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# Limited Financial Resources Constrain Food Choices

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**P**ersonal income is a key factor affecting not only the amount Americans spend for food, but also the types of food they buy. For low-income Americans, food choices run counter to most national trends. They typically spend less for food and eat less than does the general population.

In 1987-88, food spending by low-income households was about 82 percent of the national average. Low-income households bought \$1,076 worth of food per person per year, whereas the population as a whole bought about \$1,348 per person (fig. 1). Differences were even more pronounced for some specific food groups. Low-income households spent about 74 percent of the national average for fresh fruits and only 65 percent for beverages other than fluid milk (fig. 2). Eggs were the only major food item on which low-income households spent more.

Although households with limited financial resources spent and consumed less per person for almost every major food group, they paid less per unit of food—due partially to buying lower cost brands or foods, buying in bulk, and eating at home more often. The few products low-income households bought

more of included mainly lower priced red meats, and staple items, such as eggs and sugar, that are often used to make meals from scratch.

This article presents results from an analysis of USDA's 1987-88 Nationwide Food Consumption Survey (NFCS), the latest data available on household food consumption for the population as a whole and for low-income U.S. households (see box). Although somewhat dated, these data are the most recent

survey information on the use and value of foods at the household level. And since a portion of the survey is targeted at low-income households, the data provide further knowledge about this group of Americans.

## Dairy Products

The population as a whole consumed about 10 percent more dairy products per capita than did low-income households, 451 pounds



*Low-income households spent about 82 percent of the national average on food (\$1,076 per person per year compared with \$1,348). Differences were even more pronounced for some specific food groups, particularly fresh fruits and beverages.*

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compared with 396 pounds (fig. 3). However, low-income households used about 9 more pounds (on a fresh-equivalent basis) of processed milk products, such as infant formula and other dried and canned milk products. The number of children in the home and participation in food-assistance programs may

partially explain this difference. According to the survey data, low-income households contained more children (an average of 0.98) than did the overall population (0.73). In addition, being less expensive per unit than fresh milk, dried milk products stretch the value of the food dollar.

In fact, while low-income households consumed about 10 percent fewer dairy products, they spent about 14 percent less than did the average household, suggesting that they tend to look for bargains or less expensive products.

## Red Meats, Poultry, and Seafood

Low-income households consumed about 3 percent more red meats than did the population as a whole, but they paid about 10 percent less for the products. These results suggest not only that lower income households may prefer red meats more than do most households, but also that these purchasing decisions seem to be based more heavily on relative prices—leading them to shop for bargains and lower cost cuts of meats. The survey data indicate that, on average, low-income households paid about \$1.64 per pound (in 1988 dollars) for red meats, while the overall population paid about \$1.88 (fig. 4).

Similarly, while low-income households ate about the same amount of poultry, fish, and shellfish as the rest of the population, they spent about 21 percent less (an average of \$0.33 less per pound) for these products.

## Eggs

Low-income households buy more eggs than the national average. They spent 14 percent more and consumed 14 percent more. Such higher levels suggest that low-income households may tend to prepare more foods from scratch to economize on their food budget. Eggs are a relatively inexpensive source of protein and can be used in a variety of low-cost homemade recipes, such as egg salad.

Figure 1  
**Higher Incomes Result in Higher Per Person Food Spending**

Food spending, dollars per year



Figure 2  
**Low-Income Households Spend Less Per Person for Major Food Groups**

Food spending, dollars per year





## Fats and Oils

Low-income households used about 5 percent less of packaged fats and oils (as opposed to fats and oils already contained in prepared foods) than did the population as a whole, and they spent about 18 percent less. Low-income households may be using less expensive products or they may be saving money by buying large bulk containers.

The NFCS data for fats and oils use are probably not a very good indication of actual consumption. Many of the foods containing fats and oils (such as dinner mixtures) are not recorded in the fats and oils category. Also, our assumption that foods eaten away from home are consumed in the same relative amounts as foods at home (see box) may lead to inaccuracies for some food groups—particularly fats and oils. For example, if many people eat more fried foods at restaurants and fast-food establishments than they do at home, the fats and oils used in frying would not be captured by our adjustment to the data. Nonetheless, the information does contain useful comparison between low-income households and the national average (also called all-income households).

## Flours, Cereals, and Bakery Products

The survey data on consumption and expenditures on flours, cereals, and bakery products again suggest that low-income households tend to prepare meals from scratch. Low-income households used about 11 percent more flours and cereals than did households overall. Despite their greater use, low-income households spent about 7 percent less for flour and cereals than did most households.

Low-income households used about 12 percent less bakery products, and spent about 24 percent less, than did the population as a whole. Since the amount of store-bought bread, which is included in bakery products, was nearly the same between low-income households and the national average,

other, higher priced items are the source of the difference in bakery products. This suggests that low-income households tend to use far less of the higher priced bakery products, such as pre-made cakes or bakery snacks—instead purchasing lower priced products or bulk packages.

