Struggling To Feed the Family

What Does It Mean To Be Food Insecure?

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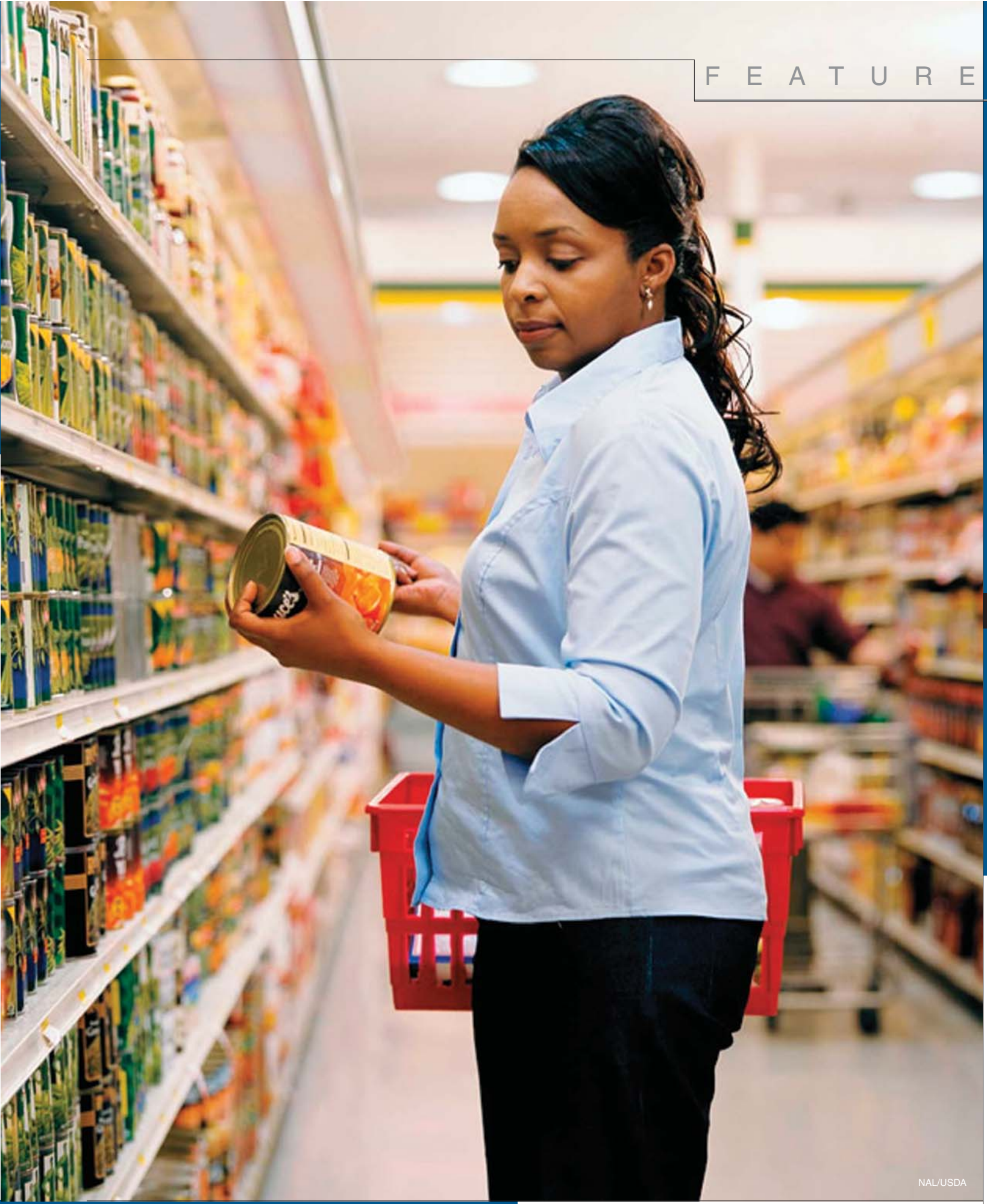
- Food security—consistent access to enough food for active healthy living—is strongly associated with income, but other household circumstances and State-level policies and economic conditions also matter.
- Health problems are more prevalent among members of food-insecure households than among otherwise similar individuals living in food-secure households.
- Food security statistics provide reliable information on the hardships households face in meeting basic food needs.

