

## Introduction

In 1941, the U.S. Department of Agriculture (USDA) first published comprehensive data to assess the availability of food and nutrients for the U.S. civilian population and to provide a basis for comparisons with the food supplies of our World War II allies. By 1949, USDA had extended the data back to 1909 for most commodities. Since 1949, the database has been maintained and updated every year with very few exceptions. The data measure the food supply of over 200 food commodities, such as beef, fresh apples, and eggs.

The Food Availability data represent the supply of food available for consumption in the United States. For a given year, the supply of each commodity is the sum of production, imports, and beginning inventories, and from this amount, USDA's Economic Research Service (ERS) subtracts out exports, farm and industrial uses, and ending stocks. USDA collects data on these components directly from producers and distributors using techniques that vary by commodity. These data are not collected from individual consumers, and thus provide an independent basis for examining food consumption trends. Per capita estimates are calculated by dividing the total annual availability for a commodity by the U.S. population for that year.

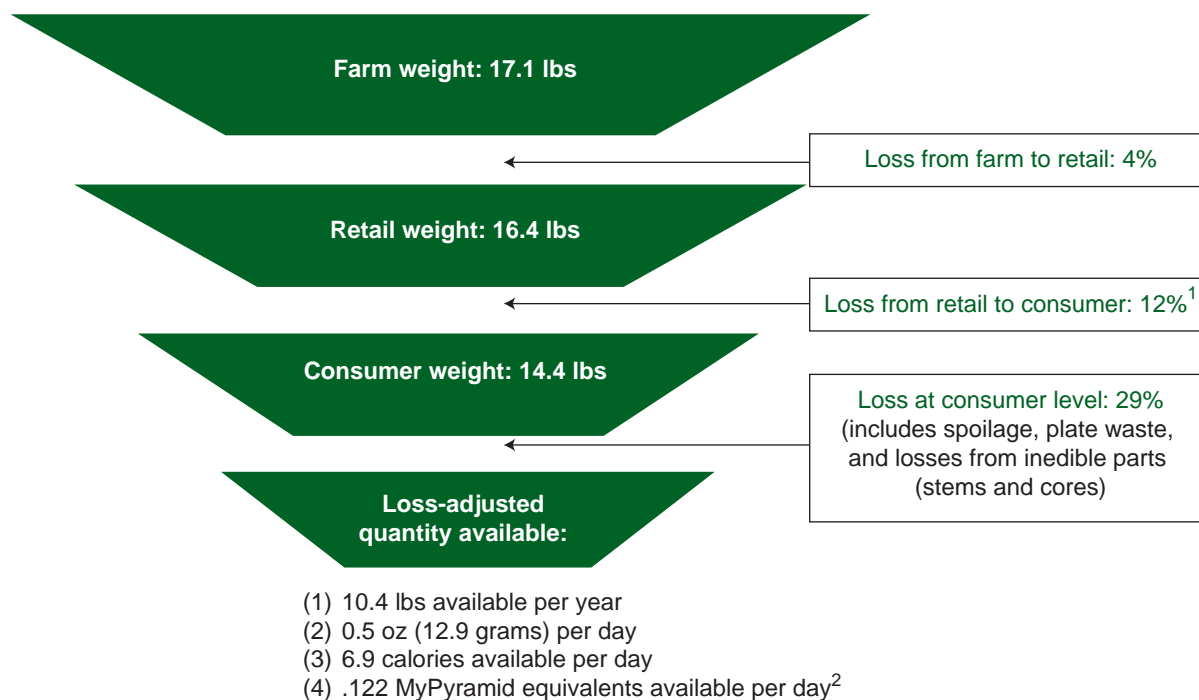
ERS manages and disseminates the Food Availability data within a data system posted on the ERS website ([www.ers.usda.gov/Data/FoodConsumption/](http://www.ers.usda.gov/Data/FoodConsumption/)). The data system is the only source of time series data on the food available for human consumption in the country. Accordingly, the data play a key role in monitoring the potential of the food supply to meet the nutritional needs of Americans and to examine historical consumption trends.

The Food Availability data overstate the amount of food actually ingested because they do not take into account all of the substantial quantities of food lost to human use through waste, moisture loss, and spoilage beyond the farm gate in the marketing system and the home. Therefore, in the mid-1990s, ERS developed methods to adjust the availability data for spoilage and other losses. In particular, the Loss-Adjusted Food Availability data series refines the Food Availability data more fully for three general types of losses:

- (1) loss from primary (e.g., farm) to retail weight.
- (2) loss at the retail level (e.g., in supermarkets, megastores such as Walmart, and other retail outlets, including convenience stores and mom-and-pop grocery stores). This type of loss does not include losses in restaurants and other foodservice outlets.
- (3) loss at the consumer level. This includes losses for food consumed at home and away from home (e.g., restaurants, fast-food outlets, etc.) by consumers and foodservice and has two components:
  - (a) "Nonedible share" of a food (e.g., asparagus stalk, apple core). Data on the nonedible share are from the National Nutrient Database for Standard Reference, compiled by USDA's Agricultural Research Service (U.S. Department of Agriculture, 2007).
  - (b) "Cooking loss and uneaten food such as plate waste" from the edible share.

Figure 1

### Loss-adjusted food availability data for fresh apples, per capita, in 2005



<sup>1</sup>This 12-percent estimate is the estimate used prior to this study.

<sup>2</sup>MyPyramid equivalents can be thought of as “servings” needed to meet the dietary recommendations. See [www.mypyramid.gov/pyramid/index.html](http://www.mypyramid.gov/pyramid/index.html) for details.

Each commodity in the Loss-Adjusted Food Availability data has a spreadsheet posted on the ERS website that provides the loss assumptions used by ERS ([www.ers.usda.gov/Data/FoodConsumption/FoodGuideIndex.htm](http://www.ers.usda.gov/Data/FoodConsumption/FoodGuideIndex.htm)). Each fruit and vegetable has a separate spreadsheet for each type of processing. For example, apples have spreadsheets for fresh, frozen, dehydrated/dried, and canned apples as well as a spreadsheet for apples made into juice. These loss estimates are sometimes called “conversion factors,” particularly when describing how a farm commodity is transformed into a consumer-ready product (e.g., fresh chicken to boneless fresh chicken).

One of ERS’s long-term goals for the food availability data system is to rigorously update the assumptions of the Loss-Adjusted Food Availability data so that the data series replaces the food availability data as ERS’ premiere estimate for food consumption over time. ERS aims to update the loss estimates for each covered commodity for the most recent years of data available, and ascertain if any of these loss estimates have changed since 1970, the first year in the data series. If there have been changes, ERS plans to explore the reasons for these changes.

The previous ERS estimates of food loss were documented to varying degrees, ranging from little to no documentation for the estimates at the retail level to well-documented estimates on the nonedible share for each food. Therefore, the objectives of this study were to obtain and document updated estimates of food loss at the retail level using supermarket loss estimates from the Perishables Group, Inc., as an estimate for food loss at the retail level even though the updated data do not include convenience stores, mega-stores, club stores, and mom-and-pop grocery stores. Because the previous estimates of retail food loss were so poorly documented, one well-documented estimate for each fresh food at supermarkets is an important improvement. The report also provides an analysis of how the updated loss estimates impact the Loss-Adjusted Food Availability data.