



From: https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf

Northeast Region

New England Division:

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut

Middle Atlantic Division:

New York, New Jersey, Pennsylvania

Midwest Region

East North Central Division:

Ohio, Indiana, Illinois, Michigan, Wisconsin

West North Central Division:

Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas

South Region

South Atlantic Division:

Delaware, Maryland, D.C., Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida

East South Central Division:

Kentucky, Tennessee, Alabama, Mississippi

West South Central Division:

Arkansas, Louisiana, Oklahoma, Texas

West Region

Mountain Division:

Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada

Pacific Division:

Washington, Oregon, California

Terms and Definitions

The following terms and definitions provide a detailed description of specific terms and phrases used in this publication. In addition, items in the publication tables that carry the note “See Appendix” are explained.

Census Divisions: groupings of states that are subdivisions of the four census regions. There are nine census divisions, which the U.S. Census Bureau adopted in 1910 for the presentation of data. Also, see previous page with Census Regions and Divisions for the United States. For additional information, see U.S. Census Bureau’s website.

Census Regions: groupings of states that subdivide the United States for the presentation of data. There are four census regions- Northeast, Midwest, South, and West. Each of the four census regions is divided into two or more census divisions. Before 1984, the Midwest region was named the North Central region. From 1910, when census regions were established, through the 1940s, there were three census regions- North, South, and West. Also, see previous page with Census Regions and Divisions for the United States. For additional information, see U.S. Census Bureau’s website.

Farmers Market: a collection of two or more farm vendors selling agricultural products directly to customers at a common, recurrent physical location.

Farmers Market Manager: the person that oversee the vendors, products, and staff at farmers market.

Rural: nonmetropolitan counties that were completely rural or had an urban population of fewer than 2,500.

Suburban: nonmetropolitan counties with an urban population greater than 2,500.

Urban: metropolitan counties.

Survey and Statistical Methodology

Scope and Purpose: The National Farmers Market Manager Survey is a survey conducted under an agreement with the Agricultural Marketing Service (AMS). AMS uses these data to measure the customer demand of local foods from the Farmers Market manager's perspective, look for potential expansion opportunities, target access to nutritional foods, market nutritional education, measure access to local foods and organic foods, and strengthen community engagement. The population for the National Farmers Market Manager Survey was managers of U.S. farmers markets operating in 2019. For this study, a farmers market is a collection of two or more farm vendors selling agricultural products directly to customers at a common, recurrent physical location. The survey was administered in the contiguous 48 states. The purpose of this appendix is to describe the survey methodology utilized to produce the final estimates in this publication.

Survey Timeline: Data collection began in March 2020 and concluded in June 2020 with analysis and review completed by publication on August 17, 2020.

Sampling: The sampling frame was comprised of two frames, to enable a measure of coverage. The sampling frames were the Farmers Market Directory maintained by AMS and a web-scraped (WS) list. Together these two frames resulted in approximately 12,000 records in the contiguous 48 states.

A stratified systematic sample of 10,000 farmers markets was drawn from the union of two frames.

Stratification:

Records were stratified using the following variables:

- A. Farmers Market Directory indicator
- B. Web-scraped list indicator
- C. U.S. Census Bureau Division
- D. Three level urbanicity categories based on the 2013 Rural-Urban Continuum Codes (see end of appendix for full definition)

Sample Size Determination: The sample was allocated based on the CV targets as well as to ensure an adequate number of respondents for each list membership combination to adjust for coverage (i.e. directory only, web-scraped only, on both lists). Sample size for each stratum was adjusted to account for differential nonresponse and out-of-scope rates (e.g. out-of-business farmers markets) between strata. Unit nonresponse was accounted for using a standard nonresponse weighting adjustment. In addition, a capture-recapture approach was used to account for under coverage of the union of the two frames.