Most Americans can afford to put enough healthful food on the table each day. USDA estimates that nearly 9 out of 10 U.S. households were food secure throughout 2005, meaning that they had consistent access to enough food for active, healthy living. Yet, for some households, it is a struggle to put enough nutritious food on the table. About 12.6 million households, or 11 percent of all U.S. households, were food insecure at some time during the year, meaning that they had difficulty meeting basic food needs because they lacked money or other resources for food.

At a time when the news is full of stories about the growing prevalence of overweight and obesity, particularly among low-income individuals, what significance should be attached to the food insecurity statistics? What do they really mean and how important are they for informing food assistance policy? In the decade since the data were first collected, USDA has sponsored a research program on the measurement, causes, and consequences of food insecurity. The program includes an annual national survey to estimate the number of households facing such difficulties. The research shows that statistics on food security are a reliable measure of households' economic access to enough food and a meaningful indicator of household well-being. This information is important both for what it reveals about food hardship and for the picture it provides of the character and extent of material hardship, more generally.



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Food Insecurity Is a Measurable Phenomenon . . .

Food security is a foundation for a healthy and well-nourished population—and food insecurity statistics are a measure of the strength of this foundation (see box, "Food Security At a Glance"). Information on unmet food need is of particular interest to USDA because the Department manages the Federal food and nutrition assistance programs, which are intended to provide children and low-income people access to food and a healthful diet.

Each year, USDA assesses the food security of households by their responses to a survey comprising a series of questions about behaviors, conditions, and experiences that are related to households' food access (see box, "Measuring Households' Food Security"). The questions cover a wide range of severity of food access problems, from worrying that food will run out to not eating for a whole day. Each question specifies a lack of money as the reason for the behavior or condition in question so that reduced food intake due to voluntary fasting or dieting does not affect the measure. The measure, then, reflects the difficult decisions households make under resource constraints.

Each surveyed household is classified in one of four categories based on the number of food-insecure conditions it reports: high food security, marginal food security, low food security, and very low food security. Although food security status is determined by the *total number* of food-insecure conditions a household reports, the *specific* conditions that households in each range typically report provide insight into the meaning of low food security and very low food security. Households with low food security report primarily conditions indicating anxiety about their food situation and reduced quality, variety, or desirability of their diets. Most report little or no reduction in food intake. Households with very low food security also report those conditions and, in addition, report multiple indications of disrupted eating patterns and reduced food intake.

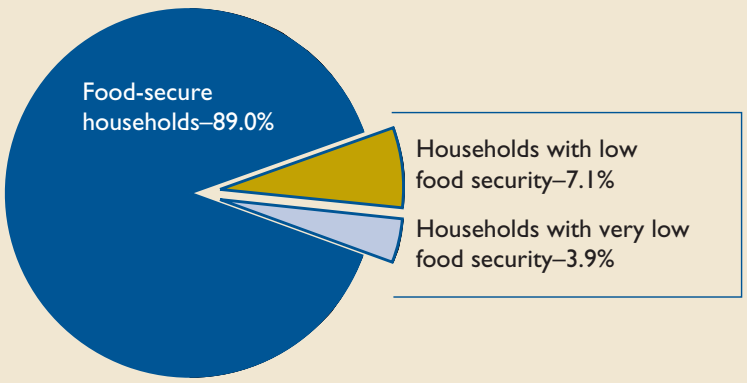
These food security measurement methods recently passed a rigorous review

Food Security At a Glance

Statistics from recent nationally representative food security surveys sponsored by USDA indicate that:

- Food security in U.S. households improved from 2004 to 2005.
- In 2005, 89 percent of households were food secure throughout the year, up from 88.1 percent in 2004.
- 11 percent of households were food insecure in 2005. These households had difficulty at times during the year providing enough food for all their members.
- 3.9 percent of households were food insecure to the extent that normal eating patterns of one or more household members were disrupted at times during the year and food intake was reduced—a condition described as *very low food security.* The prevalence of very low food security was unchanged from 2004 to 2005.
- The prevalence of food insecurity was higher than the national average in households with children (15.6 percent), and particularly in households with children headed by a single woman (30.8 percent), and was lower than the national average in households with elderly members (age 65 and over; 6.4 percent).
- States differed considerably in the extent to which their households were food secure. The prevalence rate of food insecurity ranged from 6.4 percent in North Dakota to 16.8 percent in New Mexico. The prevalence rate of very low food security ranged from 1.9 percent in Delaware to 6.3 percent in South Carolina.

Eighty-nine percent of U.S. households were food secure in 2005



Source: Calculated by ERS using data from the December 2005 Current Population Survey Food Security Supplement.

Spells of unemployment can cause food insecurity even if average annual income is above the poverty line.

by the Committee on National Statistics (CNSTAT) of the National Academies. The panel of independent experts convened by CNSTAT at USDA's request recommended that "USDA should continue to measure and monitor food insecurity regularly in a household survey." The panel affirmed the appropriateness of the general, multiple-indicator measurement method USDA uses but recommended that USDA evaluate several technical refinements that might improve the precision and reliability of the measure. (For the panel's conclusions on the meaning of "hunger" and its relationship to food insecurity, see box, "USDA Measures Food Insecurity but Not Hunger".)

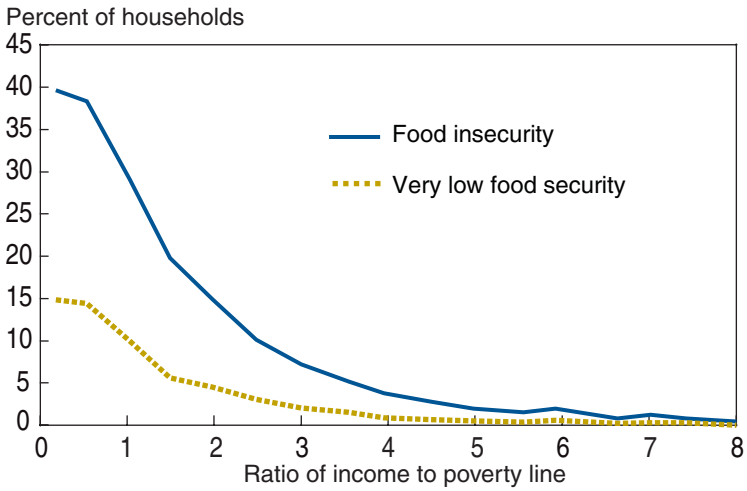
. . .With Its Roots in Poverty

Food insecurity is by definition a condition that results from a lack of money and other resources for food. As would be expected, then, measured food insecurity is strongly associated with measured income. While about 11 percent of all U.S. households were food insecure at some time in 2005, the prevalence was about 30 percent for households with poverty-level incomes. That proportion falls by half for households with incomes twice the poverty line and by half again for households with incomes three times the poverty line. The prevalence of very low food security declines by similar proportions as income increases.

Food insecurity is related to income not only at the household level but also at the national level. Over the last decade, the prevalence of food insecurity among all U.S. households has moved approximately in parallel with the national poverty rate, declining in the late 1990s and increasing since the recession of 2001. The poverty line is designed to represent the income required for a household to meet its basic needs. The food-insecure category is intended to identify households that are struggling to meet basic food needs. The similar levels of poverty and food insecurity at the national level are consistent with these understandings of the two measures.