Figure 3

### Food Consumption Per Person Is Generally Lower in Low-Income Households

Food consumption, pounds per year

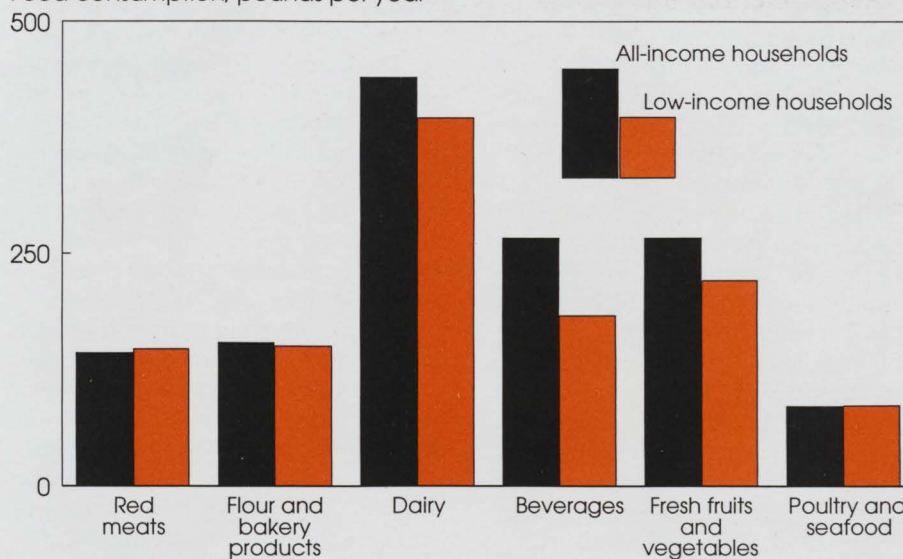
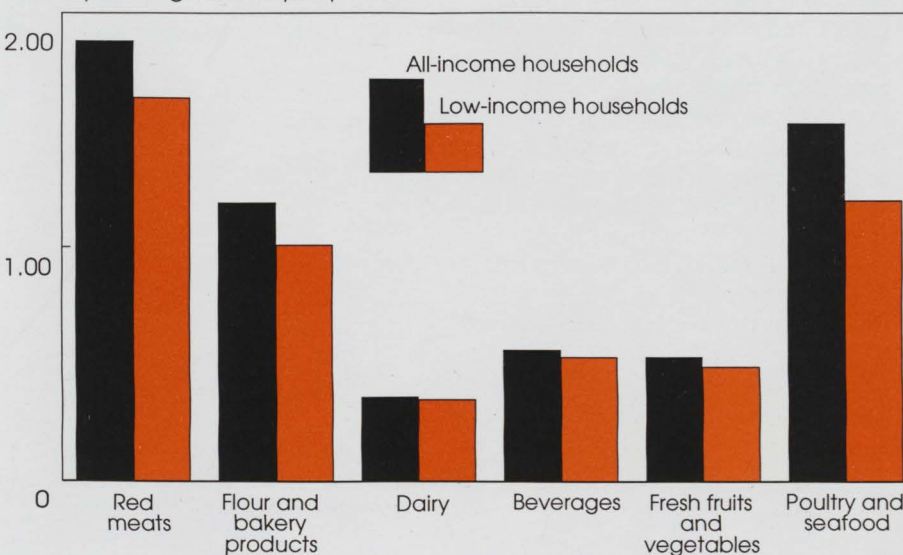


Figure 4

### Low-Income Households Usually Spend Less Per Pound of Food

Food spending, dollars per pound





## USDA's Nationwide Food Consumption Survey

The results presented in this article are based on data collected in the 1987-88 Nationwide Food Consumption Survey (NFCS) conducted by the former Human Nutrition Information Service (HNIS), now a part of USDA's Agricultural Research Service (ARS). The NFCS, collected about every 10 years since the mid-1950's, is USDA's most comprehensive survey of food consumption by American households.

The 1987-88 NFCS consisted of two samples: one from low-income households and one from the general population (sometimes referred to as the basic, or all-income, sample). Both portions sampled private households in the 48 contiguous States. The low-income sample consisted of households that met certain income criteria, adjusted for household size (see table 1). All households, regardless of income, were eligible for the basic sample.

Detailed survey information was collected regarding the value, type, and quantity of foods used from household food supplies during a week as well as socioeconomic and demographic characteristics of the households.

The data have some limitations, which may affect generalizing these findings into wholesale trends on food consumption. The survey only measures food bought for preparation/consumption at home. Without capturing purchases of food in restaurants, fast-food establishments, sandwich shops, and other outlets away from home, some of the data may not adequately measure consumption patterns. The NFCS data include food purchased at foodservice establishments, but only if it is carried home for consumption.