Data Collection: For consistency across modes, the paper questionnaire version was considered the master questionnaire, and the web and telephone-interviewing instruments were built to model the paper instrument. NASS and AMS developed the questionnaire. Questionnaire content and format were evaluated by NASS through a specifications process, where requests for changes were evaluated and approved or disapproved during questionnaire development. NASS survey methodologists also conducted cognitive interviews before finalization of the questionnaire, and updates were made to the questionnaire based off these findings from cognitive testing. All data collection instruments were tested within NASS prior to the start of data collection.

All federal data collections require approval by the Office of Management and Budget (OMB). NASS must document the public need for the data, show the design applies sound statistical practice, ensure the data do not already exist elsewhere, and show that the public is not excessively burdened. The 2020 National Farmers Market Manager Survey questionnaire displayed an active OMB number that gave NASS the authority to conduct the survey, as well as a statement of the purpose of the survey and the use of the data being collected. The questionnaire included a response burden statement that gave an estimate of the time required to complete the form as well as a confidentiality statement that the respondent's information was protected from disclosure.

Respondents received the questionnaire, along with a cover letter and instructions for web reporting by mail in mid-March 2020. Mail, web, and telephone interview modes of data collection were utilized for the survey. Respondents who did not return their survey by the end of March 2020 were sent a follow-up mailing of a pressure-sealed postcard in April 2020. The postcard served as a reminder to respondents to complete their survey, with an emphasis on online response to

improve response rates. NASS and AMS public affairs staff promoted the survey online and with news releases, emphasizing the importance of survey response. Data collection concluded in June 2020.

Survey Edit: As survey data were collected and captured, they were edited for consistency and reasonableness using automated systems. The edit logic ensured administrative coding followed the methodological rules associated with the survey design. Relationships between data items on the survey were verified. Records that did not pass the edit logic were either updated or certified by an analyst as accurate.

Total Survey Error: NASS recognizes that survey data collection may cause the results to differ from what is intended to be collected. This is referred to as *survey error* in survey research and its presence in the final estimates do not allow those estimates to represent the true population values. Survey error can be introduced in all aspects of survey data collection. Consequently, data collection methodologies must be chosen to mitigate the impact of survey error in the final estimates.

NASS adopts the *total survey error* framework to identify and correct sources of survey error in its surveys. The total survey error framework specifies areas in survey data collection and estimation where survey error can be introduced.¹ The total survey error framework defines two main sources of survey error: sampling error and nonsampling error. Sampling error includes errors from sampling and estimation, such as coverage errors, improper sampling, and nonresponse. Nonsampling errors are present in any survey process. These errors include reporting, recording, and editing errors. Using this framework, NASS creates and implements a survey methodology plan to understand and reduce the impact of survey error in the statistics published in this document.

Weighting Methodology: Because respondents may differ from nonrespondents in their characteristics (i.e., presence of contact information, location, etc.), their reported data may also differ. This can introduce nonresponse bias into the final estimates which can cause the final estimates to not match the true population values. Survey researchers may use different methods to remove nonresponse bias; the method used for this survey is the calculation of post-survey weight adjustments. Responses to the three questions in Section 1 determined if the respondent was a farmers market that was eligible to complete the survey. Respondents were classified as not a farmers market ('out-of-scope'), previously existing as a farmers market ('no items of interest'), a current farmers market ('in-scope'), or unknown status. Records with unknown status were nonrespondents, and the responding records receive nonresponse adjustments to account for the unknown status records. A logistic regression model of response on active status, a binary indicator of whether the records was only found on the WS list, a binary indicator on whether the record was in an urban region and the interactions between these predictors estimated expected probabilities of response. The inverse of the expected probability of response for each respondent becomes the nonresponse adjustment.

Two separate lists generated independently from each other were combined to create the final sampling frame. However, neither list is considered a complete list of all farmers markets in the US (otherwise called undercoverage). Therefore, coverage adjustments were calculated for each list to correct for undercoverage. The coverage adjustment for the AMS list was calculated in a two-step process. First, a probability of coverage was calculated from the survey responses for records sampled from the WS sample. An initial logistic regression model of list overlap (1 if on both lists and 0 if only on the WS list) was created from responses to survey questions to find predictors of overlap. These predictors and their interactions were put into a final logistic regression model that estimated the probability of list overlap in the AMS sample (1 if on both lists and 0 if only on the AMS list). The same procedure was used to calculate an estimated probability of list overlap in the WS sample using a model created from the AMS sample. The two coverage adjustments were composited together for records that were on both lists to create a final coverage adjustment. The final weight is composed of the product of the sampling weight, nonresponse adjustment, and coverage adjustment.

