

Community Food Security Programs Improve Food Access

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The Federal nutrition assistance safety net represents the first line of defense in boosting the food purchasing power and improving the nutritional status of low-income households in the United States. In fiscal 2000, USDA spent an estimated \$32.5 billion on food assistance programs, over half of its annual budget. Community-based initiatives, such as farmers markets and community gardens, can boost the effectiveness of USDA nutrition assistance and education programs by increasing the availability of high-quality and affordable food in a community. Such initiatives also support rural communities by strengthening the traditional ties that exist between farmers and urban consumers.

Following congressional passage of the Community Food Security Act of 1996, USDA launched the Community Food Security Initiative in February 1999. This nationwide initiative seeks to forge partnerships between USDA and local communities to build local food systems, decrease need, and improve nutrition.

Community food security is a relatively new concept with roots in a variety of disciplines, including

community nutrition, nutrition education, public health, sustainable agriculture, and community development. As such, community food security has no universally accepted definition.

Researchers at Tufts University view community food security as an expansion of the concept of household food security, which focuses on the ability of a household to acquire enough food for an active, healthy life. Community food security focuses on the underlying social, economic, and institutional factors within a community that affect the quantity, quality, and affordability of food.

Researchers at Rutgers University see community food security as a process in which community-based programs work in tandem with a strong Federal nutrition safety net and emergency food assistance programs to move people from poverty to self-sufficiency and food security (see box). This article examines a variety of community food security programs, looking at their scope, their limitations, and their successes.

Foodstore Access Affects Food Affordability and Quality

Various studies suggest that low-income households, particularly those in rural areas and poor central

cities, have less access to reasonably priced, high-quality food than other households. For example, a 1997 study by USDA's Economic Research Service found that supermarket prices were about 10 percent lower, nationwide, on average, compared with grocery stores, convenience stores, and grocery/gas combinations predominant in rural areas and central cities where a greater proportion of the poor live.

Supermarkets, which are more prevalent in suburban areas, can charge lower prices, partly due to their lower operating costs and larger item selection, including store label and generic items. This finding has particular implications for low-income households because households with access to supermarkets can often lower total food costs by selecting items within a food category, such as larger package sizes or store brands, that are more economical.

A 1997 study by USDA's Food and Nutrition Service (FNS) found that, nationwide, 77 percent of food stamps were redeemed at supermarkets. However, supermarkets accounted for 59 percent of all food stamp redemptions in rural areas and 64 percent of redemptions in the poorest central cities (those with more than 20 percent of the population living in poverty) (fig. 1). The remaining food stamps were spent in grocery stores, convenience

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Community Food Security Programs Benefit Farmers and Consumers

Community food security programs encompass a wide variety of community-based efforts to increase the quantity, quality, and affordability of food for local residents, especially for low-income residents. Some of these programs improve food access for low-income households and support rural communities by strengthening traditional ties between farmers and urban consumers. Examples of community food security programs include the following:

Food stamp outreach programs help increase the number of eligible

households that participate in the Food Stamp Program and reduce dependence on emergency food assistance providers.

Farmers markets boost incomes of small, local farmers and increase consumer access to fresh produce.

Community gardens help public housing residents and other low-income consumers supplement their diets with home-grown produce.

Food buying cooperatives help families save money by pooling food purchases. *Community-supported agriculture programs* help

provide small farmers with economic stability and consumers with high-quality produce, often at below-retail prices.

Farm-to-school initiatives help local farmers sell fresh fruits and vegetables directly to school meal programs.

Food recovery programs rescue wholesome food that would otherwise be thrown away and provide the food to groups that serve the needy.

