Increasing Food Recovery From Farmers' Markets

A Preliminary Analysis

Charlene C. Price
J. Michael Harris*

Introduction

Food recovery is the collection, or recovery, of wholesome food from farmers' fields, retail stores, or food-service establishments for distribution to the poor and hungry. Recovery is a good way to fight hunger in the United States because it makes use of wholesome food that would otherwise be discarded. Recovery efforts become even more important when one looks at the significant amounts of wholesome, edible food that is thrown away every day. USDA estimates that more than one-quarter of all food produced in the United States is discarded (Kantor, Lipton, Manchester, and Oliveira, 1997). Although some discarded food is nonedible, other discarded food is edible and, if located near nonprofit food recovery and gleaning organizations, can be used to provide food assistance to low-income Americans. Discarded food from farmers' markets is no exception.

Recovery of wholesome, unsold fruits and vegetables from farmers' markets can provide a significant source of potential donations to nonprofit food recovery and gleaning organizations (that is, food pantries, food banks, etc.) and, in turn, to low-income Americans. Not only could recovery increase food assistance, but it could also improve nutrition for low-income families because it could increase consumption of fresh fruits and vegetables. As part of USDA's Food Recovery and Gleaning Initiative, the Department has launched an initiative to expand food recovery from farmers' markets by facilitating donations of unsold fruits and vegetables to nonprofit food recovery and gleaning organizations for distribution to needy individuals and families.

USDA initiated a pilot program in 1997 which matched producers in the farmers' market setting with nonprofit food recovery and gleaning organizations in the Washington, DC, area. Over 8,000 pounds of food were recovered during 3 months of 1997 and over 12,000 pounds of food during 5 months of 1998. The success of these efforts has spawned considerable interest in expanding such programs to other areas in the United States.

Further evidence shows that recovery of unsold fruits and vegetables from local food donors is important. The following numbers reflect total local donations. These donors may include farmers' markets, retailers, restaurants, and even food processors. Recovery efforts at one organization in the Syracuse, NY, area are netting about 25 million pounds of fruits and vegetables a year (Food Bank of Central New York, 1998). We were able to determine that most of these donations came from a local wholesale market. However, significant donations from farmers' markets are included in this number. One food bank in Washington, DC, also reported donations approaching 1 million pounds of food in 1998 (D.C. Central Kitchen, 1998).

Many farmers' markets already donate unsold fruits and vegetables to nonprofit food recovery and glean-

*Charlene C. Price and J. Michael Harris are economists with the Economic Research Service, U.S. Department of Agriculture.

ing organizations, and many organizations know where farmers' markets are located in their local area. However, one impediment to further expanding cooperation is the lack of information and coordination needed to strengthen ties in local areas. In other words, nonprofit food recovery and gleaning organizations need to know numbers and locations of farmers' markets in their local areas. Conversely, donors at farmers' markets need to know that food organizations exist in their local areas and that potential losses can be turned into useful donations. A successful relationship also depends on sufficient densities (numbers) of farmers' markets in local areas to make it worthwhile for organizations to assemble donations in quantities that are large enough to make collections worthwhile. Large numbers of markets in close proximity keep collection costs low.

This report presents information about local areas in the United States with large numbers of farmers' markets near local nonprofit food recovery and gleaning organizations. The report also addresses the information and coordination problem by providing information on farmers' markets and nonprofit food recovery and gleaning organizations in these areas.

Theoretical Construct

Efficient food recovery must take economics into account—specifically, spatial economics. Three factors are particularly relevant here. First, there must be wholesome (edible), unsold fruits and vegetables and willing donors (supply). Second, nonprofit food recovery and gleaning organizations must use fruits and vegetables in their assistance efforts (demand). Third, these supplies and demands must be separated spatially (geographically), necessitating the collection and transporting of any donations from farmers' markets. The latter factor is very important because transport costs increase with distance.

To illustrate this concept, we assume that supplies and demands exist in a local area, and the number of farmers' markets are uniformly distributed within the area. We further assume equal supplies of donations at these markets. The economic relationship between recovery cost and the volume of donations in a local area can be depicted graphically (Bressler and King, 1970). Figure 1 depicts the relationship between the quantity collected and transportation costs for two different areas with different densities (numbers) of farmers' markets.

Collection costs increase as the size of the collection area around the organization increases. In other words, the farther an organization or volunteer has to travel to pick up donated food, the higher the cost. Therefore, a higher density (number) of farmers' markets in close proximity results in lower transportation costs. Conceptually, organizations will assemble donations from an area of such size or radius that transport costs would not exceed the cost of purchasing fruits and vegetables at local wholesale markets. From an economic efficiency standpoint, and at some distance and size of area, it is cheaper to purchase these products than to pay the costs to drive out to distant locations and collect donations.[1]

Based on this rationale, organizations have a collection area with a radius determined by economic cost, and costs will be lower in areas with high densities (numbers) of farmers' markets.[2] Therefore, areas with large numbers of farmers' markets in close proximity to

[1]This may not be the case if collection and transportation are donated by volunteers. In this case, fuel is an out-of-pocket cost and there is no direct cost to the organization. But from an economic efficiency standpoint, minimization of transport costs is optimal.

[2]There is an exception to this argument. One farmers' market in a local area conceivably could be large enough to supply sufficient donations to a local private food organization. To date, we have not isolated an example where this is the case.

Figure 1
Effect of volume and density on collection costs