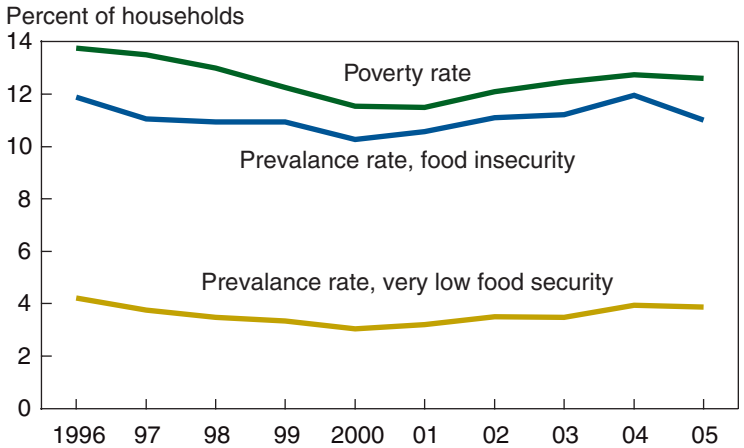
Although income strongly predicts food security for large groups of households, individual households are affected by many factors that make them substantially more or less likely to be food secure than would be inferred from their income alone. For example, nearly two-thirds of households with incomes below the poverty line were food secure throughout

Prevalence rate of food insecurity drops as income rises



Source: Calculated by USDA, Economic Research Service using data from Current Population Survey Food Security Supplements, 2001-05.

Food insecurity tracks poverty



Source: Calculated by USDA, Economic Research Service using food security data from Current Population Survey Food Security Supplements and poverty data from the U.S. Census Bureau. (Statistics through 2001 are 2-year rolling averages.)

2005, and a small proportion of households with incomes above the poverty line were food insecure.

Differences at the household level between measured poverty status and food insecurity can, to some extent, be accounted for by specific characteristics of the two measures. First, poverty is based on pre-tax cash income. Many types of resources that may improve a household's food security, such as the Earned Income Tax Credit and in-kind assistance such as food stamps, school meals, or other USDA food assistance programs, are not counted as income in the official poverty measure. Second, the official poverty line is based on national average prices. Some households' food security may be worsened due to living in an area with a high cost of living while others may benefit by living in areas with low costs of living. For a discussion of how cost-of-living differences can affect poverty rates, see "Adjusting for Living Costs Can Change Who Is Considered Poor" in the November 2006 issue of *Amber Waves*.

Third, income is usually measured on an annual basis for poverty statistics. Yet, a household's food security may be affected by variations in income and employment that occur within the year. The annual measure of food insecurity—the measure most commonly reported—registers even occasional or episodic occurrences of food insecurity because the questions ask whether a condition, experience, or behavior occurred *at any time* in the past 12 months. A household may have total annual income above the poverty line and yet experience a period of several weeks or months with little or no income, resulting in a period of food insecurity. Research consistently finds that households with an unemployed member who is looking for work are more likely to be food insecure than similar households with the same income but with no unemployed member. On the other hand, elderly persons' incomes tend to be more stable, which may help explain why the elderly are more likely to be food secure than nonelderly persons with the same income.

Differences between households' measured poverty and measured food insecurity may also reflect differences in basic needs due to unique household

Measuring Households' Food Security

Households that participate in USDA's food security survey are asked the following questions about conditions that are known to characterize households having difficulty getting enough food:

(For Questions 1-3, households were asked "Was that often, sometimes, or never true for you in the last 12 months?")

1. "We worried whether our food would run out before we got money to buy more."
2. "The food that we bought just didn't last and we didn't have money to get more."
3. "We couldn't afford to eat balanced meals."
4. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn't enough money for food?
5. (If yes to Question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?
7. In the last 12 months, were you ever hungry, but didn't eat, because you couldn't afford enough food?
8. In the last 12 months, did you lose weight because you didn't have enough money for food?
9. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?
10. (If yes to Question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

Food-insecure conditions are indicated by responses of "often" or "sometimes" to questions 1-3, "yes" to questions 4 and 6-9, and "almost every month" or "some months but not every month" to questions 5 and 10.

Households (without children) are classified according to the number of reported food-insecure conditions:

Food-secure households (0-2 conditions):

High food security (0 conditions)
Marginal food security (1-2 conditions)

Food-insecure households (3-10 conditions):

Low food security (3-5 conditions)
Very low food security (6-10 conditions)

Households with children are classified based on equivalent conditions, but the exact specifications differ because conditions among children are also considered.