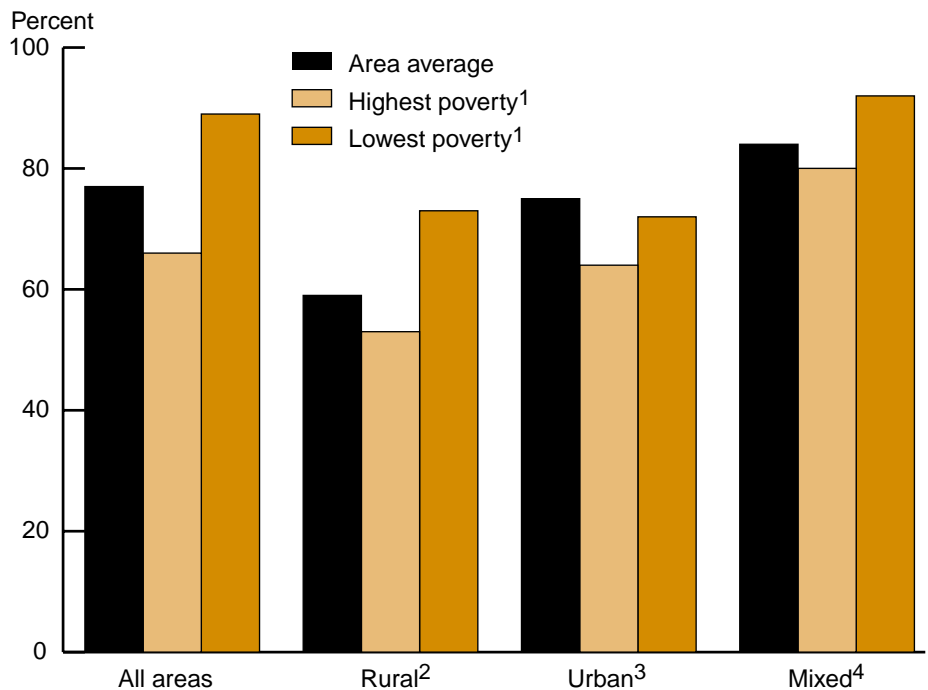
stores, and grocery sections of gas stations. Convenience stores and grocery/gas combinations typically offer poor selection and higher prices, compared with supermarkets and grocery stores.

A 1997 FNS study of shopping habits of food stamp households found that many households, especially African-American households, made just one major shopping trip per month, usually right after receiving food stamps. Food stamp households made interim trips only to replace perishable items. Fewer shopping trips per month can mean reduced access and higher prices for perishable items like dairy products and fresh fruits and vegetables as households purchase these items in smaller, more expensive stores closer to home.

Food Cooperatives Can Stretch Food Dollars

Food cooperatives are customer-owned entities that are often formed to meet a need not being met by a traditional retail store or to provide an alternative source of food in areas poorly served by retail markets. There are two major types of food cooperatives: buying clubs (or pre-order cooperatives) and retail

Figure 1
Share of Food Stamp Redemptions in Supermarkets Varies by Location



¹Zip codes were divided into poverty quintiles. The highest poverty zip codes are those in which more than 20 percent of the population is below the poverty level. The median poverty rate in the lowest poverty zip codes varied by metropolitan status. Median poverty rates in the lowest poverty quintiles were 6.9 percent (rural), 2.9 percent (urban), and 4.2 percent (mixed).

²Rural areas = Zip codes with less than 10 percent urban population.

³Urban areas = Urban population exceeds 90 percent

⁴Mixed areas = Urban population ranges from 10 percent to 90 percent.

Source: USDA, Food and Nutrition Service, Authorized Retailers' Characteristics Study, February 1997.



Community gardens are a way for local groups to improve households' access to fresh produce. Volunteer staff members with the Evangelical Lutheran Church in America (ELCA) grow vegetables in kiddie pools on the roof of the parking garage at ELCA's offices in Chicago, IL. The vegetables are donated to local food pantries.

Credit: Photographs courtesy of the Evangelical Lutheran Church in America.



security. Farmers markets are one of the leading sources of direct farm marketing in the United States. USDA reports the number of farmers markets in the United States increased 63 percent in the past 6 years, from 1,755 in 1994 to 2,863 in 2000. A 1996 USDA study estimated national fruit and vegetable sales through farmers markets and other direct marketing outlets at \$1.1 billion.

A farmers market brings together producers and consumers at the same place and time, usually once or twice a week, typically in an outdoor setting. The markets range in size from a small community-based market to a large market run by a farmer organization and serving several thousand shoppers. All farmers markets sell fresh fruits and vegetables, but markets can also sell cheese, meat and poultry, fresh flowers, baked goods, honey, maple syrup, jellies and relishes, and crafts.

Data from USDA's NFSPS suggest that farmers markets account for a relatively small share of total food purchases by low-income households. Less than one-quarter of food stamp participants reported shopping at a farmers market, while one-third shopped at a produce stand. Households that were eligible for food stamps but did not participate in the program and households that were nearly eligible for food stamps were somewhat more likely to use these outlets as food sources.

In 1998, the latest year for which data are available, farmers markets accounted for just 0.02 percent of food stamp redemptions nationwide, followed by produce stands at 0.01 percent. Produce routes, or mobile produce providers who sell products from the back of trucks, accounted for 0.31 percent of the redemption total.