We adjusted the data to account for differences in the number of meals eaten away from home, household members, and guests. The adjustment assumes that household members would consume foods

away from home in the same relative proportions as they did at home. This may be a valid assumption for many foods, but not so for others. For example, with the dramatic increase in the number of salad bars in restaurants and fast-food establishments over the last decade, people may be eating relatively more fresh vegetables away from home than at home. Therefore, it is difficult to measure actual food consumption using only data on foods eaten at home.

Also, since consumption data are not collected in the same manner as for traditional agricultural commodities, one cannot extrapolate these conclusions to estimate the impacts on agricultural markets. There has been a considerable shift from consuming individual food items to foods in mixtures (such as pizza, frozen entrees, and salads). Households participating in the survey can report these foods as mixtures rather than as each individual food. This would tend to underestimate the consumption of certain agricultural commodities. For example, the pork sausage used on pizza is reported as pizza, not pork—underestimating red meat consumption.

Another drawback is the relatively low response rate. The response rate for the all-income portion of the survey was about 37 percent and about 42 percent for the low-income portion. A number of households selected for the samples chose not to participate in the survey. This may cause statistical bias problems if many households chose not to participate and if there was a systematic difference in their consumption behavior from those who did participate.

For example, if a large proportion of single-person households chose not to participate and those households also ate more frozen dinners and fewer fresh vegetables than did the single-person households that did participate, frozen dinner consumption would be underestimated and fresh vegetable consumption would be overestimated. The lower the participation rate, the greater is the potential of nonparticipation bias. We weighted the samples to adjust for nonparticipation.

To determine the impact of nonresponse on the NFCS's representation of the U.S. population, HNIS compared descriptive statistics of the 1987-88 survey to several other surveys. Also, a panel of experts evaluated the impact of the response rate on the accuracy of the data. The U.S. General Accounting Office examined the reliability of the data.

All three groups concluded that it is not possible to determine if those not responding differed systematically from those who did. But, the evaluators were concerned about estimates based on small subgroups of people.

This article compares the entire samples—4,495 households in the all-income sample and 2,508 households in the low-income sample. For this reason, we believe nonresponse bias has a minimal effect on the estimates in this article.

Table 1  
**Low-Income Thresholds Adjusted for Household Size**

Household size	Monthly before-tax income <sup>1</sup>
Number	Dollars
1	595
2	800
3	1,010
4	1,215
5	1,420
6	1,625
7	1,830
8	2,035

Note: <sup>1</sup>Excludes benefits from the Food Stamp Program and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).



## Fruits and Vegetables

According to the survey, low-income households consumed considerably less of fresh fruits (21 percent) and fresh vegetables other than potatoes (13 percent) than the national average. On the other hand, they used about 9 percent more fresh potatoes, which are generally less expensive than other types of vegetables.

Low-income households spent 25 percent less on fresh fruits and 30 percent less on fresh vegetables than the national average. They also paid less per pound, suggesting they may buy lower cost produce items.

The numbers for fresh fruits and vegetables do not account for total consumption, since canned and frozen items are a separate category and since some fruits and vegetables may be in mixtures, such as frozen dinners. Low-income households used about 11 percent more canned fruits and vegetables and 25 percent less of frozen fruits and vegetables than did households overall. This is probably due to the relatively lower price of canned items.

## Sugars and Sweets

Sugars and sweets was one of the few food groups of which low-income households ate more (12 percent) than did the population as a whole. (These consumption figures do not count sugars used as ingredients in processed foods, such as soft drinks or presweetened breakfast cereals.) Still, low-income households spent about 10 percent less for sugars and sweets. Most of

the higher consumption can be explained by a larger use of sugar, again supporting the view that low-income households tend to make more meals and snacks from scratch instead of buying more expensive prepackaged foods.

## Beverages

The population as a whole drank about 31 percent more beverages (mainly soft drinks) and 16 percent more fruit and vegetable juices than did low-income households. Low-income households spent slightly less per pound for soft drinks and slightly more per pound for fruit and vegetable juices. The lower use of beverages by low-income households is probably due to their higher relative price.

## Income Affects Food Spending and Choices

Although eating less and spending fewer dollars does not itself imply diminished dietary quality, the Federation of American Societies for Experimental Biology identified low-income households as a group having a higher risk of developing nutrition-related health disorders. It is clear from our analysis that low-income households eat different foods than the general population, which tends to support the Federation's claim.

Households with limited financial resources probably place a higher priority on relative food prices and other living expenses, such as rent, than does the general population. Since they tend to buy lower priced foods in search of bargains, they may also have a tendency to buy lower quality foods, such as high-fat meats. While low-income households appear to economize their

food dollar very effectively, there is some danger that the nutritional quality of their diets may suffer from buying few highly nutritious foods, such as fresh fruits and vegetables.

Knowledge of the differences and similarities between national averages and averages for low-income Americans is critical in making effective farm and nutrition program decisions, such as in assessing costs and benefits of welfare reform proposals on agricultural producers and needy families.

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