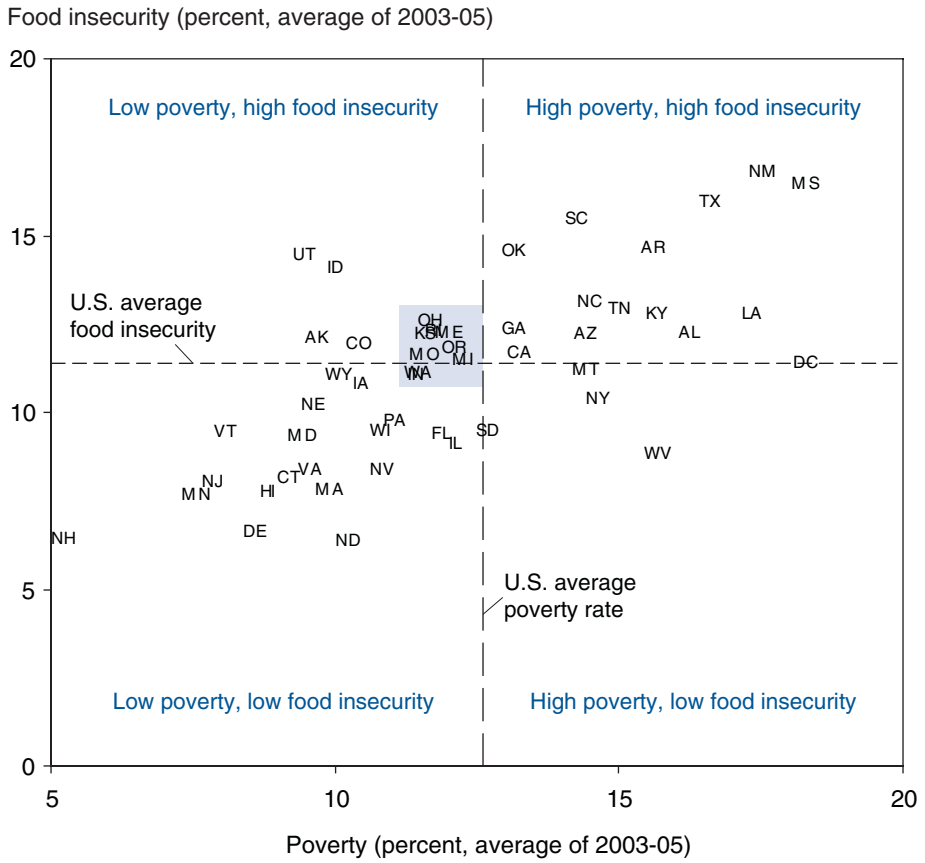
circumstances. Some households have special needs to which they allocate resources, leaving less to meet food needs. Households with a disabled member, for example, are much more likely to be food insecure than households with the same income but with no disabled member.

Evidence From States Strengthens Confidence in Food Insecurity Statistics

Deviations between measured poverty and food insecurity rates also arise at the State level. States with high poverty rates tend, in general, to have high rates of food insecurity. For example, both poverty and food insecurity rates were relatively high during 2003-05 in New Mexico, Mississippi, and Texas, and both rates were low in New Hampshire, Minnesota, and Delaware. On the other hand, Utah and Idaho had food insecurity rates above the national average and poverty rates below the national average, while the opposite was true in West Virginia (see "On the Map" on page 44). These disparities between the levels of poverty and food insecurity have, at times, raised concerns about whether USDA measurement of food insecurity does, in fact, fairly represent differences in food hardship across States. However, most of these apparent anomalies have now been accounted for by factors other than official poverty status that affect households' food security.

Economists at the University of Wisconsin and Cornell University, with collaboration and funding from ERS, examined a number of household-level and State-level factors that were expected to affect households' food security. They confirmed the expected relationships between food insecurity and income, education, demographics, employment, and disability of households resident in the State. Then, controlling for those household-level factors, they assessed the

High-poverty States generally have higher rates of food insecurity, but there are exceptions



Note: States in the shaded area are Indiana, Kansas, Maine, Michigan, Missouri, Ohio, Oregon, Rhode Island, and Washington.