Between 1994 and 1998, food stamp participation declined and total redemptions decreased from \$21.8 billion to \$16.8 billion. Food

cooperative food stores. In buying clubs, members pool their resources (money, labor, purchasing, and distribution) to buy food in bulk quantities at reduced cost. Retail cooperative food stores maintain an inventory of food and nonfood items similar to a regular retail store. Members typically have some control over the types and quality of food available and often receive price discounts in return for a set number of work hours.

According to National Cooperative Business Association data, the United States has approximately 500 retail cooperative food stores where people can walk in and buy food. However, of 2,400 food stamp recipients interviewed for the 1996 National Food Stamp Program Survey (NFSPS), fewer than 3 percent reported shopping at a food cooperative. The relatively low success

rates for operating food cooperatives in low-income areas—due to lack of community support, poor access to working capital, and Federal regulations that require cooperatives to offer a full range of staple foods in order to qualify as an authorized food stamp retailer—may limit access to food cooperatives among food stamp recipients and other low-income households.

Farmers Markets Dominate Direct Agricultural Marketing

Direct farm marketing, including farmers markets, community-supported agriculture programs, pick-your-own farms, roadside stands, and direct sales of farm products to schools and other institutions, is a key component of community food

stamp redemptions dropped more sharply from \$6.4 million to \$3.8 million at farmers markets, from \$134 million to \$58 million at produce stands, and from \$11.9 million to \$2.6 million on produce routes, as many States adopted electronic benefits transfer (EBT) systems for food stamps. During the same period, redemptions at supermarkets, grocery stores, and other food stores decreased at about the same rate as the total decline. Most farmers markets, produce stands, and produce routes operate in environments in which the electric power and land-line telephone access required for EBT redemptions is not readily available. Federal welfare reform legislation enacted in 1996 requires that all States implement Food Stamp Program EBT systems before October 2002, unless a State receives a special waiver from USDA. USDA is currently working with State and local officials to improve EBT access in direct marketing outlets.

Direct farm marketers in low-income areas may face many of the same constraints faced by traditional retailers in such neighborhoods. Low-volume sales, concerns about crime, limited space for parking, competition from produce routes, and competition from local retail stores that may offer produce items as "loss leaders" can limit farmer participation in farmers markets in low-income areas or increase prices beyond the reach of many low-income consumers. Also, in areas with large numbers of food stamp recipients, the tendency of recipients to concentrate purchases early in the month when benefits are received may limit purchases at farmers markets. In neighborhoods with large immigrant populations, farmers may have difficulty supplying foods with specific ethnic appeal, such as tropical fruits, that are typically not produced in the United States.

Finally, farmers markets are not equally available in all geographic

areas. Nationwide, seven States—California, Illinois, Iowa, Kentucky, Massachusetts, Missouri, and New York—account for 41 percent of the farmers markets, compared with 30 percent of the total population.

Community-Supported Agriculture Increases in Popularity

Community-supported agriculture (CSA) is a relatively new direct marketing tool that is seen as an alternative food source for low-income consumers with limited access to conventional food sources. In a CSA program, a group of consumers (shareholders) purchase shares at the beginning of the growing season to buy a portion of the farm's crop that year. This arrangement gives growers upfront cash to finance their operation and higher prices for produce, since the middleman has been eliminated. Shareholders receive a weekly box or bag of fresh produce, typically organically grown, which is usually harvested no more than 1 day prior to delivery.

The Center for Agroecology and Sustainable Food Systems at the University of California, Santa Cruz, states CSA programs take many forms. Shares are usually intended to feed two to four people at an average price of \$10-\$30 per share for 10-25 weeks, depending on the geographic area, or between \$100 and \$750 per season. Some CSAs allow members to purchase shares on a monthly or quarterly basis. Delivery options vary from programs in which members must pick up their food at the farm itself to those in which food is delivered to centralized pickup sites around a community. The typical CSA offers a mix of between 8 and 12 types of vegetables, fruits, and herbs per week per shareholder.

A 1995 study of three CSA programs in Massachusetts compared

CSA prices with retail foodstore prices in the same area. The study found that comparable produce purchased in a conventional supermarket cost 60-150 percent more than if purchased through a CSA.

Despite potential cost savings and other benefits, participation in CSA programs can be difficult for low-income consumers. Many low-income households may not have the resources to pay a lump-sum fee at the beginning of a growing season. Food stamp recipients are not allowed to use food stamps to purchase CSA shares based on the notion that recipients are speculating on the outcome of a crop rather than actually purchasing food. Some CSA programs are reaching out to low-income consumers with programs to subsidize shares for households that are unable to afford the full price (see "Organic Marketing Features Fresh Foods and Direct Exchange" elsewhere in this issue).

