid milk consumption with an 85-percent market share. By contrast, 57 percent of cheese was obtained for at-home use, on average, during 1994-2008—11.7 pounds at home versus 8.7 pounds away from home per capita per year.

Among all meats and fish, chicken had the smallest at-home market share. On average, 61 percent of all meats and fish were obtained for at-home use, averaging 88 pounds per capita per year at home and 57.3 pounds away from home during 1994-2008. The away-from-home share of chicken consumption rose from 41.9 percent during 1994-98 to 46.4 percent during 2007-08. This trend is consistent with the introduction of chicken nuggets and their rising popularity in fast-food places.

How Was the Study Conducted?

Our analysis used three databases: the LAFA data series, the Federal dietary intake surveys, and the Food Intakes Converted to Retail Commodities Databases (FICRCDs), which links foods and commodities for data collected in recent dietary intake surveys, including the 1994-96 and 1998 Continuing Survey of Food Intakes by Individuals, 1999-2000 National Health and Nutrition Examination Survey (NHANES), and 2001-02, 2003-04, 2005-06, and 2007-08 What We Eat in America, which is the dietary component of NHANES. The 1999-2002 NHANES data are excluded from this study because they do not have the data to classify food source into at home and away from home. To disaggregate the LAFA data by food source, we employed a two-step procedure. First, we estimated commodity consumption patterns by food source (e.g., the proportion of potatoes acquired for at-home consumption) using intake survey data and FICRCD. Then, we applied the estimated commodity consumption proportions to disaggregate the LAFA data by food source for various demographic variables (i.e., household income, age, men versus women versus boys versus girls, adult education, and race and ethnicity).