



# GENERAL EXPLANATION

## DATA COLLECTION

### METHOD OF ENUMERATION

All agriculture censuses beginning with the 1969 census have primarily used mailout/mailback data collection for each State. Direct enumeration methods were used for the agriculture censuses in Guam, U.S. Virgin Islands, and the Commonwealth of Northern Mariana Islands. Puerto Rico used mail as the primary contact method, but relied heavily on telephone and personal interviews and an area frame survey for followup activity. The report for each territory includes a discussion of its method of enumeration.

### MAIL LIST

The mail list for the 1997 census was comprised of individuals, businesses, and organizations that could be identified as associated with agriculture. The list was assembled from previous census records, USDA mail registers, and other authorized sources. In an attempt to maximize the coverage of active farm operators, names and addresses were obtained from State and Federal agencies, trade associations, and similar organizations. The variety of list sources utilized helped insure representation of specialized interests such as nurseries and greenhouses; poultry, fish, and livestock farms; cattle feedlot operations; maple syrup producers; and Christmas tree growers.

Lists of companies having one or more establishments/locations producing agricultural products were obtained from the 1992 census and updated using information from the Standard Statistical Establishment List maintained by the Bureau of the Census. Exhaustive record linkage, unduplication, and mathematical modeling yielded an initial mail list of 3.31 million names and addresses which had a substantial probability of being farm operations.

To refine these 3.31 million names even further, a screening operation was conducted prior to mailout which identified about 125,570 names as nonfarms. Finally, NASS's State Statistical Offices (SSOs) added approximately 13,000 names which brought the final mail list to approximately 3.2 million.

### REPORT FORMS

In 1997, two report forms were used--a sample form and a nonsample form (which helped minimize respondent burden). The sample form contained all questions asked on the nonsample form plus additional questions on commercial fertilizer, chemicals, production expenses, machinery and equipment, value of land and buildings, income from farm-related sources, and hired workers. The additional information collected on the sample forms provided a good basis for making estimates of these items for all farms. There were 11 regional versions of the nonsample form and 13 regional versions of the sample form with the prelisted crops varying by region. Appendix D, in the volume 1 publication, contains copies of the sample form and the information sheet.

The sample form was mailed to approximately 814,000 addresses on the mail list, including 1) all those expected to be large (based on expected sales or acreage), 2) all farms operated by multi-establishment companies or nonprofit organizations, 3) all those in Alaska, Hawaii, and Rhode Island, 4) those in a county that had less than 100 farms in 1992, and 5) a sample of other addressees. The nonsample form

was mailed to the remaining 2.37 million addressees. Further discussion of the criteria used to determine which form was mailed to an addressee is provided in the Census Sample Design section of Appendix C in the volume 1 publication.

## **DATA COLLECTION OUTREACH/PROMOTIONAL EFFORTS**

Promotional and outreach programs were primarily handled by the NASS State Statistical Offices (SSOs) rather than from the NASS headquarters; similar programs in past censuses were conducted from a central, national-level office. The Census Division of NASS coordinated the overall effort through the national headquarters of the various USDA agencies and prepared many materials that the SSOs could customize to meet their specific requirements.

Information kits containing a mixture of census materials such as brochures, report forms, fact sheets, press releases, answers to frequently asked questions, posters, print and radio/television advertisements, and various other items were distributed, as appropriate, to many public and private groups. Also included in these information kits was the 1997 Census of Agriculture Report Form Guide which described and defined various items in greater detail than was available in the instructions that accompanied each report form.

The most common recipients of the information kits were county service centers, extension offices, farm-supply retail stores and cooperatives, Farm Service Agency and Natural Resources Conservation Service offices, State and local farmer organizations, commodity groups, State departments of agriculture, commissioners of agriculture, governors, and vocational agriculture instructors. Kits were distributed by mail and through personal visits by field enumerators and SSO staff.

SSOs worked with the commissioners of agriculture, governors, and other officials to obtain written proclamations and verbal support of the census in their speeches and public appearances. To improve the coverage of minorities, SSOs made special promotional efforts through direct contacts with 1890 institutions, Native American tribal leaders, limited resource farm organizations, and women's associations.

## **INITIAL MAILING**

Most report forms were mailed in late December 1997 to individuals, businesses, and organizations on the mail list. Approximately 34,000 report forms were not mailed but given directly to the SSOs for data collection to ease respondent burden for operators selected to participate in other NASS surveys. The mail packages included a report form with a cover letter, an information sheet containing instructions for completing the form, and a postage-paid return envelope. Special instructions were included with report forms sent to grazing associations, American Indian reservations, Christmas tree growers, maple producers, and firms with multiple farm or ranch operations.

For the first time in 1997, the census counted the number of individual American Indian farmers or ranchers that operated within the boundaries of American Indian reservations. Each reservation was asked to complete an additional one-page report form (called an R1 form, see Appendix D in volume 1) that asked for the number of American Indians within their borders who had an agricultural operation that met the \$1,000 sales definition of a farm. It was not required that these operators be individually listed by name to be counted.

## **FOLLOW-UP PROCEDURES**

A thank you/reminder card was mailed to everyone on the mail list in early January 1998. In mid-February and again in late March, a followup letter, census report form, and information sheet were sent to each nonrespondent.

Telephone calling began in the State offices in early February. Calls were made to 1992 Census nonrespondents who had not yet responded to the 1997 Census of Agriculture. In early March, telephone calls were made to operators of large farms who had not responded. In addition, from early April until late May, telephone calls were made to all remaining nonrespondents to encourage them to respond to the census and to ensure a minimum 75 percent response rate in each county in the U.S. A nonresponse adjustment procedure was used to represent the final nonrespondent farms in the census results. A description of this procedure is included in the Census Estimation section of Appendix C in the volume 1 publication.

## **STATISTICAL METHODOLOGY**

The 1997 Census of Agriculture used two types of statistical estimation procedures to account for whole farm nonresponse and sample data collection. The procedures were necessary because some farm operators did not respond to the census despite numerous attempts to contact them, and estimates for certain data items were based on a sample of farm operators rather than a full enumeration.

There are two types of errors possible in these estimates: sampling or nonsampling. The sampling error, or standard error, of a survey estimate is a measure of the variations among the estimates from all possible samples. Nonsampling errors arise from many sources, including respondent or enumeration error or incorrect data keying, editing, or imputing for missing data. For a complete and detailed explanation of the statistical methodology, see Appendix C in volume 1.

