This is a summary of an ERS report.

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Consumer-Level Food Loss Estimates and Their Use in the ERS Loss-Adjusted Food Availability Data

Mary K. Muth, Shawn A. Karns, Samara Joy Nielsen, Jean C. Buzby, and Hodan Farah Wells

What Is the Issue?

The Food Availability (per capita) Data System developed by USDA's Economic Research Service (ERS) tracks annual food and nutrient availability (a proxy for consumption) in the United States since 1909 for several hundred commodities. Because the core Food Availability data series in the system overstates actual consumption, ERS has added another series to the system—the Loss-Adjusted Food Availability data—which adjusts the Food Availability data for nonedible food parts and food losses, including losses from farm to retail, at retail, and at the consumer level. This second data series more closely estimates per capita consumption.

The current Loss-Adjusted Food Availability data are incomplete and need updating. Under an agreement with ERS, RTI International has proposed new estimates for the data series' loss of the edible share of food at the consumer level. These proposed estimates cover food loss both at home and away from home for most of the commodities included in the series. These losses include losses during cooking and preparation (e.g., frying fats); discards due to preparation of too much food; expired use-by/open dates; spoilage; and plate waste. ERS then examined how adoption of RTI's proposed estimates in this data series would affect ERS's per capita estimates of daily calories and pounds available for consumption per year for each commodity. Higher loss estimates relative to current ERS loss estimates equate to decreased consumption; lower estimates equate to increased consumption. The purpose of this report is to provide documentation about the proposed estimates and to make these estimates available for public comment. We propose to adopt the new estimates for the entire data span (1970 to the most recent year in the series).

What Did the Study Find?

Proposed loss estimates. Consumer-level food loss varies greatly among individual foods based on a number of factors, such as a food's perishability or shelf life, the likelihood of a food being used as an ingredient or eaten without further preparation, and the degree to which a food is typically consumed by children or adults (because of differences in food consumption patterns across age groups). Based on RTI's proposed estimates, foods with the largest annual increase (more than 35 percentage points) in estimated consumer-level loss as compared with

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the currently used ERS estimates include fresh pumpkin, dry buttermilk, dry whole and nonfat milk, Swiss cheese, edible beef tallow, and lard. Foods with the largest decrease (more than 15 percentage points) include chicken, lamb, nonfat cottage cheese, frozen potatoes, and veal. Changes in consumer-level food loss estimates could stem from changes in food preparation habits and the increase in food consumed away from home or simply from RTI's use of a different methodology for calculating losses than that used currently by ERS.

Effects of proposed loss estimates on ERS food availability estimates. If RTI's proposed food loss estimates are adopted for use in ERS's data series, changes in estimates of per capita availability of individual foods relative to current ERS estimates would vary. Changes over entire food groups, however, would tend to be small. The most affected group would be meat, poultry, fish, eggs, and nuts, with an annual increase in food available for consumption of 22.3 pounds per person, or 15 percent. The food group with the smallest change would be grain products, with an annual decrease in availability of 2.1 pounds per person, or 1.5 percent, though RTI could calculate estimates for only three grain products due to data limitations, such as when the grain was used almost exclusively as an ingredient (e.g., various types of flours). Overall, use of RTI's proposed estimates in the data series would result in a reduction in estimated per capita availability of 17.3 pounds of food per year, or 41.9 fewer calories per day, for the average American.

How Was the Study Conducted?

RTI conducted the first of two phases in this study by comparing estimates of total U.S. retail household purchases with total U.S. at-home consumption for each food in ERS's Loss-Adjusted Food Availability series. The main data sources included The Nielsen Company's Homescan® data for 2004 (food purchases from retail outlets) and the National Health and Nutrition Examination Survey (NHANES) for 2003-04 (food consumption). RTI also calculated alternative estimates of food loss by comparing the total quantity available at the consumer level in the Loss-Adjusted Food Availability series with total reported consumption in NHANES. RTI relied on several supplemental data sources to adjust the purchase data to facilitate comparisons with the consumption data. In addition, RTI took direct measurements of count data (e.g., produce sold by count rather than weight), inedible percentages of food, and moisture gains for foods if data were not available from one of the data sources.

Comparison of daily calories using current ERS and RTI's proposed estimates of consumer-level food loss
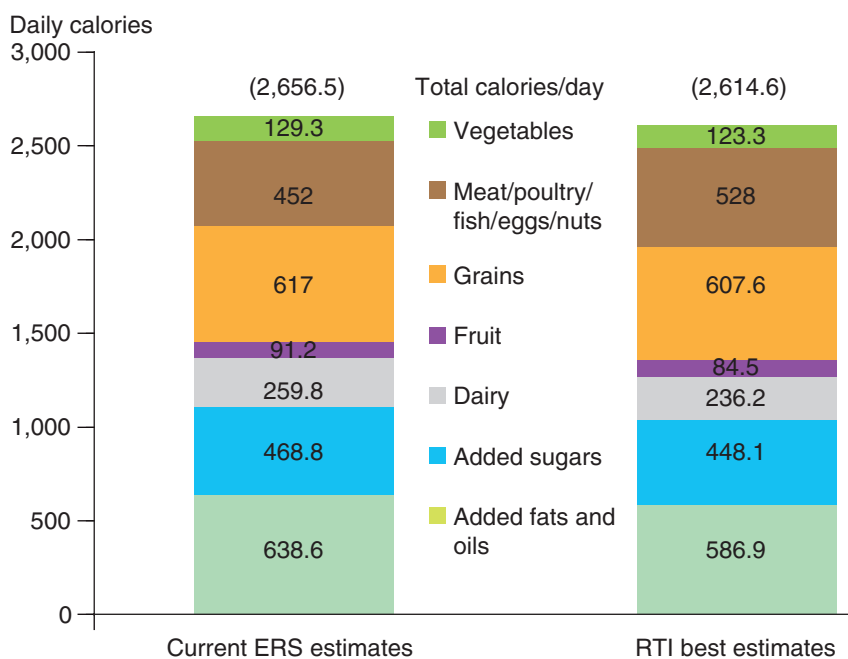
Source: Calorie estimates are for 2006 as computed by authors.

RTI also developed and conducted an expert panel to provide additional data for the analysis, including estimates of food loss to validate the RTI estimates (or provide an estimate for foods for which estimates could not be calculated) and estimates of the percentage of each food typically used as an ingredient. Based on the resulting data, RTI provided one recommended or proposed estimate for each food for which an updated estimate could be calculated for use in ERS' Loss-Adjusted Food Availability data.

In the second phase of this study, ERS applied the consumer-level loss estimates proposed by RTI for each commodity to ERS's Loss-Adjusted Food Availability data. Results revealed changes in ERS estimates of the pounds of food available for consumption per capita per year, and changes in the number of calories available for consumption per capita per day.

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