USDA reported that about 550 CSA programs operated in the United States in 2000. CSA programs, however, were unevenly distributed nationwide. Ten States—California, Iowa, Massachusetts, Minnesota, New York, Oregon, Pennsylvania, Vermont, Washington, and Wisconsin—accounted for nearly two-thirds of all CSA programs in the United States. More than one-third of States had fewer than six programs (fig. 2).

Farm-to-School Initiatives Can Boost Local Farm Income

Farm-to-school initiatives encourage small farmers to sell fresh produce to schools and encourage schools to buy fresh produce from small farmers, usually from the local community. According to USDA's Small Farms/School Meals Initiative Guide, farm-to-school programs benefit both students and farmers by providing fresh, nutritious pro-

Community Gardening Improves Access to Fresh Produce

Many communities have sought to improve households' access to fresh fruits and vegetables through community gardening. The American Community Gardening Association (ACGA), a national nonprofit organization that supports the development of community gardens, defines a community garden as any place where two or more people garden together. Community gardens are commonly established on vacant lots in central cities where land for home gardens is limited. They can include school-based gardens, therapeutic gardens for seniors and disabled people, and youth training gardens.

It is difficult to determine the precise number of community gardens in the United States due to their local nature and lack of formal organizational structure. ACGA estimates a total of 150,000 community gardens in the United States, with New York City leading the list (table 1).

Few studies have quantified the impact of community gardens on food and nutrient intakes by low-income households. A 1991 study undertaken by Pennsylvania State University examined fruit and vegetable consumption among 144 community gardeners and a control group of 67 nongardeners throughout the city of Philadelphia. The study found that community gardeners consumed several vegetables more often than their nongardening counterparts, including cruciferous vegetables like cabbage, cauliflower, and brussels sprouts and dark-green leafy vegetables like kale, broccoli, pak choi, and other Chinese vegetables. Cruciferous and dark-green leafy vegetables are among the least consumed vegetables in the United States. The study also found that community gardeners were less likely to consume dairy products,

citrus fruits, baked goods, and soft drinks than nongardeners.

Community gardeners, however, face a number of constraints that can affect participation by low-income households. Low-income households may hesitate to spend money from their limited budgets on gardening inputs when the outcome of a crop is uncertain. Basic needs for a successful community garden include good soil, a reliable in-ground water system that meets all appropriate city codes, and fencing. Community gardens over 5,000 square feet also require a delivery area, compost area, and a convenient water source.

Establishing and maintaining a community garden costs an estimated \$1 per square foot per year over 5 years for soil, seeds, soil testing, basic turkey wire fence, and initial cleanup, assuming volunteer labor and a free water source. An average 10 x 20 foot plot could cost \$200 per year. Many community gardens attempt to minimize input costs for individual gardens by

obtaining donated supplies, applying for startup grants, and sharing costs for common-area items like fencing and cleanup.

The value of crops produced in a community garden depends on climate, experience of the gardeners themselves, and quality and timing of inputs, such as compost, water, and sunlight. According to a formula developed by USDA and the National Gardening Association, a garden plot of 10 x 20 feet can yield between \$70 and \$540 worth of vegetables per season, depending on crop density, crop quality, and length of season. The Georgia Department of Agriculture estimated the average value of the yield for such a 10 x 20 plot at \$600 per season.

Lack of secure land tenure can also create uncertainty in the ability of community gardens to serve as a reliable food source for low-income households. Community gardens are often seen as a temporary use for vacant and city-owned land that is later developed by city governments eager to expand their tax base. The ACGA's 1998 National Community Gardening Survey found that only 5.3 percent of gardens in 38 cities were in permanent ownership status.

A 1999 study of rural community gardeners in 13 States by the Tufts University Center on Hunger and Poverty found that travel to community gardens in rural areas may be difficult, costly, and time consuming, and that volunteer labor was subject to high turnover. Some rural areas provide incentives for residents to garden on their personal property, including technical assistance, free seeds, tilling, and training plots to improve food-growing skills. A Vermont project paired local experienced gardeners with others interested in gardening. A Wisconsin group established community gardens in trailer parks and low-income apartment complexes.