Reliability: The presence of nonsampling errors from nonresponse and coverage render traditional design-based variance estimators insufficient for calculating estimates of variance. Therefore, the jackknife variance estimator, a replication –based variance estimator, is used for variance calculation.

The survey respondents were randomly sorted within the list from which they were sampled (AMS only, WS only and both lists). Fifteen replicate weight variables were created where the weights were set to zero for equal groups of respondents. The

¹ A more thorough discussion of the total survey error framework is found in Paul Biemer's article *Total Survey Error: Design, Implementation and Evaluation*, Public Opinion Quarterly, Vol. 74, No. 5, 2010, pp. 817–848.

replicate weights were rescaled so that the sum of the weights is equal to the sum of all weights.

Estimation Procedures: Data were checked for reasonableness and consistency before summarizing for each state. State estimates were aggregated to national totals for Headquarters review. Headquarters performed a thorough review of survey results and data relationships. Data were processed through an interactive analysis tool that displayed data for all reports by questionnaire item. The tool provided various scatter plots, tables, charts, and special tabulations that allowed the analyst to compare an individual record to other similar records within the appropriate state and region. These tools made outliers and unusual data relationships evident and NASS Regional Field Office and Headquarters staff reviewed them to determine if they were correct. Suspect data in error were corrected, while data found correct were kept.

Urban, Suburban, and Rural: The following is a description of the classification.

1. Urban
 - a. '1- County in metro area with 1 million population or more'
 - b. '2- County in metro area of 250,000 to 1 million population'
 - c. '3- County in metro area of fewer than 250,000 population'
2. Suburban
 - a. '4- Nonmetro county with urban population of 20,000 or more, adjacent to a metro area'
 - b. '5- Nonmetro county with urban population of 20,000 or more, not adjacent to a metro area'
 - c. '6- Nonmetro county with urban population of 2,500-19,999, adjacent to a metro area'
 - d. '7- Nonmetro county with urban population of 2,500-19,999, not adjacent to a metro area'
3. Rural
 - a. '8- Nonmetro county completely rural or less than 2,500 urban population, adj. to metro area'
 - b. '9- Nonmetro county completely rural or less than 2,500 urban population, not adj. to metro area'

For more detailed information on the Rural-urban Continuum Codes see:

<http://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx#.UYJuVEpZRvY>

Quality Metrics for National Farmers Market Managers Statistics

Purpose and Definitions: Under the guidance of the Statistical Policy Office of the OMB, NASS provides data users with quality metrics for its published data series. The metrics table below describes the performance data for the survey contributing to the publication. The accuracy of data products may be evaluated through sampling and non-sampling error. Non-sampling error is evaluated by response rates and the percent of the estimate from respondents.

Sample size is the number of observations selected from the population to represent a characteristic of the population.

Response rate is the proportion of the sample that completed the survey, excluding those operations that did not have the item of interest or were out of business at the time of data collection. This calculation follows Guideline 3.2.2 of the OMB Standards and Guidelines for Statistical Surveys (September 2006).

2019 National Farmers Market Manager Survey Sample Size and Response Rates – Census Region, Census Division, and United States

Geography	Sample size	Response rate (percent)
Northeast Region	2,243	48.5
New England Division.....	968	46.8
Middle Atlantic Division.....	1,275	49.8
Midwest Region	2,997	64.0
East North Central Division.....	1,715	60.7
West North Central Division.....	1,282	68.4
South Region	2,942	60.9
South Atlantic Division.....	1,561	62.9
East South Central Division.....	696	74.4
West South Central Division.....	685	42.6
West Region	1,818	59.6
Mountain Division.....	786	54.3
Pacific Division.....	1,032	63.6
United States	10,000	58.8