

food recovery and gleaning organizations have the highest potential for successful recovery relationships. We concentrate on these local areas in this study.

## Methodology

Numbers and locations of farmers' markets and non-profit food recovery and gleaning organizations were determined from several sources, including USDA publications and Internet web pages (see references). We identified over 2,812 farmers' markets (Johnson and others, 1998) and 440 nonprofit food recovery and gleaning organizations (USDA, 1999) across the United States (table 1). These numbers may not include all farmers' markets and nonprofit food recovery and gleaning organizations because farmers' markets continually enter and exit markets and local areas. Also, while larger nonprofit food recovery and gleaning organizations were included in this analysis, other types were excluded. Tens of thousands of food pantries and hot meals programs that distribute food to individual families or neighborhoods were not included.

This study focuses on the larger nonprofit food recovery and gleaning organizations that collect and distribute excess food on a citywide, countywide, multicounty, or statewide basis (table 1). Spatial analysis of these data allowed us to identify areas where densities (numbers) of farmers' markets were highest relative to local organizations. We assumed that nonprofit food recovery and gleaning organizations have collection areas within a 30-mile radius (2,826 square miles). However, no specific information exists about the size of collection areas. We selected 30 miles based on telephone conversations with a few recovery and gleaning organizations.

ArcView Geographical Information System (GIS) software was used to conduct a spatial analysis of the locations of farmers' markets and nonprofit food recovery and gleaning organizations. ArcView organizes spatial attribute data (data concerning specific locations and geography) and presents it graphically. The software contains boundary data points for State, county, zip code, and study area boundaries, as well as latitudinal and longitudinal reference points for locations of nonprofit food recovery and gleaning organizations and farmers' markets. Actual addresses were not used in this analysis. Zip code centroids (geographic centers) were used as the mapping reference point for all food assistance organizations and farmers' markets contained in each zip code.

**Table 1—Numbers and locations of farmers' markets and food organizations in the United States<sup>1</sup>**

State	Farmers' markets	Food organizations
<i>Number</i>		
Alabama (AL)	15	9
Alaska (AK)	4	5
Arizona (AZ)	13	12
Arkansas (AR)	28	10
California (CA)	301	51
Colorado (CO)	35	7
Connecticut (CT)	53	7
Delaware (DE)	2	2
District of Columbia (DC)	10	2
Florida (FL)	43	21
Georgia (GA)	9	9
Idaho (ID)	23	1
Iowa (IA)	121	6
Illinois (IL)	149	11
Indiana (IN)	61	13
Kansas (KS)	65	3
Kentucky (KY)	83	4
Louisiana (LA)	14	7
Maine (ME)	48	1
Maryland (MD)	66	10
Massachusetts (MA)	104	8
Michigan (MI)	68	15
Minnesota (MN)	48	7
Missouri (MO)	92	8
Mississippi (MS)	53	3
Montana (MT)	7	2
North Carolina (NC)	61	11
North Dakota (ND)	27	2
Nebraska (NE)	36	5
Nevada (NV)	4	3
New Hampshire (NH)	28	1
New Jersey (NJ)	47	5
New Mexico (NM)	27	7
New York (NY)	264	17
Ohio (OH)	76	18
Oklahoma (OK)	27	2
Oregon (OR)	31	22
Pennsylvania (PA)	172	25
Rhode Island (RI)	12	1
South Carolina (SC)	33	8
South Dakota (SD)	22	2
Tennessee (TN)	62	7
Texas (TX)	56	26
Utah (UT)	3	2
Vermont (VT)	35	2
Virginia (VA)	57	10
Washington (WA)	67	20
West Virginia (WV)	21	3
Wisconsin (WI)	123	5
Wyoming (WY)	6	2
<b>Total</b>	<b>2,812</b>	<b>440</b>

<sup>1</sup>Excludes Hawaii and Puerto Rico.