Table 1
New York City Leads the Nation in Community Gardening

City	Community gardens in selected cities, 1996
New York, NY	1,906
Newark, NJ	1,318
Philadelphia, PA	1,135
Minneapolis, MN	536
Boston, MA	148
San Francisco, CA	113
Pittsburgh, PA	108
Washington, DC	58
Seattle, WA	44
New Orleans, LA	43
Madison, WI	37
Portland, OR	23
Tucson, AZ	5
Durham, NC	4
Santa Barbara, CA	3

Source: National Community Gardening Survey, American Community Gardening Association, 1998.

USDA Toolkits Provide Communities With Technical Assistance

Currently, community food security programs are unevenly represented across the Nation. Areas underserved include the Western States of Wyoming, Montana, Idaho, and Utah, and the lower Mississippi Delta States of Louisiana, Arkansas, and Mississippi. The lower Mississippi region is among the poorest in the Nation. By contrast, community food security programs enjoy strong support in a handful of States, including California, Iowa, Massachusetts, Minnesota, New York, Oregon, Pennsylvania, Washington, and Vermont.

The recently released Food and Nutrition Service publication *A National Nutrition Safety Net: Tools for Community Food Security* contains a set of checklists to help communities identify barriers people may face in fully participating in USDA nutrition assistance programs. The publication also instructs communities on how to improve nutrition assistance infrastructures.

A forthcoming USDA community food security toolkit will provide a standardized set of tools for measuring various indicators of community food security, including food resource accessibility, food availability, food affordability, and local agricultural resources. The toolkit will provide communities with an important first step in identifying the resources needed to most effectively meet the food needs of their citizens.

References

American Community Gardening Association. *National Community Gardening Survey*. 1998.

Anderson, Molly D., and John T. Cook. "Community Food Security: Practice in Need of Theory?" *Agriculture and Human Values*, Vol. 16, 1999, pp. 141-150.

Blair, Dorothy, Carol C. Giesecke, and Sandra Sherman. "A Dietary, Social, and Economic Evaluation of the Philadelphia Urban Gardening Project," *Journal of Nutrition Education*, Vol. 23, 1991, pp. 161-167.

Bradbard, Steven, Eileen F. Michaels, Kathryn Fleming, and Marci Campbell. *Understanding the Food Choices of Low Income Families*. U.S. Department of Agriculture, Food and Consumer Service, Office of Analysis and Evaluation, May 30, 1997.

Burns, Arthur, and Denny N. Johnson. *Farmers' Market Survey Report*. U.S. Department of Agriculture, Agricultural Marketing Service, Transportation and Marketing Division, Wholesale and Alternative Markets Program, July 1996.

Cooley, Jack, and Daniel Lass. "Consumer Benefits from Community Supported Agriculture Membership," *Review of Agricultural Economics*, Vol. 20, No. 1, Spring/Summer 1998, pp. 227-237.

Gale, Fred. "Direct Farm Marketing as a Rural Development Tool," *Rural Development Perspectives*, Vol. 12, No. 2, February 1997, U.S. Department of Agriculture, Economic Research Service.

Hamm, Michael. "Community Food Security and Anti-Hunger Advocacy: Similar Goals in Search

of Unity," *Community Food Security News*, Summer 1999, Community Food Security Coalition, Venice, CA.

Kaufman, Phillip R., James M. MacDonald, Steven M. Lutz, and David M. Smallwood. *Do the Poor Pay More for Food? Item Selection and Price Differences Affect Low-Income Household Food Costs*, Agricultural Economic Report No. 759. U.S. Department of Agriculture, Economic Research Service, November 1997.

Mantovani, Richard E., Lynn Daft, Theodore F. Macaluso, James Welsh, and Katherine Hoffman. *Authorized Food Retailer Characteristics Study, Technical Report IV: Authorized Food Retailers' Characteristics and Access Study*. U.S. Department of Agriculture, Food and Consumer Service, Office of Analysis and Evaluation, February 1997.

Ohls, James C., Michael Ponza, Lorenzo Moreno, Amy Zambrowski, and Rhoda Cohen. *Food Stamp Participants' Access to Food Retailers, Final Report*. U.S. Department of Agriculture, Food and Nutrition Service, Office of Analysis and Evaluation, July 1999.

Sullivan, Ashley. *Community Gardening in Rural Regions: Enhancing Food Security and Nutrition*. Boston, MA: Tufts University, School of Nutrition and Poverty, Center on Hunger and Poverty, December 1999.

U.S. Department of Agriculture, Economic Research Service. *USDA Community Food Security Assessment Toolkit*, forthcoming.

U.S. Department of Agriculture, Food and Nutrition Service. *The National Nutrition Safety Net: Tools for Community Food Security*, Food and Nutrition-314, January 2000. ■