Source: Calculated by USDA, Economic Research Service using data from the Current Population Survey Food Security Supplements and poverty statistics from the Census Bureau.

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Households with a disabled member need more income to ensure food security.

USDA Measures Food Insecurity but Not Hunger

Hunger is a potential, although not inevitable, outcome of food insecurity. By measuring and monitoring food insecurity, USDA provides important information about the social and economic context in which hunger may occur, but does not directly assess the extent of hunger. In 2006, USDA introduced new labels for ranges of severity of food insecurity to avoid implying that hunger is directly assessed in the food security survey.

Before 2006, USDA described households with low food security as "food insecure without hunger" and those with very low food security as "food insecure with hunger." Households in the latter category were described as those in which one or more people were hungry at times during the year because they could not afford enough food. "Hunger," in this case, referred to "the uneasy or painful sensation caused by lack of food."

Information about the incidence of hunger is of considerable interest and potential value for policy and program design. USDA's nutrition assistance programs are intended, in part, to prevent or alleviate hunger. But providing precise and useful information about hunger is hampered by lack of a consistent meaning of the word. "Hunger" is understood variously by different people to refer to conditions across a broad range of severity, from "the uneasy or painful sensation caused by lack of food" (a dictionary definition underlying the labels USDA used before 2006) to prolonged clinical undernutrition.

At the end of the first decade of monitoring food security, USDA asked the Committee on National Statistics (CNSTAT) of the National Academies to convene an independent panel of experts to review how food security is measured and the language used to describe food-insecure conditions. The panel gave particular attention to the concept and definition of hunger.

The CNSTAT panel concluded that in the context of official statistics and public policy discourse, the word "hunger" should be used only to refer to a more severe condition than that implied by the previous USDA labels. The word "hunger," the panel stated, "*. . .* should refer to a potential consequence of food insecurity that, because of prolonged, involuntary lack of food, results in discomfort, illness, weakness, or pain *that goes beyond the usual uneasy sensation.*" [Emphasis added.] The panel recommended that methods be developed to measure hunger since no validated methods for such measurement exist at present.

The panel recommended that USDA continue to measure and monitor household food insecurity but to recognize more explicitly that hunger, although related, is a different phenomenon. Food security is a household-level economic and social condition of limited access to food, while hunger is an individual-level physiological condition that may result from food insecurity. The food security measure, then, provides important information about the economic and social contexts that may lead to hunger, but it does not assess the extent to which hunger actually ensues. Based on the more severe concept of hunger and on the lack of a one-to-one correspondence between food insecurity and hunger, the CNSTAT panel recommended that USDA avoid using the word "hunger" to characterize a severe range of food insecurity.

USDA concurred with the panel's understanding of hunger and its relationship to food insecurity. The new labels "low food security" and "very low food security" reflect differences in the severity of households' food access difficulties without implying a one-to-one correspondence with hunger at any specific level of severity.

associations of food insecurity with selected State characteristics.

Food insecurity was more prevalent (other factors equal) in States with low average wages, high housing rents, low summertime participation in the National School Lunch Program and Summer Food Service Programs, high unemployment rates, residential instability, low participation in the Food Stamp Program, and high tax burdens on low-income households. Taken together, identified household and State factors accounted for a large proportion of State-to-State variation in food insecurity—as much as 86 percent in some analyses. Household-level and State-level factors contributed about equally to the inter-State differences.

These findings strengthen confidence in the food security measurement methods and also point to specific State policies and programs that can help promote food security. The extent to which these factors account for inter-State differences in food insecurity implies that, to a great extent, the measured differences in food insecurity across States reliably represent differences in the proportions of their households that face food hardship.

