Discussion

The average loss rates for 2005-06 for individual commodities varied from 0.6 percent for sweet corn to 63.6 percent for mustard greens. When ERS incorporated the new loss estimates in the existing Loss-Adjusted Food Availability data, the impact on the per capita estimates varied broadly among commodities within a food group (e.g., all fresh fruit). The largest annual impacts, per capita, were for fresh potatoes, chicken, beef, pork, bananas, and sweet corn—all of which have high consumption shares for their respective food groups.

For many commodities, loss has declined over time due to several different factors, such as:

- improved packaging (e.g., plastic clam shells)
- improved ordering systems
- more frequent deliveries
- increased product handling training for in-store personnel
- improved temperature-control tracking
- introduction of produce varieties with improved shelf life

In some cases, loss increased for particular subcategories (e.g., leafy greens, citrus fruit) within a larger food group (e.g., vegetables, fruit), partly due to the introduction of a greater number of competing segments or items within a food subcategory. The presence of more segments/items can often increase the loss for a subcategory because of the larger number of products competing for consumers' food dollars. For example, while packaged salads typically have a longer shelf life than head lettuce, loss of packaged salads is often higher due to the number of varieties available, as well as an increase in promotions for specific packaged salads. Both factors inadvertently raise sales of some products at the expense of others.

Future work is needed to update the remaining loss estimates at the retail level for commodities that were not included in the Perishables Group grant but are part of the Loss-Adjusted Food Availability data. Examples include: canned, frozen, or dried fruits and vegetables and juice made from them; added fats and oils; added sweeteners; grain products; and dairy products. Future work can investigate what is included in supermarket food loss. In addition to loss due to spoilage and moisture loss, what portions are thrown out, fed to animals, or given to food banks? Food consumed through food banks should not be considered as food loss in the Loss-Adjusted Food Availability data.

Once ERS has updated all the food loss assumptions in the data series, ERS can more accurately estimate the magnitude of such losses at the:

(1) farm-to-retail level

(2) retail level

(3) consumer level

ERS will also be able to estimate the losses by commodity and commodity group. This information, combined with estimates of recovery costs, can be used to identify potential priority areas for food-loss reduction and food recovery to help reduce food insecurity. One implication of these updated loss estimates is that the amount of food loss at the supermarket level is slightly lower than previous estimates. This means the amount of food potentially available for charitable donations would be somewhat lower.

Updated food loss assumptions will help us more accurately estimate what is available for consumption, which is used as an estimate for actual consumption. This information is important for policymaking. Better estimates of food consumption for different foods and food groups can be used to more accurately calculate how well Americans are meeting Federal dietary recommendations.

The study found that for the commodities it examined, new supermarket loss estimates using the Perishables Group data averaged 11.4 percent for fresh fruit; 9.7 percent for fresh vegetables; and 4.5 percent for fresh meat, poultry, and seafood during 2005-06. In each case, these averages are slightly smaller than the previous estimates used in the ERS data (i.e., 12 percent for the fresh fruit; 12 percent for fresh vegetables; and 7 percent for fresh meat, poultry, and seafood). Although the direction of these differences is consistent with the notion that the food industry has adopted ways to reduce fresh food loss since the first ERS estimates for retail loss were developed in the late 1990s, the magnitude of these differences is less than or equal to 2.5 percentage points for each of the three fresh food groups. Having more individualized and documented estimates for each fresh food commodity going back to 1970 for the Loss-Adjusted Food Availability data is an important improvement, even if the actual estimates of loss in the early years may be slightly higher in some cases (i.e., prior to the development and use of technological improvements and more hardy produce varieties). Additionally, a search for potential outliers among the 2005 and 2006 estimates did not reveal evidence that any of the individual estimates should be excluded. Therefore, ERS adopted the new 2005-06 average loss estimates for each fresh food as substitutes for the respective estimates of the retail loss in the Loss-Adjusted Food Availability data.

The most important finding for ERS is that incorporating the Perishables Group's estimates of supermarket loss had little total impact on the Loss-Adjusted Food Availability estimates of the amount of these commodities that consumers can take home from retail stores over the course of a year. Using the new loss estimates increased our estimates of per capita availability at the retail level in 2005 of fresh fruit by 0.7 pounds (0.6 percent); fresh vegetables by 4.2 pounds (2.7 percent); and fresh meat, poultry, and seafood by 4.8 pounds (2.7 percent). Dividing these estimates by 365 days to estimate the impact per capita per day results in very small numbers.