Food Insecurity Is a Direct Measure of Well-Being

It is reassuring that food insecurity varies with the factors expected to affect it. Confirmation that the expected causal chain is valid strengthens our confidence in the validity of the outcome measure itself. This does not mean, however, that a more accurate accounting of income and expenditure shocks could replace the food insecurity statistics. First, such an accurate accounting is not feasible. The range and variety of income sources and flows would be wide, including gifts from extended family members and in-kind neighborhood swaps. The list of budget-breaking expenditures, such as medical expenses or car repairs, would be even wider. It would

be difficult to collect data on this type of information with any degree of accuracy.

Second, even the most accurate accounting of factors affecting food insecurity is not an accurate measure of the condition itself. Such an accounting does not provide information on how households cope with budget stress nor does it measure the result of budget stress on household well-being. The food insecurity measure does. It is a direct measure of household well-being that helps link defined levels of low income—such as the poverty line—to specific levels of material hardship, described in terms of familiar and widely understood conditions and experiences.

The validity of food insecurity as a direct measure of well-being is reinforced by the types of outcomes with which it is associated. USDA has sponsored the addition of food insecurity questions to several national surveys to learn more about other outcomes potentially associated with food insecurity. Analyses of these data indicate that a number of problematic health and development conditions are more prevalent among members of food-insecure households than among otherwise similar individuals living in food-secure households. The statistical methods used in these analyses took into account households' income and other characteristics. Therefore, the relationships found with other outcomes are attributable to food insecurity rather than low income per se.

It is not always possible to distinguish causes from effects in these studies, but it is clear that food insecurity is part of a complex of potentially serious health and developmental conditions. Potential outcomes identified in these studies include inadequate intake of key nutrients, poor physical and mental health in low-income Black and White women, depression in women, several adverse health outcomes for infants and toddlers, behavioral problems in preschool-aged children, lower educational achievement in kindergarteners, and depressive disorder and suicidal symptoms in adolescents.

A seemingly paradoxical outcome is the finding that overweight is more likely for people in food-insecure households than in food-secure households. That paradox has been largely resolved, however, by more detailed research. Research conducted at Tufts University and elsewhere strongly suggests that overweight and weight gain are most problematic in households with marginal food security and low food security, and less so in those with very low food security. This pattern is consistent with the behavioral responses typically reported by households in each food-security category.

In the marginally secure range and at less severe levels of food insecurity, households typically report reducing the quality and variety of their diets to avoid having to reduce the amount they eat—to avoid hunger. Poorer quality and less varied diets may contribute to weight gain. Psychological factors associated with the stresses associated with food insecurity may also contribute. At more severe levels of food insecurity, these effects appear to be partially or completely offset by reduced food intake that characterizes households with very low food security. Altogether, the weight-gain patterns across the spectrum of food security-insecurity corroborate the reported conditions and behaviors by which food security status is measured.

Food Insecurity and Policy Performance

In fiscal year 2006, USDA spent almost $53 billion on nutrition assistance programs intended to provide children and low-income people access to food and a healthful diet, with the ultimate goal of improving the health and well-being of low-income households. But dollars spent are not a measure of whether the programs are working. Food insecurity statistics provide part of the answer. A direct measure of well-being, such as food security, is critical for assessing the success of food assistance programs and identifying subpopulations with food needs that are not fully met by the programs.

This article is drawn from . . .

Household Food Security in the United States, 2005, by Mark Nord, Margaret Andrews, and Steven Carlson, ERR-29, USDA, Economic Research Service, November 2006, available at: www.ers.usda.gov/publication/err29/

What Factors Account for State-to-State Differences in Food Security? by Judi Bartfeld, Rachel Dunifon, Mark Nord, and Steven Carlson, EIB-20, USDA, Economic Research Service, November 2006, available at: www.ers.usda.gov/publications/eib20/

Food Insecurity and Hunger in the United States: An Assessment of the Measure, Committee on National Statistics, Panel to Review the U.S. Department of Agriculture's Measurement of Food Insecurity and Hunger, Gooloo S. Wunderlich and Janet L. Norwood (eds.), Washington, DC: The National Academies Press, 2006, available at: www.ers.usda.gov/briefing/foodsecurity/nassummary.htm

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